

REGION IV
DIVISION OF REACTOR PROJECTS
QUARTERLY PLANT PERFORMANCE REVIEW

(Revised 01/10/94)

SOUTH TEXAS PROJECT
ELECTRIC GENERATING STATION

DATE: January 19, 1993

QUARTER: Fourth Quarter (October-December 1993)

SALP PERIOD: August 2, 1992 thru July 2, 1994

PERFORMANCE SUMMARY ATTACHMENTS:

Attachment A - Plant Ops Performance Summaries in Previous QPPR's
Attachment B - Rad Con Performance Summaries in Previous QPPR's
Attachment C - M/S Performance Summaries in Previous QPPR's
Attachment D - EP Performance Summaries in Previous QPPR's
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Attachment G - SA/QV Performance Summaries in Previous QPPR's
South Texas Project QPPR Input from NRR
Performance Indicators
QPPR Executive Summary
MIP Form #2
IFS Form #1

1. PERFORMANCE INDICATORS

A. PI SUMMARY (DATA ATTACHED-1st QUARTER 1993 LATEST DATA AVAILABLE)

Unit 1

0 SCRAMs
0 Safety System Actuations
1 Significant Event
3 Safety System Failures

Unit 2

2 SCRAMs
0 Safety System Actuations
1 Significant Event
2 Safety System Failures

B. INSIGHTS FROM PIs

Unit 1 PIs trend with the peer group. Unit 2 SCRAMs, Safety System Actuations, and Significant Events are high when compared to the peer group. Both units have been in forced outages for the entire quarter.

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2. ENFORCEMENT AND REGULATORY ISSUES

A. ESCALATED ENFORCEMENT

None

B. SUMMARY OF NON-ESCALATED ENFORCEMENT SINCE LAST QPPR

Unit 1

Functional Area	Level IV	Level V	NCV's	Dev
Plant Operations	0	0	1	0
Maintenance	0	0	1	0
Engineering	1	0	1	0
Plant Support	0	0	0	0
Total	1	0	3	0

Unit 2

Functional Area	Level IV	Level V	NCV's	Dev
Plant Operations	0	0	0	0
Maintenance	3	0	0	0
Engineering	1	0	1	0
Plant Support	0	0	0	0
Total	4	0	1	0

C. INSIGHTS FROM ENFORCEMENT

The licensee has demonstrated weak performance in the area of maintenance; particularly in the control of contract maintenance personnel.

D. LER SUMMARY

1 LER was issued by the licensee for Unit 1 since the last QPPR. 2 LERs were issued by the licensee for Unit 2 the last QPPR.

E. OTHER REGULATORY ISSUES

The STP Restart Panel has been active in identifying the inspection activities that will be necessary to be performed prior to either unit's restart. The first portion of a Headquarters lead ORAT Inspection was performed during the week of December 6, 1993; the second portion is presently scheduled for the weeks of January 10 and 17, 1994.

PLANT OPERATIONS

(1) Performance Summary

IR 93-30 Loveless

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, maintenance and surveillance observations, employee concerns program, licensee event report followup, and followup on an unresolved item.

Strengths:

None

Weaknesses:

A valid failure of Standby Diesel Generator 11 was caused by a preposition circuit board failure.

IR 93-36 Loveless

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, maintenance and surveillance observations, and review of system certification activities.

Strengths:

The identification and resolution of the loss of spent fuel pool (SFP) water inventory indicated an increased awareness in this area. The situation was handled well and corrective actions to prevent recurrence were taken.

Early in this inspection period, inspectors noted examples of poor communications and lack of professionalism in the control room. Throughout the period an improvement was noted. Operators exhibited a heightened sense of professionalism, and communications appeared to be more formal.

Weaknesses:

The overfilling of the reactor vessel while restoring the reactor coolant system was caused, in part, by the failure of a reactor plant operator (RPO) and a unit supervisor to fully evaluate and question abnormal indications.

The inspector identified equipment clearance order tags that had not been initialed as verified. Additionally, the inspector identified tags on a feedwater system clearance which were missing or unreadable because of exposure to the elements.

IR 93-41 Tapia

Areas Inspected: Routine, announced inspection of open items summarized in NRC Inspection Report 50-498/93-40; 50-499/93-40 and of the licensee's corrective action to resolve operations staffing issues (Restart Issue No. 6).

Strengths:

Control room personnel response to an inadvertent loss of 480 volt motor control center was observed to be very good.

Weaknesses:

None

(2) Attachment A & G - Performance Summaries in Previous QPPR's

ENFORCEMENT SINCE LAST QPPR

Unit 1

93-030 10-27-93 NCV Fouling HVAC boundary in the ECW intake structure with a sump pump hose.

Unit 2

None

LERs SINCE LAST QPPR

Unit 1

None

Unit 2

93-016 11-29-93 Inadvertent ESF actuation due to CCW Pump start resulting from operator error.

(3) DRP Recommendation

(4) Recommended MIP Changes

MAINTENANCE

(1) Performance Summary

IR 93-30 Loveless

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, maintenance and surveillance observations, employee concerns program, licensee event report followup, and followup on an unresolved item.

Strengths:

- The inspectors observed routine daily work practices in the control room and at the work sites throughout the plant. Good work practices and adherence to procedures were observed in most cases. However, specific examples of failure to follow procedures are discussed in other sections.
- Scheduled maintenance activities on Essential Chiller 11A were performed in an acceptable manner. The on-the-job training process was observed as being good.

Weaknesses:

- During plant tours, the inspectors observed several equipment deficiencies which had not been identified on service requests.
- One noncited violation was documented because a heating, ventilation, and air-conditioning boundary at the essential cooling water intake structure was found breached. No breach permit had been issued for the breach.
- Excessive failures of the refueling machine caused a delay of the off-load of the Unit 1 core. The licensee's corrective actions will be tracked.
- One violation was identified involving the failure to perform an engineering evaluation prior to installation of an alternate replacement part.
- Standby Diesel Generator 23 was inoperable for an extended period of time because during the maintenance outage, the reverse power relay had not been properly modified prior to installation. This occurred as a result of inadequate procedures and errors in human performance.
- Portions of maintenance on the electrical auxiliary building air handling unit fan were observed. While verifying the equipment clearance order the inspectors discovered that the clearance had not been accepted by the mechanics performing the job. One noncited violation was documented.
- Postmaintenance test surveillance of the Standby Diesel Generator 11 were observed. Problems with alarms, speed, and voltage indications were observed. The failure of the voltage regulator to increase to the proper voltage was considered a valid failure.

IR 93-36 Loveless

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, maintenance and surveillance observations, and review of system certification activities.

Strengths:

- Troubleshooting and repair of the standby diesel generators following the inadvertent starts of Standby Diesel Generators (SDGs) 12 and 22, indicated a marked improvement in the understanding and diagnosis of control circuit problems.

Reinstallation of the upper bearing housing cover on High Head Safety Injection Pump 2C and a vibration analysis run were observed to be well performed.

Good control of testing activities during a 10-hour operability run on Train B of the control room heating, ventilation, and air conditioning system was observed.

Weaknesses:

Operators failed to control configuration of fuses when two sets of fuses in the control cabinets of SDGs 12 and 13 were inadvertently reversed.

Failure to follow established procedures governing freeze stop plugs was a violation. The attempt at establishment of a freeze seal on Essential Cooling Water System A was observed. Lack of control over contractor activities and procedure weaknesses were noted.

IR 93-38 Satorius

Areas Inspected: Routine, announced inspection to determine the effectiveness of the licensee's actions to improve reliability and testing methodology of turbine-driven auxiliary feedwater pumps (TDAFWPs).

Strengths:

The preventive maintenance (PM) program has been re-written, with enhanced maintenance procedures that incorporated the latest revisions of the turbine, governor, and trip/throttle valve vendor manuals.

Acceptable repairs have been accomplished on both unit's TDAFWPs to adequately address material deficiency issues identified in NRC Inspection Reports 50-498/93-05; 50-499/93-05 and 50-498/93-07; 50-499/93-07.

Weaknesses:

None

IR 93-39 McKernon

Areas Inspected: Routine, announced inspection of postmaintenance testing program (Restart Issue 4 of NRC Inspection Report 50-498/93-31; 50-499/93-31) and related previous inspection findings.

Strengths:

The licensee had restructured the postmaintenance testing program. The revised program was adequate to address those programmatic weaknesses noted in the related items reviewed during this inspection.

Weaknesses:

At the conclusion of this inspection, Restart Issue 4 remained open. Evaluation of the postmaintenance testing program will be continued in a future inspection.

IR 93-46 McKernon

Areas Inspected: Routine, announced inspection to ascertain the effectiveness of the licensee's improved postmaintenance testing (PMT) program.

Strengths:

The improved PMT program resolved many of the problems of the prior program; however, some implementation weaknesses still exist.

The licensee was effective in identifying and pursuing problems related to the PMT program.

Weaknesses:

None

IR 93-53 Satorius

Areas Inspected: Routine, announced inspection to determine the effectiveness of the licensee's efforts to reduce and maintain the maintenance backlog.

Strengths:

The licensee had made notable progress in reducing the service request (SR) backlog and the material condition of the station had improved significantly during the past 6 months. However, the inspectors considered that the achievement of the licensee's goal of less than 1000 Common and Unit 1 SRs and the subsequent management of that maintenance backlog, given the planned shift of maintenance resources to Unit 2, was a significant challenge.

Licensee activities to repair station automatic functions and main control board deficiencies was viewed as a positive initiative.

Although well behind schedule, the maintenance procedure upgrade program should improve the quality of maintenance procedures.

The Operations Work Control Group had been effective in reducing the administrative burden on control room operators.

The Maintenance Rover Work Program was considered a good initiative, and that program's success was regarded as pivotal in the licensee's efforts to improve maintenance activity efficiency and reach and maintain the SR backlog goal.

The planned maintenance (PM) deferral rate was less than one percent and had trended at that level for the past 6 months.

With the exception of two deferred SRs that constituted operator work-arounds and several relatively minor coding errors, the licensee's deferral process was effective.

SRs voided to PMs were being appropriately tracked to ensure that deficient conditions were not being removed from the SR backlog prior to being corrected.

Nonsystem certification and acceptance systems were being effectively monitored for deferral of maintenance activities.

Weaknesses:

The licensee's walkdowns conducted as a part of their system certification and acceptance programs were generally effective in problem identification; however, the inspectors noted several examples of poor resolution of identified deficiencies and inconsistencies in identification of deficient conditions.

(2) Attachment C & G - Performance Summaries in Previous QPPR's

ENFORCEMENT SINCE LAST QPPR

Unit 1

93-030	10-27-93	NCV	Failure of personnel to sign onto an equipment clearance order.
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Unit 2

93-030	10-27-93	IV	Failure of maintenance personnel to follow procedures when installing a replacement reverse power relay.
93-035	12-17-93	IV	Failure to maintain environmental qualification of motor-operated valves due to failing to install T-drains to the actuators.
93-036	12-02-93	IV	Failure to maintain adequate control of contractor personnel during the formation of a freeze seal on an ECW pipe to the essential chillers.

LERs SINCE LAST QPPR

None

(3) DRP Recommendation

(4) Recommended MIP Changes

ENGINEERING

(1) Performance Summary

IR 93-28 Barnes

Areas Inspected: Regional initiative, announced inspection to review the history and material condition of Units 1 and 2 steam generator tubing, and to assess the effectiveness of licensee programs in detection and analysis of degraded tubing, repair of defects, and correction of conditions contributing to tube degradation.

Strengths:

- Actions were taken by the licensee to minimize tubing wear in the preheater section of the steam generators by expanding the tubes at two baffle plate locations; and actions were taken to improve resistance to stress corrosion cracking by peening of tube expansion transition areas and heat treatment of low radius U-bends.
- The 1993 eddy current examination results for South Texas Project, Units 1 and 2, indicated that limited tube degradation had occurred in Unit 1. Similar damage indications were not identified in Unit 2 tubing. Tube pull samples will be subjected to laboratory examination to verify whether tube degradation has occurred and the nature, as applicable, of the damage mechanisms.
- The licensee adopted a comprehensive eddy current examination strategy for the current steam generator examinations. With one exception, prior inservice examinations were performed using only the bobbin method and a sample size at or near the minimum required by the Technical Specifications.
- The current eddy current examination program requirements were found to be good, with the primary area of improvement being the adoption of formalized training and testing of data analysts.
- The 1993 eddy current data were observed to exhibit low noise, with the performance of the contractor analysts being found to be satisfactory for the tube data sample that was reviewed.
- Visual examination of Unit 2 steam generators appeared to have been well performed for the documented inspection scope. Procedural guidance lacked specificity, however, on inspection scope expectations.
- Since commercial operation of STP, Units 1 and 2, the secondary water chemistry program for both units had continually been upgraded to incorporate industry guidelines as they were made available.
- The licensee has maintained excellent control of the secondary water chemistry, with only two significant out-of-specification chemistry conditions noted since plant startup. These conditions both involved out-of-specification sodium concentrations that occurred in Unit 1 during 1990 and again in 1993. In each case, the out-of-specification condition was promptly identified and corrected.

Weaknesses:

- Operational experience is limited since South Texas Project, Units 1 and 2, are the only U.S. pressurized water reactors which utilize Westinghouse Model E steam generators in the plant design.
- These units have been operated with a hot leg temperature of 626°F, which appeared from available information to be the highest temperature used by any domestic pressurized water reactor. It was noted by the inspectors that reduction of hot leg temperature is being pursued by other individual licensees, including South Texas Project, as an approach to limit initiation and propagation of stress corrosion cracking.

Belgian operating experience data provided by the licensee indicated that significant stress corrosion cracking damage had occurred in their Model E steam generators since commercial operation began in 1985.

IR 93-30 Loveless

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, maintenance and surveillance observations, employee concerns program, licensee event report followup, and followup on an unresolved item.

Strengths:

During this inspection period, the licensee performed steam generator tube inspections on Units 1 and 2. A very small number of tubes in both units were identified as requiring plugging. One tube in Unit 1 appeared to have degraded at a greater rate than anticipated. A review of records showed that the tube had a 59 percent through-wall indication when tested in 1985 and was not plugged or reported as required.

Weaknesses:

None

IR 93-35 Ellershaw

Areas Inspected: Routine, announced inspection of onsite followup of previous inspection findings and followup of licensee event reports.

Strengths:

Based on the results of this inspection, it was concluded that significant progress has been made concerning Restart Issue 14, "Adequacy of the Licensee's Resolution of the Reliability of the Feedwater Isolation Bypass Valves." However, this restart issue will remain open pending completion of the open findings specified in the report.

Weaknesses:

None

IR 93-36 Loveless

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, maintenance and surveillance observations, and review of system certification activities.

Strengths:

The conduct of an inservice inspection of Component Cooling Water Pump 1B was good.

Weaknesses:

One unresolved item was opened to review the licensee's investigation and root cause of a continuing fuse configuration control problem.

IR 93-38 Satorius

Areas Inspected: Routine, announced inspection to determine the effectiveness of the licensee's actions to improve reliability and testing methodology of turbine-driven auxiliary feedwater pumps (TDAFWPs).

Strengths:

Enhancements to the condensate removal system have been completed and tested to ensure adequate operation, and monitoring instrumentation installed to alert operators and engineers of potential system degradation.

Weaknesses:

None

IR 93-42 Satorius

Areas Inspected: Routine, announced inspection to resolve the issue of testing tornado dampers installed on safety-related heating, ventilation, and air conditioning (HVAC) systems.

Strengths:

The inspector concluded that no further review of tornado damper issues was required prior to the restart of Unit 1 and that Restart Issue 15 could be considered resolved.

Weaknesses:

None

(2) Attachment F - Performance Summaries in Previous QPPR's

ENFORCEMENT SINCE LAST QPPR

Unit 1

33-035	12-17-93	IV	Failure to promptly disposition engineering change notice packages concerning the qualification of positioners on main feedwater isolation bypass valves.
93-035	12-17-93	NCV	Failure to properly reclassify positioners for the main feedwater isolation bypass valves.

Unit 2

93-035	12-17-93	IV	Failure to promptly disposition engineering change notice packages concerning the qualification of positioners on main feedwater isolation bypass valves.
93-035	12-17-93	NCV	Failure to properly reclassify positioners for the main feedwater isolation bypass valves.

LERs SINCE LAST QPPR

Unit 1

93-021	10-29-93		Failure to provide backup overcurrent protection for penetration conductors.
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Unit 2

93-015	11-29-93		Inadvertent start of EDG 22 due to spurious operation of a transistor.
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(3) DRP Recommendation

(4) Recommended MIP Changes

PLANT SUPPORT

(1) Performance Summary

IR 93-30 Loveless

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, maintenance and surveillance observations, employee concerns program, licensee event report followup, and followup on an unresolved item.

Strengths:

The inspectors reviewed characteristics of the licensee's employee concerns program.

Weaknesses:

None

IR 93-31 Satorius

Areas Inspected: Routine in-office inspection of the issues contained in the Diagnostic Evaluation Team (DET) Report, Confirmatory Action Letter (CAL) and Supplements, the licensee's Operational Readiness Plan (ORP), routine and special NRC inspection reports, licensing actions, and NRC staff actions.

Results:

The DET report, CAL and Supplements, ORP, routine and special NRC inspection reports, licensing issues, and NRC staff actions assigned by the NRC Executive Director for Operations following the Diagnostic Evaluation were reviewed. Based on this review, issues that the NRC considers necessary to be addressed prior to the restart of either unit (Restart Issues) were identified and listed.

IR 93-33 McKernon

Areas Inspected: Routine, announced inspection of the licensee's station problem report (SPR) backlog management and management of new incoming SPRs. The inspection also included a review of the licensee's planned corrective actions list (operational readiness items list), comparison to the NRC Region IV restart issues list, and review of the licensee's line management assessment process and the independent assessment process. Further, the inspection included a review of previous inspection findings.

Strengths:

The inspection verified that the licensee was appropriately managing the SPR backlog.

There was satisfactory correlation between the licensee's operational readiness items list and the NRC Region IV Restart Issues list.

The independent assessment process was well structured but had not yet been implemented.

Weaknesses:

While the licensee's direction for the line management assessment process appeared appropriate, only one department had formulated and submitted their self-assessment checklist.

IR 93-34 Lantz

Areas Inspected: Routine, announced inspection of the qualifications of applicants for operator licenses at the South Texas Project facility, which included an eligibility determination and administration of comprehensive written and operating examinations. The examination team also observed the performance of on-shift operators and plant conditions incident to the conduct of the applicant evaluations. The examiners used the guidance provided in NUREG-1021, "Operator Licensing Examiner Standards," Revision 7, Sections 201, 202, 203, 301, 302, 303, 401, 402, and 403, issued January 1993.

Strengths:

- Four of the six applicants for reactor operator licenses satisfied the requirements of 10 CFR 55.33(a)(2).
- Eight of the nine applicants for senior reactor operator licenses satisfied the requirements of 10 CFR 55.33(a)(2).
- The reference material provided by the training department for examination development was adequate.
- All applicants passed the written examinations, with scores ranging from a low of 82 percent to a high of 94 percent with averages of 86 percent for reactor operator applicants, 90 percent for senior reactor operator applicants, and 88.4 percent overall.

Weaknesses:

- The crews examined exhibited generally effective, formal communications, with effective command and control on the part of crew supervision, with noted exceptions.
- The applicants demonstrated a generic performance weakness which involved a hesitancy to secure equipment when abnormal conditions were noted immediately following equipment startup.

The applicants demonstrated a second generic performance weakness which involved a general unfamiliarity with low power and shutdown procedures.
- Procedural guidance for loss of primary reactor coolant accident scenarios while shutdown was unclear.

Procedural guidance for abnormal response of a reactor coolant pump when starting was lacking.
- Poor plant labeling was observed to adversely impact operator performance and was consistent with prior NRC inspection reports.
- General observations were made of poor decorum on-shift control room operators and plant material conditions.

IR 93-35 Ellershaw

Areas Inspected: Routine, announced inspection of onsite followup of previous inspection findings and followup of licensee event reports.

Strengths:

- Management was proactive by ensuring a more aggressive troubleshooting plan be developed to identify the cause of the erratic refueling machine behavior. Once the plan was developed, the licensee identified the root cause and took appropriate corrective action.

Weaknesses:

None

IR 93-36 Loveless

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, maintenance and surveillance observations, and review of system certification activities.

Strengths:

- Overall, plant housekeeping and material condition improved over the period. RPOs were noted assisting in this effort.
- Security officers observed during a personnel accountability drill performed in an excellent manner.

Weaknesses:

None

IR 93-37 Whittemore

Areas Inspected: Routine, announced inspection of the licensee's corrective action to resolve previous inspection findings related to fire protection.

Strengths:

- The licensee had verified that the training program for fire brigade leaders met the requirements specified in Appendix R of 10 CFR 50. Additional personnel were being qualified as fire brigade leader to reduce the burden on operations personnel.
- The Unit 1 fire protection computer system had undergone hardware and software changes to enhance usability and reliability. As a result, the nuisance alarms and operator distraction attributed to the fire protection system computer had decreased significantly. Changes to computer alarm descriptions had improved system reliability.
- The licensee had correctly identified all the work necessary to improve the material condition of the fire protection systems. However, a significant portion of the work remained to be done by a licensee contractor.
- The licensee had correctly identified, investigated, and resolved the problems with fire barrier penetration seals. Additional occurrences of seal problems would be identified and corrected by the licensee's surveillance and corrective action programs.
- The licensee program for control of transient combustibles had improved, but required additional management attention to improve the collective employee attitude toward fire safety.
- STPEGS management appeared aggressive toward correcting identified problems and identifying additional problems.

Weaknesses:

None

IR 93-38 Satorius

Areas Inspected: Routine, announced inspection to determine the effectiveness of the licensee's actions to improve reliability and testing methodology of turbine-driven auxiliary feedwater pumps (TDAFWPs).

Strengths:

The licensee's surveillance testing procedures have been revised in order to address the testing inadequacies identified in NRC Inspection Reports 50-498/93-05; 50-499/93-05 and 50-498/93-07; 50-499/93-07. Specifically, these enhancements should provide assurance that future TDAFWP deficiencies that could degrade reliability will not be masked by an inadequate surveillance testing program.

Readiness Review Committee activities were conducted in a thorough manner. Division Managers that constituted the TDAFWP Readiness Review Committee were appropriately critical and circumspect with respect to system status and the acceptability of proposed deferral of maintenance activities.

Pending the satisfactory completion of MODE 3 testing of the Unit 1 TDAFWP, the inspector concluded that no further review was required prior to the restart of Unit 1 and that Restart Issue No. 1 could be considered resolved.

STPEGS management's receptiveness to identifying and correcting problems with respect to the TDAFWP issues, were considered to have improved since the original problems were identified and documented in NRC Inspection Reports 50-498/93-05; 50-499/93-05 and 50-498/93-07; 50-499/93-07.

Weaknesses:

None

IR 93-40 Pellet

Areas Inspected: Routine, announced inspection of open items summarized in NRC Inspection Report 50-498/93-31; 50-499/93-31 relating to operations staffing (Restart Issue No. 6) and required to be resolved prior to the restart of Unit 1.

Strengths:

The inspector found that the licensee had made substantial progress toward resolving Restart Issue No. 6 open items and that most of the remaining issues remained open to assess implementation effectiveness. As a result of observation of plant and control room activities, the inspector noted improvement in control room crew workload and communications practices.

Weaknesses:

None

IR 93-41 Tapia

Areas Inspected: Routine, announced inspection of open items summarized in NRC Inspection Report 50-498/93-40; 50-499/93-40 and of the licensee's corrective action to resolve operations staffing issues (Restart Issue No. 6).

Strengths:

The inspector found that the licensee's corrective actions have been effective in correcting the problems which existed as a result of inadequate operator staffing.

As a result of observation of plant and control room activities, the inspector noted improvements in communications practices and in the reduction of control room crew workload.

A review of the recent operator requalification training course content indicated increased training resources and additional focus on reactor startup, response to shutdown LOCA, and training on modifications made during the outage.

Weaknesses:

None

IR 93-43 Bundy

Areas Inspected: Routine, announced inspection of the licensee's self-assessment capability, information exchange with the industry, and followup on previous inspection findings.

Strengths:

- The licensee was performing high quality audits, surveillance, and special assessments. However, it appeared that identified deficiencies were not being addressed in a timely manner.
- The industry experience review program was acceptable. The backlog of open operating experience communications was high, but appeared manageable. The open operating experience review and vendor equipment technical information communications had been reviewed for plant restart impact.
- The nuclear safety review board appeared proactive in identifying safety issues to management; however, the backlog of nuclear safety review board action items was unacceptably high. An action plan existed for resolving the backlogged action items.
- The plant operations review committee was performing all Technical Specifications required activities and attempting to become more proactive in identifying adverse performance trends.
- Administration of the operating experience review program by the independent safety engineering group (ISEG) had detracted from its ability to perform its other duties. A minimal number of surveillance and assessments had been performed. However, contract personnel had recently been added to the staff to work on the operating experience review effort.
- The operational readiness assessment program appeared comprehensive and was effectively addressing safety issues.
- The licensee had demonstrated effective self-assessment capability. The personnel interviewed exhibited a safety conscious attitude and a desire to correct past errors. Everyone appeared to be working toward optimizing safety performance. Positive changes had been made in several site programs. However, several programs were still in transition, including the responsibilities of the ISEG and the corrective action group.
- The licensee was an active participant in the appropriate industry groups.
- The licensee was active in information exchange with other utilities and the information obtained was considered when making programmatic changes.

Weaknesses:

- The ISEG action item tracking system had inaccuracies. It indicated that the final action for Report 93-04, which involved a printed circuit board configuration control issue, was scheduled for completion in February 1994. The final action was actually scheduled for completion at the end of 1996.

IR 93-47 Spitzberg

Areas Inspected: Special, announced inspection of the emergency preparedness program including an evaluation of the licensee's emergency accountability capabilities during day shift hours to determine whether previous weaknesses in this area have been corrected and a review of recent organizational changes as they relate to emergency preparedness.

Strengths:

The licensee had performed a comprehensive analysis and developed a detailed set of corrective actions to address problems in accountability capabilities. Corrective actions had been implemented in training, procedures, personnel, and hardware to facilitate and improve the accountability process. Accountability drills conducted showed steady improvement and validated the effectiveness of the actions taken to correct previous licensee identified weaknesses in this area. Recent drills including one evaluated by the NRC demonstrated that the licensee can perform personnel accountability in a timely manner during day shift hours.

It was concluded that recent organizational changes would not diminish the licensee's capabilities to effectively respond to emergencies.

Weaknesses:

None

- (2) Attachment G - Performance Summaries in Previous QPPR's

ENFORCEMENT SINCE LAST QPPR

None

LERs SINCE LAST QPPR

None

- (3) DRP Recommendation
- (4) Recommended MIP Changes

ATTACHED IS THE INFORMATION TO BE USED FOR
THE QPPR FOR

**SOUTH TEXAS PROJECT ELECTRIC
GENERATING STATION**

THE QPPR DISCUSSION WILL BE HELD IN THE DRP
CONFERENCE ROOM

**1330 HOURS
JANUARY 18, 1994**

B. BEACH
P. GWYNN
P. HARRELL
S. COLLINS
A. HOWELL
T. WESTERMAN
L. CONSTABLE
D. POWERS
I. BARNES
J. PELLET
J. CALLAN
D. CHAMBERLAIN
B. MURRAY
SRI*
PM*
* SENT VIA E-MAIL

SOUTH TEXAS PROJECT
EXECUTIVE SUMMARY
QUARTERLY PLANT PERFORMANCE REVIEW 94-01
JANUARY 18, 1994

SALP CYCLE 010
(AUGUST 2, 1992 THRU JULY 2, 1994)

I. OVERVIEW

Both units have remained shutdown the entire quarter, as a result of many concerns identified by Region IV, the Diagnostic Evaluation, and the licensee. Poor performance has been recently identified in maintenance activities, particularly in the area of control of contractor personnel; however, overall licensee performance has improved. The plant's material condition has improved significantly; the maintenance backlog has been reduced and approaches a manageable level; specific hardware issues are nearing resolution; and the post-maintenance testing and corrective action programs and the engineering backlog problems have improved.

II. SUMMARY OF SIGNIFICANT REGULATORY ISSUES

No significant regulatory issues have been identified during this quarter; however, a trend has developed concerning the licensee's effectiveness in management and oversight of contract workers. There have been several examples of contract workers working on the wrong component, failing to follow procedures, and failing to exercise adequate self-verification. In addition, equipment clearance order and configuration control problems have been identified; these later problems are not confined to contract workers. A recent finding by the resident inspectors identified the containment sumps as having unacceptable gaps and openings in their cover screens. This deficiency could permit debris larger than the design permits to enter the suction of the safety-injection pumps and potentially clog the containment spray nozzles or block flow channels in the fuel assemblies.

III. PLANT OPERATIONS

PREVIOUS RATINGS

SALP 91: 2 92: 2

QPPR 93-01: (NC) QPPR 93-02: (NC) QPPR 93-03: (-) SPPR 93-04: (-)

QPPR 94-01: (NC)

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: (NC) Performance trend; control room professionalism and decorum has improved. The licensee's efforts to remove distractions from the control room has been successful and the addition of the sixth shift to the control room staff is viewed as positive. Several recent equipment clearance order and configuration control problems have been identified.

IV. MAINTENANCE

PREVIOUS RATINGS

SALP 91: 2 92: 2D

QPPR 93-01: (-) QPPR 93-02: (-) QPPR 93-03: (-) SPPR 93-04: (-)

QPPR 94-01: (NC)

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: (NC) Performance trend. The maintenance backlog has been significantly reduced; however, there is limited implementation information that would permit concluding that the licensee is able to maintain the maintenance backlog numbers at manageable levels. Recent problems have been identified in the area of contractor oversight and work performance.

V. ENGINEERING

PREVIOUS RATINGS

SALP 91: 2I 92: 2

QPPR 93-01: (NC) QPPR 93-02: (NC) QPPR 93-03: (-) SPPR 93-04: (NC)

QPPR 94-01: (NC)

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: (NC) performance trend. Engineering backlog numbers have been successfully reduced; restart activities continue to assess the licensee's efforts in this area.

VI. PLANT SUPPORT

PREVIOUS RATINGS

SALP 94:

SPPR 93-04: (-) QPPR 94-01: (NC)

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: (NC) performance trend. The weakness previously identified in emergency preparedness have been corrected. New management in the security department is viewed as a positive. Good performance in radiation protection continues.

VII. TIA STATUS

There are currently no open TIA's.

VIII. MAJOR SITE ACTIVITIES

COMPLETED

- 9230 - MOVATS Inspection
- 9235 - OSTI
- 9327 - Check Valve TI 2515/110
- STIR
- DET
- SPEAKOUT Inspection
- Operational Readiness Assessment Team Inspection - December 1993/January 1994--Week 1 completed
- Several Regional based Restart Issue Inspection activities have been completed

PLANNED

- Operational Readiness Assessment Team Inspection - December 1993/January 1994--Week 2 scheduled for January 13-21, 1994
- Several Regional based inspections prior to and during the Restart activities

IX. ENCLOSURES

1. Master Inspection Plan Report 2
2. IFS Report 1

SOUTH TEXAS PROJECT

QUARTERLY PLANT PERFORMANCE REVIEW 94-01
JANUARY 18, 1994

SUMMARY OF MIP CHANGES - UNIT 1

MODULE	TITLE	AREA	ADD/ CHANGE	FM	TO	DELTA
71715	Sustained Control Room and Plant Observations	OPS	A	0	504 ¹	+504
71707	Operational Safety Verification	OPS	A	0	30 ²	+30
92701	Followup	SA/QV	A	0	5 ³	+5
92720	Corrective Action	SA/QV	A	0	60 ⁴	+60
83750	Occupational Radiation Exposure	PS	a	0	35 ⁵	+35
NET CHANGE						+634

¹Justification: 24-hour coverage of the Unit 1 Restart for three weeks

²Justification: Special Inspection on Containment Sumps

³Justification: Service Request Backlog Restart Inspection

⁴Justification: Service Request Backlog Restart Inspection

⁵Justification: Extended SALP Cycle requires additional inspection in this area

SUMMARY OF MIP CHANGES - UNIT 2

MODULE	TITLE	AREA	ADD/ CHANGE	FM	TO	DELTA
71715	Sustained Control Room And Plant Observation	OPS	A	0	168 ¹	+168
71707	Operational Safety Verification	OPS	A	0	30 ²	+30
83750	Occupational Radiation Exposure	PS	A	0	35 ³	+35
NET CHANGE						+233

¹Justification: 24-hour coverage of the Unit 2 Restart for one week

²Justification: Special Inspection on Containment Sumps

³Justification: Extended SALP Cycle requires additional inspection in this area

Regulatory Information Conference Survey

Example 1:

On March 18, 1993, a Head Reactor Plant Operator (nonlicensed) was performing Step 5.8 of Procedure 2POPO2-NE-0004, "Startup of Plant Computer 120 VAC Uninterruptable Power Supply," which states, "Close 3CB Aux. AC (on Inverter)." The Operator placed his hand on the breaker switch, read the step, and then incorrectly opened the already closed breaker. The plant computer was being powered from the plant computer alternate transformer via the 3CB Aux. AC breaker which caused the plant computer to crash. The event was attributable to a fatigue induced mental lapse as a result of eight consecutive midnight shifts, several of which were of a twelve hour duration.

Immediate corrective actions taken were to counsel the employee on attention to detail. A Human Performance Review Board was assembled to review the incident. The Board recommended that a review of the Operations Dept. practices for the utilization of overtime during dual unit outages should be conducted in order to minimize the potential for fatigue induced events. This corrective action does not address the real root cause: inadequate staffing.

Example 2:

On March 21, 1993, a Reactor Plant Operator (nonlicensed) was performing Step 6.16 of Procedure OPSP03-EW-0018, "ECW System Train B Testing," which calls for the throttling of valve EW-0064 in order to obtain the target pressure. When the Operator went to the location of the valve in the heat exchanger room, he realized that he did not have a key to unlock the valve on him. He then went back to the Control Room to obtain a key. He was questioned about what was taking him so long. He then proceeded back to the heat exchanger room and erroneously stopped at the wrong heat exchanger and started throttling valve EW-0027, an equivalent valve for Train A. The control room received an alarm for A train ECW pump discharge pressure low. Control room personnel then instructed the operator to return EW-0027 to the as-found position.

Immediate corrective actions taken involved counseling the nonlicensed operator on the requirements for self-verification. A Human Performance Review Board was assembled to review the incident. The Board found that the individual did not utilize the self-verification process following a distraction. Contributing causes included a difficulty in utilizing communications between the high noise CCW heat exchanger area and the ECW structure. Inadequate staffing for the implementation of this particular surveillance procedure was also a contributor. This event occurred during the mid shift. The Board recommended that a review of the Operations Dept. practices for the utilization of overtime during dual outages should be conducted in order to ensure proper staffing levels. An evaluation of communications adequacy between the ECW structure and CCW heat exchanger room was also recommended. Again, these corrective actions do not address the underlying issue of adequate staffing.

Example 3:

On April 1, 1993, at about 4:50 a.m., I & C technicians were performing Procedure 1PSP02-RC-0419, "Reactor Coolant Flow Analog Channel Operational Test (ACOT)." This procedure required that the technicians place a bistable switch in cabinet

ZRR017 in test. The technicians erroneously went to cabinet ZRR018 and placed the corresponding switch to test. The cabinets are adjacent to each other. The Solid State Protection System was in test mode and therefore the consequences of this event were minimal.

The individuals involved were counseled. A Human Performance Review Board was convened to review the incident. Their determination was that the repetitive nature of the surveillance contributed to this event. Only twelve procedures require work in cabinet ZRR017 whereas cabinet ZRR018 has many more surveillances performed in it. I find this argument weak if not irrelevant. It only serves to question the adequacy of the Board's deliberations. It is the opinion of this inspector that this event is another example of maintenance personnel failing to utilize self verification requirements.

Example 4:

On April 4, 1993, a temporary modification (TI-VC-93-0011) was being implemented to supply temporary instrument power on Control Panels CP-001 through 004. During the electrical preparation for installation of temporary power for CP-004, the control room operators noticed Volume Control Tank level beginning to decrease and Pressurizer level increasing. Reactor Coolant Pump seal injection recorders were discovered to have lost power and seal injection flow control valve failed full open. Charging flow control was placed in manual to regulate inventory.

Temporary power was removed from CP-001 through -003 and normal power was restored. While restoring power, breaker 25 to Distribution Panel 003 was found tripped. This supplies power to CP-004. The breaker was closed and normal power was restored to CP-004. The cause of the event was a poor temporary modification. The Control Panels are ungrounded and the temporary power supplied by the modification was grounded. This caused the breaker to trip.

The licensee utilizes the INPO seven step self-verification program as well as the Human Performance Evaluation System.

SOUTH TEXAS PROJECT

EXECUTIVE SUMMARY
QUARTERLY PLANT PERFORMANCE REVIEW 94-01
JANUARY 18, 1994
FINAL

SALP CYCLE 010
(AUGUST 2, 1992 THRU JULY 2, 1994)

I. OVERVIEW

Both units have remained shutdown the entire quarter, as a result of many concerns identified by Region IV, the Diagnostic Evaluation, and the licensee. Poor performance has been recently identified in maintenance activities, particularly in the area of control of contractor personnel; however, overall licensee performance has improved. The plant's material condition has improved significantly; the maintenance backlog has been reduced and approaches a manageable level; specific hardware issues are nearing resolution; and the postmaintenance testing and corrective action programs and the engineering backlog problems have improved.

II. SUMMARY OF SIGNIFICANT REGULATORY ISSUES

No significant regulatory issues have been identified during this quarter; however, a trend has developed concerning the licensee's effectiveness in management and oversight of contract workers. There have been several examples of contract workers working on the wrong component, failing to follow procedures, and failing to exercise adequate self-verification. In addition, equipment clearance order and configuration control problems have been identified; these later problems are not confined to contract workers. A recent finding by the resident inspectors identified the containment sumps as having unacceptable gaps and openings in the cover screens. This deficiency could permit debris larger than the design permits to enter the suction of the safety injection pumps and potentially clog the containment spray nozzles or block flow channels in the fuel assemblies.

III. PLANT OPERATIONS

PREVIOUS RATINGS

SALP 91: 2 92: 2

QPPR 93-01: (NC) QPPR 93-02: (NC) QPPR 93-03: (-) SPPR 93-04: (-)

QPPR 94-01: (NC)

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: Control room professionalism and decorum has improved. The licensee's efforts to remove distractions from the

C/20

control room has been successful and the addition of the sixth shift to the control room staff is viewed as positive. Several recent equipment clearance order and configuration control problems have been identified.

IV. MAINTENANCE

PREVIOUS RATINGS

SALP 91: 2 92: 2D

QPPR 93-01: (-) QPPR 93-02: (-) QPPR 93-03: (-) SPPR 93-04: (-)

QPPR 94-01: (NC)

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: The maintenance backlog has been significantly reduced; however, there is limited implementation information that would permit concluding that the licensee is able to maintain the maintenance backlog numbers at manageable levels. Recent problems have been identified in the area of contractor oversight and work performance.

V. ENGINEERING

PREVIOUS RATINGS

SALP 91: 2I 92: 2

QPPR 93-01: (NC) QPPR 93-02: (NC) QPPR 93-03: (-) SPPR 93-04: (NC)

QPPR 94-01: (NC)

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: Engineering backlog numbers have been successfully reduced; restart activities continue to assess the licensee's efforts in this area.

VI. PLANT SUPPORT

PREVIOUS RATINGS

SALP 91: (HP-1, EP-2, SEC-1) 92: (HP-1, EP-2, SEC-2)

SPPR 93-04: (-) QPPR 94-01: (NC)

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: The weakness previously identified in emergency preparedness have been corrected. New management in the security department is viewed as a positive. Good performance in radiation protection continues.

VII. TIA STATUS

None

VIII. MAJOR SITE ACTIVITIES

Completed

MOVATS Inspection

OSTI

Check Valve (TI 2515/110)

STIR

DET

SPEAKOUT Inspection

Operational Readiness Assessment Team Inspection

Several Regional based Restart Issue Inspection activities

Planned

Operational Readiness Assessment Team Inspection (December/January 1994)

Several Region-Based Inspections (prior to and during the restart)

SOUTH TEXAS PROJECT-UNIT 1
QUARTERLY PLANT PERFORMANCE REVIEW 94-01
JANUARY 18, 1994

SUMMARY OF MIP CHANGES

MODULE	TITLE	AREA	IPE Code	FM	TO	DELTA
71715	Sustained Control Room and Plant Observations	OPS	RI	0	504	+504
71707	Operational Safety Verification	OPS	RI	0	30	+30
92701	Followup	OPS	RI	0	5	+5
92720	Corrective Action	ENGR	RI	0	60	+60
83750	Occupational Radiation Exposure	PS	RI	0	35	+35
NET CHANGE						+634

JUSTIFICATION

71715 24-hour coverage of the Unit 1 Restart for three weeks
71707 Special Inspection on Containment Sumps
92701 Service Request Backlog Restart Inspection
92720 Service Request Backlog Restart Inspection
83750 Extended SALP Cycle requires additional inspection in this area

SOUTH TEXAS PROJECT-UNIT 2
QUARTERLY PLANT PERFORMANCE REVIEW 94-01
JANUARY 18, 1994

SUMMARY OF MIP CHANGES

MODULE	TITLE	AREA	IPE Code	FM	TO	DELTA
71715	Sustained Control Room And Plant Observation	OPS	RI	0	168	+168
71707	Operational Safety Verification	OPS	RI	0	30	+30
83750	Occupational Radiation Exposure	PS	RI	0	35	+35
NET CHANGE						+233

JUSTIFICATION

71715 24-hour coverage of the Unit 2 Restart for one week
71707 Special Inspection on Containment Sumps
83750 Extended SALP Cycle requires additional inspection in this area

ATTACHED IS THE INFORMATION TO BE USED FOR
THE QPPR FOR

SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION

THE QPPR DISCUSSION WILL BE HELD IN THE DRP
CONFERENCE ROOM

**1330 HOURS
JANUARY 18, 1994**

B. BEACH
P. GWYNN
P. HARRELL
S. COLLINS
A. HOWELL
T. WESTERMAN
L. CONSTABLE
D. POWERS
I. BARNES
J. PELLET
J. CALLAN
D. CHAMBERLAIN
B. MURRAY
SRI*
PM*
* SENT VIA E-MAIL

C/21

SOUTH TEXAS PROJECT
EXECUTIVE SUMMARY
QUARTERLY PLANT PERFORMANCE REVIEW 94-01
JANUARY 18, 1994

SALP CYCLE 010
(AUGUST 2, 1992 THRU JULY 2, 1994)

I. OVERVIEW

Both units have remained shutdown the entire quarter, as a result of many concerns identified by Region IV, the Diagnostic Evaluation, and the licensee. Poor performance has been recently identified in maintenance activities, particularly in the area of control of contractor personnel; however, overall licensee performance has improved. The plant's material condition has improved significantly; the maintenance backlog has been reduced and approaches a manageable level; specific hardware issues are nearing resolution; and the post-maintenance testing and corrective action programs and the engineering backlog problems have improved.

II. SUMMARY OF SIGNIFICANT REGULATORY ISSUES

No significant regulatory issues have been identified during this quarter; however, a trend has developed concerning the licensee's effectiveness in management and oversight of contract workers. There have been several examples of contract workers working on the wrong component, failing to follow procedures, and failing to exercise adequate self-verification. In addition, equipment clearance order and configuration control problems have been identified; these later problems are not confined to contract workers. A recent finding by the resident inspectors identified the containment sumps as having unacceptable gaps and openings in their cover screens. This deficiency could permit debris larger than the design permits to enter the suction of the safety-injection pumps and potentially clog the containment spray nozzles or block flow channels in the fuel assemblies.

III. PLANT OPERATIONS

PREVIOUS RATINGS

SALP 91: 2 92: 2

QPPR 93-01: (NC) QPPR 93-02: (NC) QPPR 93-03: (-) SPPR 93-04: (-)

QPPR 94-01: (NC)

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: (NC) Performance trend; control room professionalism and decorum has improved. The licensee's efforts to remove distractions from the control room has been successful and the addition of the sixth shift to the control room staff is viewed as positive. Several recent equipment clearance order and configuration control problems have been identified.

IV. MAINTENANCE

PREVIOUS RATINGS

SALP 91: 2 92: 2D

QPPR 93-01: (-) QPPR 93-02: (-) QPPR 93-03: (-) SPPR 93-04: (-)

QPPR 94-01: (NC)

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: (NC) Performance trend. The maintenance backlog has been significantly reduced; however, there is limited implementation information that would permit concluding that the licensee is able to maintain the maintenance backlog numbers at manageable levels. Recent problems have been identified in the area of contractor oversight and work performance.

V. ENGINEERING

PREVIOUS RATINGS

SALP 91: 2I 92: 2

QPPR 93-01: (NC) QPPR 93-02: (NC) QPPR 93-03: (-) SPPR 93-04: (NC)

QPPR 94-01: (NC)

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: (NC) performance trend. Engineering backlog numbers have been successfully reduced; restart activities continue to assess the licensee's efforts in this area.

VI. PLANT SUPPORT

PREVIOUS RATINGS

SALP 94:

SPPR 93-04: (-) QPPR 94-01: (NC)

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: (NC) performance trend. The weakness previously identified in emergency preparedness have been corrected. New management in the security department is viewed as a positive. Good performance in radiation protection continues.

VII. TIA STATUS

There are currently no open TIA's.

VIII. MAJOR SITE ACTIVITIES

COMPLETED

- 9230 - MOVATS Inspection
- 9235 - OSTI
- 9327 - Check Valve TI 2515/110
- STIR
- DET
- SPEAKOUT Inspection
- Operational Readiness Assessment Team Inspection - December 1993/January 1994--Week 1 completed
- Several Regional based Restart Issue Inspection activities have been completed

PLANNED

- Operational Readiness Assessment Team Inspection - December 1993/January 1994--Week 2 scheduled for January 13-21, 1994
- Several Regional based inspections prior to and during the Restart activities

IX. ENCLOSURES

1. Master Inspection Plan Report 2
2. IFS Report 1

SOUTH TEXAS PROJECT

QUARTERLY PLANT PERFORMANCE REVIEW 94-01
JANUARY 18, 1994

SUMMARY OF MIP CHANGES - UNIT 1

MODULE	TITLE	AREA	ADD/ CHANGE	FM	TO	DELTA
71715	Sustained Control Room and Plant Observations	OPS	A	0	504 ¹	+504
71707	Operational Safety Verification	OPS	A	0	30 ²	+30
92701	Followup	SA/QV	A	0	5 ³	+5
92720	Corrective Action	SA/QV	A	0	60 ⁴	+60
83750	Occupational Radiation Exposure	PS	a	0	35 ⁵	+35
NET CHANGE						+634

¹Justification: 24-hour coverage of the Unit 1 Restart for three weeks

²Justification: Special Inspection on Containment Sumps

³Justification: Service Request Backlog Restart Inspection

⁴Justification: Service Request Backlog Restart Inspection

⁵Justification: Extended SALP Cycle requires additional inspection in this area

SUMMARY OF MIP CHANGES - UNIT 2

MODULE	TITLE	AREA	ADD/ CHANGE	FM	TO	DELTA
71715	Sustained Control Room And Plant Observation	OPS	A	0	168 ¹	+168
71707	Operational Safety Verification	OPS	A	0	30 ²	+30
83750	Occupational Radiation Exposure	PS	A	0	35 ³	+35
NET CHANGE						+233

¹Justification: 24-hour coverage of the Unit 2 Restart for one week

²Justification: Special Inspection on Containment Sumps

³Justification: Extended SALP Cycle requires additional inspection in this area

SOUTH TEXAS PROJECT

EXECUTIVE SUMMARY

SALP CYCLE 010

(AUGUST 2, 1992 THRU SEPTEMBER 11, 1993)

FINAL

MARCH 24, 1993

I. OVERVIEW

Both units have remained shutdown since February 3, 1993, as a result of turbine-driven auxiliary feedwater pump operability concerns and other issues. Unit 2 entered its third refueling outage on February 27, 1993. Declining performance trends have been observed in the areas of plant operations, radiological controls, maintenance/surveillance, engineering/technical support, and safety assessment/quality verification. Numerous examples of little or inadequate corrective actions taken for known Technical Specification governed equipment problems, poor maintenance practices, and ineffective postmaintenance testing and corrective maintenance have been identified during the OSTI, several special inspections initiated to resolve issues, and the AIT inspection.

II. PERFORMANCE INDICATORS

Quarter 92-04

Analysis: Review of the performance indicators did not reveal that any MIP changes were required.

III. SUMMARY OF SIGNIFICANT REGULATORY ISSUES

A summary of significant regulatory issues include the following:

- A DET will be performing an inspection during March and April 1993. As a result of this initiative, a number of regional initiative inspections have been cancelled during this QPPR.
- Two enforcement conferences were conducted on March 8, 1993, concerning the TS 3.0.3 issue on May 17, 1992, and eight examples of a failure of the licensee's self-verification program. The resolution of both of these issues is pending the concurrence of the Office of Enforcement.
- An enforcement conference is scheduled for March 25, 1993, to address the operability of a number of MOVs in the residual heat removal system and the low head safety-injection system, and the repeated failure of the licensee's corrective action program to identify and correct problems.
- A special inspection was completed on March 17, 1993, concerning the operability of the solid-state protection system (SSPS). Although in

draft, a number of violations were identified, with one being considered for escalated enforcement.

- A special inspection was completed on March 12, 1993, concerning the regulatory issues identified during the AIT. Although in draft, ten apparent violations were identified, with two being considered for escalated enforcement.
- A special inspection was completed on March 19, 1993, concerning the steam generator manway leakage. A number of apparent violations were identified. The report is presently in draft.
- During the quarter, there were nine severity level IV violations cited in both units: one each in OPs, RC and SA/QV, five in M/S, and three in E/TS.
- The routine resident inspection, which is in draft, has identified two additional severity level IV violations in OPs and M/S.
- STP was discussed at the January 1993, Senior Managers' Meeting.

IV. PLANT OPERATIONS

PREVIOUS RATINGS

SALP 91: 2 92: 2 QPPR 01-93: (NC) 03-24: (NC)

STRENGTHS: The OSTI findings indicate that operators are generally motivated and perform their duties in a professional manner. Operators' performance during the operator license examinations was good.

WEAKNESSES: Both Unit 2 senior reactor operator watchstanders were absent from the control room for a period of approximately 45 seconds. An EDG was unintentionally tripped during a maintenance run because of inadequate venting of the lubricating oil piping. There appeared to be a lack of operations commitment to training needs identification. A personnel error due to inadequate self-verification by a nonlicensed operator was responsible for inadvertently deenergizing the Proteus Computer. Operators throttled the wrong train's ECW valve while conducting a test that resulted in a low flow on the operating ECW train.

PERFORMANCE ASSESSMENT: Performance in this functional area was mixed.

RECOMMENDED MIP REVISIONS:

Units 1 and 2

42700 - RI - 35 to 0 Hours

71500 - RI - 50 to 0 Hours

Reason: These modules being performed by DET

Unit 2

60705 - RI (FIRS) - 64 to 0 Hours

60710 - RI (FIRS) - 64 to 0 Hours

86700 - RI (FIRS) - 32 to 0 Hours

Reason: These modules being performed by DET

V. RADIOLOGICAL CONTROLS

PREVIOUS RATINGS

SALP 91: 1 92: 1 QPPR 01-93: (-) 03-24: (-)

STRENGTHS: None noted during this QPPR period.

WEAKNESSES: An individual left and reentered the radiologically restricted area on several occasions, without frisking, while transferring storage drums. An individual violated a radiological posting by entering the control room while a radiation detector surveillance was in progress. Numerous problems with the plant's toxic gas monitors were experienced because of equipment malfunctions. Two examples of the failure to adhere to TS requirements were identified. A licensee HP was observed entering the radiological control area without the required dosimetry.

PERFORMANCE ASSESSMENT: Licensee performance has degraded during this quarter.

RECOMMENDED MIP REVISIONS: None

VI. MAINTENANCE/SURVEILLANCE

PREVIOUS RATINGS

SALP 91: 2 92: 2D QPPR 01-93: (-) 03-24: (-)

STRENGTHS: Three surveillance tests were witnessed and good self-verification and supervisory oversight were observed based on a review of three resident inspector reports. Two complex surveillances were effectively performed. In general, the OSTI found that work activities were conducted in accordance with procedure requirements.

WEAKNESSES: The Unit 1 fourth refueling outage was completed several weeks behind schedule because of refueling equipment problems and unanticipated emergency diesel generator rework. Personnel errors occurred that resulted in eight examples of work being performed on the wrong component, train, and unit. Numerous examples of repetitive corrective maintenance included an activity on the Unit 2 turbine-driven auxiliary feedwater pump. Implementation of the boric acid prevention program was poor, resulting in the failure of identified RCS leakage being appropriately dispositioned. The OSTI identified poor implementation of the licensee's lubrication control program.

The licensee's MOVATs testing group incorrectly installed a jumper in a safety-related MOV, which resulted in accuator motor failure.

A significant number of escalated enforcement issues are pending, involving inadequate corrective maintenance conducted on MOVs, EDGs, and TDAFWPs in both units

PERFORMANCE ASSESSMENT: The licensee continues to experience problems in this functional area. Numerous maintenance-related personnel errors caused by a lack of self-verification and degraded/failed equipment, caused by a lack of preventive and corrective maintenance, are indicative of a declining trend in this area.

RECOMMENDED MIP REVISIONS:

Units 1 and 2

61700 - RI - 30 to 0 Hours

61725 - RI - 18 to 0 Hours

62700-03 - RI - 25 to 0 Hours

62703-13 - RI - 25 to 0 Hours

62704 - RI - 25 to 0 Hours

62705 - RI - 25 to 0 Hours

Reason: Modules to be performed by DET

62700-05 - RI - 0 to 50 Hours

Reason: Special inspection for DG/AFW operability

VII. EMERGENCY PREPAREDNESS

PREVIOUS RATINGS

SALP 91: 2 92: 2 QPPR 01-93: (NC) 03-24: (NA)

STRENGTHS: No inspections have been completed in this functional area for this QPPR period.

WEAKNESSES: NA

PERFORMANCE ASSESSMENT: NA

RECOMMENDED MIP REVISIONS: None

VIII. SECURITY

PREVIOUS RATINGS

SALP 91: 1 92: 2 QPPR 01-93: (NC) 03-24: (NC)

STRENGTHS: Some improvement was noted in the picture quality of assessment aids. Effective action had been taken to identify prepositioned compensatory post locations. The OSRE determined that STP was a good performer in this functional area.

WEAKNESSES: The OSTI noted that security personnel were not always responsive to operators.

PERFORMANCE ASSESSMENT: No changes in performance level were noted

RECOMMENDED MIP REVISIONS: None

IX. ENGINEERING/TECHNICAL SUPPORT

PREVIOUS RATINGS

SALP 91: 2I 92: 2 QPPR 01-93: (NC) 03-24: (NC)

STRENGTHS: Evaluators' performance during the operator license examinations was good. The training department appeared effective in implementing the licensed operator requalification training program; however, the training department did not have an approved biennial licensed operator training plan.

WEAKNESSES: Engineering support was poor in the resolution of an electrical load sequence problem with an essential chiller and toxic gas monitors. Both units were required to shut down because of the discovery of incorrectly calibrated components (steam line rate and negative rate pressure time constants) caused by deficient surveillance procedures. A Criterion V violation was cited because the licensee's Technical Advisory Council failed to review and approve the current biennial training plan. Poor engineering evaluations of steam generator manway stud elongation resulted in the licensee apparently over-tensioning steam generator manway studs. Engineering support in resolving MOV issues with respect to thermal binding, hydraulic lock of springpacks, valve disk wedging, and excess thrust and torque conditions was considered weak.

PERFORMANCE ASSESSMENT: Performance was mixed.

RECOMMENDED MIP REVISIONS:

Units 1 and 2

37001 - RI - 35 to 0 Hours

Reason: Module to be performed by DET

X. SAFETY ASSESSMENT/QUALITY VERIFICATION

PREVIOUS RATINGS

SALP 90: 1D 91: 2 QPPR 01-93: (-) 03-24: (-)

STRENGTHS: None noted during this QPPR period.

WEAKNESSES: Four Unit 1 residual heat removal pump trips, occurring in an 11-day period, were caused, in part, by procedure weaknesses and operator inattention. A station problem report (SPR) was not initiated until the fourth occurrence. The OSTI identified five examples where safety-related equipment or program implementation deficiencies were not properly identified or inadequate corrective actions were taken. The inadequacy of corrective actions for a number of MOVs was the subject of a special inspection that has resulted in escalated enforcement. Inadequate corrective action was determined to be a contributing cause to the Unit 1's TDAFWP being in an inoperability condition for approximately six weeks. One apparent violation was identified that involved eight examples of a failure to follow procedural requirements for performing self-verification; a second apparent violation was identified concerning the failure to initiate an SPR concerning the May 17, 1992, TS 3.0.3 issue. These actions were the subject of an enforcement conference. Poor follow up of identified problems concerning the over-tensioning of steam generator manway studs was identified in a special inspection completed March 19, 1993.

PERFORMANCE ASSESSMENT: The licensee's performance appears to have declined.

RECOMMENDED MIP REVISIONS:

Units 1 and 2

40500-02 - RI - 37.5 to 0 Hours

92720 - RI - 37.5 to 0 Hours

Reason: Modules to be performed by DET

92701-01 - RI - 30 to 60 Hours

Reason: Additional hours required to followup on the large number of issues at STP

XI. OFFICE OF NUCLEAR REACTOR REGULATION (NRR) ACTIVITIES

The NRR input related to STP for the January 1993 QPPR consists of observations in the functional areas of E/TS and SA/QV:

E/TS

The licensee's review of the design for the toxic gas monitor modification was less than adequate in that it did not identify that a tripped channel could become "untripped" without operator action.

SA/QV

The general quality of submittals has been good, although on some occasions additional information was required and provided by the licensee. There was one instance where a request for additional information was untimely and delayed the completion of an amendment.

XII. ATTACHMENTS

1. MIPS 2 Report
2. IFS 1 Report

**SUMMARY OF MIP CHANGES
STP-UNIT 1 QPPR MEETING
MARCH 24, 1993**

MODULE	TITLE	AREA	ADD/ CHANGE	FM	TO	DELTA
42700	PLANT PROCEDURES	OPS	C	35	0	-35
71500	BOP	OPS	C	50	0	-50
61700	SURV PROCEDURES	MS	C	30	0	-30
61725	ST AND CAL CONTROL PROGRAM	MS	C	18	0	-18
62700-03	MAINT PRACTICES	MS	C	25	0	-25
62703-13	MAINT OBSERVATION	MS	C	25	0	-25
62704	INSTRUMENT MAINTENANCE	MS	C	25	0	-25
62705	ELECTRICAL MAINTENANCE	MS	C	25	0	-25
62700-05	MAINT PRACTICES	MS	A	0	50	+50
37001	50.59 SAFETY EVALUATIONS	ETS	C	35	0	-35
40500-02	SAFETY ASSESSMENT	SA/QV	C	37.5	0	-37.5
92720	CORRECTIVE ACTION PROGRAM	SA/QV	C	37.5	0	-37.5
92701-01	OPEN ITEM FOLLOWUP	SA/QV	C	30	60	+30
NET CHANGE						-263

**SUMMARY OF MIP CHANGES
STP-UNIT 2 QPPR MEETING
MARCH 24, 1993**

MODULE	TITLE	AREA	ADD/ CHANGE	FM	TO	DELTA
42700	PLANT PROCEDURES	OPS	C	35	0	-35
71500	BOP	OPS	C	50	0	-50
60705	PREPARATION FOR REFUELING - FIRS	OPS	C	64	0	-64
60710	REFUELING ACTIVITIES - FIRS	OPS	C	64	0	-64
86700	SPENT FUEL POOL - FIRS	OPS	C	32	0	-32
61700	SURV PROCEDURES	MS	C	30	0	-30
61725	ST AND CAL CONTROL PROGRAM	MS	C	18	0	-18
62700-03	MAINT PRACTICES	MS	C	25	0	-25
62703-13	MAINT OBSERVATION	MS	C	25	0	-25
62704	INSTRUMENT MAINTENANCE	MS	C	25	0	-25
62705	ELECTRICAL MAINTENANCE	MS	C	25	0	-25
62700-05	MAINT PRACTICES	MS	A	0	50	+50
37001	50.59 SAFETY EVALUATIONS	ETS	C	35	0	-35
40500-02	SAFETY ASSESSMENT	SA/QV	C	37.5	0	-37.5
92720	CORRECTIVE ACTION PROGRAM	SA/QV	C	37.5	0	-37.5
92701-01	OPEN ITEM FOLLOWUP	SA/QV	C	30	60	+30
NET CHANGE						-423

ATTACHMENT A
REGION IV
INSPECTION SCHEDULE

FACILITY: South Texas Project Unit 1

REPORT NUMBER: 94011

START DATE: 03/14/94

LEAD

INSPECTOR: Joe Tapia

ORG CODE: 4613

ACCOMPANYING

INSPECTORS: Dennis Boal - OI

MODULES TO BE PERFORMED

MODULE	IPE CODE (CO/RI/RR AF/OA/RT ST/HT/SI)	CURRENT STATUS (N/M/P R/C)	APPROVED IN MIP (Y/N)	PLANNED HOURS ON MIP	ESTIMATED HOURS TO COMPLETE
92700	RR				

OPEN ITEMS TO BE REVIEWED:

Onsite review of LER 94-003; see attached inspection plan.

RESIDENT INSPECTOR NOTIFIED: Y x N

LEAD INSPECTOR:

Joe Tapia

DATE:

2-11-94

INSPECTOR'S BRANCH CHIEF:

John Pellet

DATE:

3-11-94

DRP BRANCH CHIEF:

Bill Johnson

DATE:

3/11/94

INSPECTION ANNOUNCED: Y N x WHEN

BY WHOM

cc: Howell
 OI
 Tapia
 Satorius
 Collins
 Pellet

Wise
 Johnson
 Boal

C/22

DATE	ITEM	COMMENT
01/29/86	Gusset installation on Damper 113 inspected, per construction records	LER 9403
04/26/86	Damper cycled twice, per construction records	LER 9403
05/12/86	Final inspection of damper 113, per construction records	LER 9403
04/93	DET raised tornado damper testing issue	No PM for cycling
05/29/93	PM changes initiated to include manual stroking periodically	LER 9403
09/27/93	Tornado damper issues added to a draft restart issue list by the STP Restart Panel	Panel Meeting Notes
10/05/93	Tornado damper testing identified as a recently identified issue in a public meeting in RIV	Meeting presentation slide
10/14/93	STP Restart Panel discussed making tornado dampers a restart issue	Panel Meeting Notes
10/14/94	STP Restart Panel was informed that tornado damper testing would be inspected starting 11/01/93	Panel Meeting Notes
10/15/93	Tornado damper testing added as restart issue in CAL Supplement 2	
10/21/93	SR 210282 performed revised PM on two of the sections of Damper 113, cycled satisfactorily. Other two sections had an interference problem which prevented measurement of closing data. Manual override lever arm slipped on axle, so sections could not be cycled manually. Engineering evaluation determined that these problems did not impact the dampers ability to cycle under tornado conditions.	LER 9403
10/29/93	In a public meeting, HL&P identified status of tornado damper restart issue as completed- ready for NRC review	Meeting presentation slide
11/01-03/93	NRC inspection conducted on damper issue	9342
11/19/93	Inspection Report 9342 issued, based on inspection performed 11/1-3/93. Concluded that tornado damper restart issue was resolved.	

ATTACHMENT A
REGION IV
INSPECTION SCHEDULE

FACILITY: South Texas Project Unit 1

REPORT NUMBER: 94011

START DATE: 03/14/94

LEAD

INSPECTOR: Joe Tapia

ORG CODE: 4613

ACCOMPANYING

INSPECTORS: Dennis Boal - OI

MODULES TO BE PERFORMED

MODULE	IPE CODE (CO/RI/RR AF/OA/RT ST/HT/SI)	CURRENT STATUS (N/M/P R/C)	APPROVED IN MIP (Y/N)	PLANNED HOURS ON MIP	ESTIMATED HOURS TO COMPLETE
92700	RR				

OPEN ITEMS TO BE REVIEWED:

Onsite review of LER 94-003; see attached inspection plan.

RESIDENT INSPECTOR NOTIFIED: Y N

LEAD INSPECTOR: *J. J. Wister* for Joe Tapia DATE: 3-11-94

INSPECTOR'S BRANCH CHIEF: *J. J. Wister* for John Pellet DATE: 3-11-94

DRP BRANCH CHIEF: Bill Johnson *W. Johnson* DATE: 3/11/94

INSPECTION ANNOUNCED: Y N WHEN _____ BY WHOM _____

cc: Howell
 OI
 Tapia
 Satorius
 Collins
 Pellet
 Wise
 Johnson
 Boal

C/22

Inspection Plan - STP1 LER 94-003

- Review the history of Damper 1VDA113 (3V101VDA113) from construction completion, inspection, testing in 1986 to testing, repair, modification, and testing in 1993 and 1994.
- Review the circumstances in October and November of 1993 which led to Inspection Report 50-498/9342 reaching an erroneous conclusion with respect to the status of the damper.
- Review the circumstances which led the licensee to tell the NRC in a public meeting on 10/29/93 that the tornado damper issue resolution was completed and ready for NRC review.
- Review the circumstances which led the licensee to state in LER 94-003 that the NRC had been notified of the damper deficiency on January 24, 1994, when the notification actually was not made.
- Assess the safety significance of the damper being inoperable from original construction until 1994.
- Determine whether any violations of NRC regulations occurred.

Attachments:

Timeline

LER 50-498/94-003

NRC Inspection Report 50-498/93-42; 50-499/93-42

DATE	ITEM	COMMENT
01/29/86	Gusset installation on Damper 113 inspected, per construction records	LER 9403
04/26/86	Damper cycled twice, per construction records	LER 9403
05/12/86	Final inspection of damper 113, per construction records	LER 9403
04/93	DET raised tornado damper testing issue	No PM for cycling
05/29/93	PM changes initiated to include manual stroking periodically	LER 9403
09/27/93	Tornado damper issues added to a draft restart issue list by the STP Restart Panel	Panel Meeting Notes
10/05/93	Tornado damper testing identified as a recently identified issue in a public meeting in RIV	Meeting presentation slide
10/14/93	STP Restart Panel discussed making tornado dampers a restart issue	Panel Meeting Notes
10/14/94	STP Restart Panel was informed that tornado damper testing would be inspected starting 11/01/93	Panel Meeting Notes
10/15/93	Tornado damper testing added as restart issue in CAL Supplement 2	
10/21/93	SR 210282 performed revised PM on two of the sections of Damper 113, cycled satisfactorily. Other two sections had an interference problem which prevented measurement of closing data. Manual override lever arm slipped on axle, so sections could not be cycled manually. Engineering evaluation determined that these problems did not impact the dampers ability to cycle under tornado conditions.	LER 9403
10/29/93	In a public meeting, HL&P identified status of tornado damper restart issue as completed- ready for NRC review	Meeting presentation slide
11/01-03/93	NRC inspection conducted on damper issue	9342
11/19/93	Inspection Report 9342 issued, based on inspection performed 11/1-3/93. Concluded that tornado damper restart issue was resolved.	

12/02/93	Public meeting with licensee. Status of restart issue on tornado dampers noted as complete	Meeting presentation slide
01/05/94	STP Restart Panel discussed the status of closure of restart issues. The tornado damper issue was noted as being resolved.	Panel Meeting Notes
01/07/94	Tornado damper restart issue noted by the licensee as closed by inspection report in a public meeting	Meeting presentation slide
01/18/93	Work initiated to correct interference. Lower section was stroked successfully. Upper left section could not be stroked due to linkage impacting a gusset inside the ductwork.	LER 9403
01/18/94	SPR 940120 written to evaluate damper problem	Phone con with licensee 3/9/94
01/19/94	Service Request written to trim the gusset	Phone con with licensee 3/9/94
01/21/94	Gusset trimmed and stroked satisfactorily	Phone con with licensee 3/9/94
01/24/94	Problem with the upper left section of damper determined to be reportable. 50.72 report was not made.	LER 9403 stated report was made
02/14/94	Closure of restart issues discussed in public meeting	Meeting presentation slide
02/15/94	STP Restart Panel recommended restart approval	Panel Meeting Notes
02/15/94	Unit 1 restart authorized by Regional Administrator	Letter to licensee

The Light company

Houston Lighting & Power South Texas Project Electric Generating Station P. O. Box 289 Wadsworth, Texas 77483

March 2, 1994
ST-HL-AE-4680
File No.: G26
10CFR50.73

MAR - 7

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

South Texas Project
Unit 1
Docket No. STN 50-498
Licensee Event Report 94-003
Regarding an Inoperable Tornado Damper

Pursuant to 10CFR50.73, Houston Lighting & Power submits the attached Unit 1 Licensee Event Report (LER) 94-003 regarding an inoperable tornado damper. This event did not have an adverse effect on the health and safety of the public.

On February 23, 1994, an extension of the due date of this letter to March 2, 1994, was requested and granted by Mr. W. D. Johnson of NRC Region IV.

If there are any questions regarding this matter, please contact Mr. J. M. Pinzon at (512) 972-8007 or me at (512) 972-8664.



J. F. Groth
Vice President,
Nuclear Generation

JTC/eg

Attachment: LER 94-003 (South Texas, Unit 1)

94-003

Project Manager on Behalf of the Participants in the South Texas Project

03/02/94 (9:51am)

C:

L. J. Callan
Regional Administrator, Region IV
U. S. Nuclear Regulatory Commission
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Arlington, TX 76011

Lawrence E. Kokajko
Project Manager
U. S. Nuclear Regulatory Commission
Washington, DC 20555 13H15

David P. Loveless
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Rufus S. Scott
Associate General Counsel
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Operations - Records Center
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Dr. Joseph M. Hendrie
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D. K. Lacker
Bureau of Radiation Control
Texas Department of Health
1100 West 49th Street
Austin, TX 78756-3189

U. S. Nuclear Regulatory Comm.
Attn: Document Control Desk
Washington, D.C. 20555

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (RMBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0704), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) South Texas Unit 1	DOCKET NUMBER (2) 05000 498	PAGE (3) 1 OF 4
---	--------------------------------	--------------------

TITLE (4)

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
01	24	94	94	-- 003 --	00	03	02	94	FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9) 5	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)									
POWER LEVEL (10) 0	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)						
	20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)						
	20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER						
	20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	Classify in Abstract below and in Test, NRC Form 368A						
	20.405(a)(1)(iv)	X 50.73(a)(2)(iii)	50.73(a)(2)(viii)(B)							
20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	VOLUNTARY							

LICENSEE CONTACT FOR THIS LER (12)		TELEPHONE NUMBER (Include Area Code)
NAME Jairo M. Pinzon - Senior Engineer		(512) 972-8027

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)									
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS

SUPPLEMENTAL REPORT EXPECTED (14)	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (if yes, complete EXPECTED SUBMISSION DATE). N/A				

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On January 24, 1994, Houston Lighting & Power determined that a condition discovered on January 18, 1994, was reportable and notified the NRC. On January 18, 1994, at approximately 1100 hours, with Unit 1 in Mode 5, Maintenance personnel discovered an interference between the plant exhaust vent tornado damper linkage and a gusset (ductwork structural stiffener). The damper consists of four sections, each of which has linkage that interconnects the individual damper blades. The gusset limited the closing travel of the damper linkage in the upper left section to approximately 40% of full stroke, thus preventing the section from closing. The cause of the condition was an undetected construction interference which was corrected by notching the gusset to allow free travel of the damper linkage.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.8 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (PHOB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND FOR THE PAPERWORK REDUCTION PROJECT (3150-0186), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
South Texas, Unit 1	05000 498	94	-- 003 --	00	2 OF 4

TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

DESCRIPTION OF EVENT:

On January 24, 1994, Houston Lighting & Power determined that a condition discovered on January 18, 1994 was reportable and notified the NRC. On January 18, 1994, at approximately 1100 hours, Unit 1 was in Mode 5 with the reactor shutdown, reactor pressure at 350 psi, and reactor temperature at 147 degrees F. During the performance of service request VE-210282, Maintenance personnel discovered an interference between the plant exhaust vent tornado damper (IVDA113) linkage and a gusset (ductwork structural stiffener). The damper consists of four sections, each of which has linkage that interconnects the individual damper blades. The gusset limited the closing travel of the damper linkage in the upper left damper section to approximately 40% of full stroke, thus preventing the section from closing completely. The chronology of this condition follows.

Each damper section consists of six vertical damper blades, each fixed to its own axle. The six damper blade axles are connected by fixed linkages such that the six blades in the section operate together. Each damper section has a manual override lever arm attached with a friction-fit collar to two of the outer damper blade axles. The manual override lever arms are used to manually rotate the damper blade axles to overcome the constant force springs holding the damper blades open, in order to verify that the damper blades, axles, and linkages are free to rotate. This action is known as manually stroking the damper.

On May 29, 1993, in response to a Diagnostic Evaluation Team observation that there was no evidence of testing to show that tornado dampers would actuate as required, STP initiated changes to existing preventive maintenance work instructions for all tornado dampers (fifteen per unit) to include manual stroking on a periodic basis. The stroking of the dampers per the revised preventive maintenance work instructions was scheduled to be accomplished during the outage, based on manpower and system availability. One tornado damper was successfully stroked in June 1993, followed by eight more during August 1993.

On October 21, 1993, during the first performance of the revised work instruction on damper IVDA113, the two right sections were stroked successfully. However, it was found that an interference between the constant force spring assemblies and the manual override lever arms affected manual stroking of the two left sections of the damper. While attempting to stroke the two left sections, Maintenance personnel also observed that the manual override lever arms slipped on their damper blade axles in both sections. The lower left section stroked fully, but the measured force necessary to close the damper was increased by the interference. The upper left section could not be stroked manually due to the interference with the manual override lever arm. An engineering evaluation determined that the interference with the upper left section manual lever arm would not have prevented the damper blades from closing in response to a tornado because the damper blade axle rotated within the friction-fit collar, which would have allowed the damper blades to shut. The evaluation concluded that an operability concern did not exist.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARDED COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MMRB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, ADD TO THE PAPERWORK REDUCTION PROJECT (3150-0106), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
South Texas, Unit 1	05000 498	94	-- 003 --	00	3 OF 4

TEXT (if more space is required, use additional copies of NRC Form 366A) (17)

On January 18, 1994, work was initiated to correct the interference between the constant force spring assemblies and the manual override lever arms. Following the adjustments, the lower left section was stroked successfully. However, after the manual override lever arm on the upper left section was tightened on the damper blade axle, and the lever arm rotated the damper blade axle, the damper blade linkage moved and impacted a gusset installed in the ductwork. This interference had not been discovered earlier because the manual override lever had slipped on the damper blade axle and had not moved the linkage far enough to hit the gusset. This newly-discovered interference was evaluated for reportability and the NRC was notified on January 24, 1994.

The tornado exhaust damper is manufactured by American Warming and Ventilating, Inc. as model number NBD-70. The Energy Industry Identification System component function identifier is DMP and the system identifiers are VF and VG.

CAUSE OF EVENT

The cause of this condition is an undetected construction interference. A review of the construction documents indicated that the gusset installation was inspected on January 29, 1986, that the damper was cycled twice on April 26, 1986, and that the final inspection of the damper was conducted on May 12, 1986. It could not be determined from the records why the interference was not detected.

ANALYSIS OF EVENT

There were no actual safety consequences of this event.

The safety function of tornado dampers is to prevent the rapid depressurization of HVAC systems and buildings in the event of a tornado. The plant main exhaust vent tornado damper (1VDA113) protects several exhaust systems, including the Fuel Handling Building exhaust. The Fuel Handling Building exhaust is the only exhaust system that is safety-related, as it mitigates the consequences of a fuel handling accident and a loss of coolant accident by limiting the site boundary dose within the guidelines of 10CFR100. The simultaneous occurrence of a tornado and a fuel handling accident or a loss of coolant accident could have potential safety consequences. The Severe Weather Guidelines suspend fuel movement during a tornado warning condition, which significantly decreases the risk of a fuel handling accident during a tornado. Therefore, potential safety consequences could result only from the simultaneous occurrence of a loss of coolant accident and a tornado. Based on the STP Probabilistic Safety Assessment, the probability of this occurring is extremely small.

Due to the undetected gusset interference with the damper linkage, from early in 1986 until early in 1994, the Fuel Handling Building exhaust system was not protected at the plant main exhaust vent from the adverse effects of a tornado as provided in the design basis. Therefore, this event is reportable pursuant to 10CFR50.73(a)(2)(ii)(B) in that it represents a condition that was outside the design basis of the plant.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (ROOM 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, ATTENTION: PAPERWORK REDUCTION PROJECT (3150-0283) OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
South Texas, Unit 1	05000 498	94	-- 003 --	00	4 OF 4

TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

CORRECTIVE ACTION

1. The interference between the damper and gusset was removed by notching the gusset to allow free travel of the damper linkage.

ADDITIONAL INFORMATION

No previous similar events have been reported at the South Texas Project.

All Unit 1 tornado dampers have been successfully stroked. The Unit 2 plant exhaust vent tornado damper has also been successfully stroked in accordance with the revised preventive maintenance work instruction.

UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION IV

611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064

November 19, 1993

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

Houston Lighting & Power Company
ATTN: William T. Cottle, Group
Vice President, Nuclear
P.O. Box 1700
Houston, Texas 77251

SUBJECT: NRC INSPECTION REPORT 50-498/93-42; 50-499/93-42

This refers to the inspection conducted by Mr. Mark A. Satorius during the period November 1-3, 1993. The inspection included a review of activities authorized for your South Texas Project facility. At the conclusion of the inspection, the findings were discussed with those members of your staff identified in the enclosed report.

Areas examined during the inspection are identified in the report. Within these areas the inspection consisted of a review of the actions that you have taken to resolve the issue of testing tornado dampers installed on safety-related heating, ventilation, and air conditioning systems. Based on the results of this inspection, it was determined that Restart Issue 15 identified in Inspection Report 50-498/93-31; 50-499/93-31 is considered resolved.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be placed in the NRC Public Document Room.

Should you have any questions concerning this inspection, will be pleased to discuss them with you.

Sincerely,

A. Bill Beach, Director
Division of Reactor Projects

Enclosure:
Appendix - NRC Inspection Report
50-498/93-31; 50-499/93-31 w/attachments

cc w/enclosure:
Houston Lighting & Power Company
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P.O. Box 289
Wadsworth, Texas 77483

City of Austin
Electric Utility Department
ATTN: J. C. Lanier/M. B. Lee
721 Barton Springs Road
Austin, Texas 78704

City Public Service Board
ATTN: K. J. Fiedler/M. T. Hardt
P.O. Box 1771
San Antonio, Texas 78296

Newman & Holtzinger, P. C.
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Atlanta, Georgia 30339-5957

Mr. Joseph M. Hendrie
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State of Texas
1100 West 49th Street
Austin, Texas 78756

Judge, Matagorda County
Matagorda County Courthouse
1700 Seventh Street
Bay City, Texas 77414

Houston Lighting & Power Company

-3-

Licensing Representative
Houston Lighting & Power Company
Suite 610
Three Metro Center
Bethesda, Maryland 20814

Houston Lighting & Power Company
ATTN: Rufus S. Scott, Associate
General Counsel
P.O. Box 61867
Houston, Texas 77208

bcc to DMB (IE01)

bcc distrib. by RIV:

J. L. Milhoan

Section Chief (DRP/A)

MIS System

RIV File

R. Bachmann, OGC, MS: 15-B-18

T. O. McKernon (DRS)

Resident Inspector

Lisa Shea, RM/ALF, MS: MNBB 4503

DRSS-FIPS

Project Engineer (DRP/A)

Section Chief (DRP/TSS)

PE:DRP/A	C:DRP/A	D:DRP
MASatorius;df	WBJohnson	ABBeach
11/ /93	11/ /93	11/ /93

APPENDIX

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report No.: 50-498/93-42
50-499/93-42

License Nos.: NPF-76
NPF-80

Licensee: Houston Lighting & Power Company
P.O. Box 1700
Houston, Texas 77251

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

Inspection At: Matagorda County, Texas

Inspection Conducted: November 1-3, 1993

Inspectors: Mark A. Satorius, Project Engineer, Project Section A, Division
of Reactor Projects

Approved: _____
W. D. Johnson, Chief, Project Section A Date _____

Inspection Summary

Areas Inspected (Units 1 and 2): Routine, announced inspection to resolve the issue of testing tornado dampers installed on safety-related heating, ventilation, and air conditioning (HVAC) systems.

Results (Units 1 and 2):

- The inspector concluded that no further review of tornado damper issues was required prior to the restart of Unit 1 and that Restart Issue 15 could be considered resolved (Section 6.1).

Summary of Inspection Findings:

- Inspection Followup Item 498;499/9331-76 was closed (Section 6.1).

Attachments:

- Attachment 1 - Persons Contacted and Exit Meeting

DETAILS

1 BACKGROUND

Both units at STPEGS were shut down in early February 1993 and remain shut down as a result of numerous broad scope problems identified by the NRC and the licensee.

NRC Inspection Report 50-498/93-31; 50-499/93-31, issued on October 15, 1993, identified 16 Restart Issues that required resolution prior to the restart of Unit 1. In addition to these Restart Issues, a number of items related to these Restart Issues were identified. The purpose of this inspection was to determine the licensee's effectiveness in addressing Restart Issue 15, "Tornado Damper Issues," and to establish a basis for concluding that this Restart Issue has been adequately resolved by the licensee.

During the Diagnostic Evaluation Team (DET) Inspection, the DET identified the following issue concerning tornado dampers:

- Failure of tornado dampers could prevent cooling of safety-related components and systems. Thirty dampers had not been tested to verify their designed operation. The licensee agreed to test the dampers. NRC will evaluate the licensee's test procedures and results.

This inspection reviewed the licensee's tests and results to determine whether a regulatory requirement existed that would have required preservice testing and subsequent periodic testing following installation.

Fifteen tornado dampers were installed in each unit at STPEGS. The dampers installed were:

<u>DAMPER DESCRIPTION</u>	<u>STPEGS IDENTIFICATION NUMBER (UNIT 1/UNIT 2)</u>
Control Room Outside Air Intake	3V111VDA075/3V112VDA075
Electrical Auxiliary Building (EAB) Elevator Machine Room Exhaust	3V111VDA077/3V112VDA077
EAB Elevator Machine Room Supply	3V111VDA078/3V112VDA078
EAB HVAC Exhaust	3V111VDA076/3V112VDA076
Fuel Handling Building (FHB) Supply	3V101VDA052/3V102VDA052
Mechanical Auxiliary Building (MAB) Main HVAC Supply	3V101VDA118/3V102VDA118
MAB Main HVAC Supply	3V101VDA119/3V102VDA119

MAB Main HVAC Supply	3V101VDA120/3V102VDA120
Plant Exhaust Stack	3V101VDA113/3V102VDA113
Reactor Containment Building (RCB) Purge Supply	3V141VDA001/3V142VDA001
Tendon Gallery Exhaust	3V141VDA298/3V142VDA298
Technical Support Center (TSC) HVAC Exhaust	3V111VDA277/3V112VDA277
TSC HVAC Supply	3V111VDA276/3V112VDA276
TSC Outside Air Intake	3V111VDA302/3V112VDA302
TSC Smoke Purge Exhaust	3V111VDA275/3V112VDA275

2 DAMPER TESTING REQUIREMENTS (92720)

The inspector reviewed the following STPEGS documents to determine what testing was required to be performed on the tornado dampers.

- Technical Specifications
- Updated Final Safety Analysis Report
- Design Basis Document for the EAB HVAC System (5V119VB1022)
- Design Basis Document for the FHB HVAC System (5V129VB0116)
- Design Basis Document for the MAB HVAC System (5V109VB0110)
- Design Basis Document for the RCB HVAC System (2V149VB0114)
- Tornado Damper Vendor Manual (American Warming and Ventilating, Inc., Document 80278-722)
- Bechtel Specifications for Safety Class Dampers (3V289VS0008)

The Bechtel Specification required that the damper vendor conduct a postfabrication shop test consisting of cycling the tornado dampers 25 times to ensure freedom of movement. In addition to these tests, the Bechtel specification required that the vendor test one Unit 1 supply and one Unit 1 exhaust tornado damper for leak rate and blade deflection (no requirement was specified for conducting these later tests on any Unit 2 tornado damper). The inspector reviewed the vendor test packages and determined that all of these vendor required tests had been completed satisfactorily.

Further review revealed that only the design basis documents referred to any type of postinstallation periodic testing. The design basis documents stated that all tornado dampers were required to be manually stroked as part of scheduled maintenance to assure damper operability. A review of preventive and corrective maintenance conducted on the dampers since installation was unable to confirm that the dampers had ever been cycled following installation. Discussions with the system engineer, who was familiar with the licensee's HVAC systems since damper installation, stated that to his knowledge, the tornado dampers had never been cycled during any maintenance activity.

3 TORNADO DAMPER MAINTENANCE ACTIVITIES (92720)

Following the DET's identification of the tornado damper testing issue, the licensee revised all of the periodic preventive maintenance procedures to include stroking of the dampers. Previously, these procedures performed cleaning, lubrication, and inspection, on an 18- to 24-month periodicity, and did not cycle the dampers to ensure freedom of operation. The maintenance procedure currently utilized by the licensee include:

<u>STPEGS</u> <u>IDENTIFICATION NUMBER</u> <u>(UNIT 1/UNIT 2)</u>	<u>FREQUENCY</u>	<u>WORK INSTRUCTION</u> <u>(UNIT 1/UNIT 2)</u>
3V111VDA075/3V112VDA075	24 Months	93000484/485
3V111VDA077/3V112VDA077	24 Months	93000498/499
3V111VDA078/3V112VDA078	24 Months	93000500/501
3V111VDA076/3V112VDA076	24 Months	93000495/496
3V101VDA052/3V102VDA052	Outage	93000493/494
3V101VDA118/3V102VDA118	Outage	93000518/519
3V101VDA119/3V102VDA119	Outage	93000518/519
3V101VDA120/3V102VDA120	Outage	93000518/519
3V101VDA113/3V102VDA113	Outage	93000491/492
3V141VDA001/3V142VDA001	Outage	93000516/517
3V141VDA298/3V142VDA298	Outage	93000514/515
3V111VDA277/3V112VDA277	24 Months	93000504/505
3V111VDA276/3V112VDA276	24 Months	93000509/510

3V111VDA302/3V112VDA302	24 Months	93000502/503
3V111VDA275/3V112VDA275	24 Months	93000504/505

The inspector reviewed these procedures and concluded that the changes would be effective to ensure free damper operation.

This preventive maintenance had been performed on all of the Unit 1 tornado dampers, and 11 of the 15 tornado dampers installed in Unit 2, with the remaining 4 to be completed prior to the Unit 2 restart. Some relatively minor damper stiffness was documented on Unit 1 Dampers 3V101VDA118, 119, and 120 on August 25, 1993. This identified deficiency was worked under Service Request (SR) 92058 and consisted of lubricating and then manually cycling the dampers several times.

Other problems developed during maintenance activities on Unit 1 Dampers 3V101VDA052 and 3V101VDA113. The problem encountered on Damper 3V101VDA052 consisted of some binding and bearing stiffness identified during the attempts to cycle the damper on October 23, 1993. Because the functionality of this damper affected the operability of the FHB exhaust air system, Unit 1 entered Technical Specification 3.9.12, when operators declared all trains of the FHB exhaust air system inoperable. These problems were dispositioned by SR 210277, which was worked October 25, 1993, and consisted of lubricating and exercising the damper. This activity was successful in loosening the damper bearings.

The problem discovered with Damper 3V101VDA113 consisted of difficulties with cycling the damper and obtaining spring tension values using a dynamometer during maintenance performed on October 22, 1993. Damper 3V101VDA113, which was not equipment governed under Technical Specifications, consisted of four damper sections, each section being a self-contained unit with its own blades and actuation spring. During repair activities worked under SR 210282 on October 25, 1993, two of the sections satisfactorily cycled. The other two sections were capable of cycling; however, due to an interference problem between the spring operator and a portion of the damper frame, maintenance personnel were unable to measure the closing tension using the dynamometer. After resolving the interference problems, the damper (all four sections) was successfully cycled and the tension data recorded.

The licensee analyzed both latter damper problems and determined that both dampers in their as-found condition would have been able to perform their safety function under tornado conditions. The inspector concluded that this determination was appropriate.

4 PROCEDURAL ENHANCEMENTS (92720)

The licensee was in the process of changing the periodic preventive maintenance procedures to collect quantitative values for damper spring tension in order to conduct trending analysis of tornado damper performance. The inspector reviewed the maintenance feedback requests that were intended to

accomplish this activity. Other procedural improvements included changing Procedure OPOP04-ZO-0002, Revision 3, "Severe Weather Guidelines," to require that following any close tornado strike, all tornado dampers will be inspected and cycled, in accordance with the preventive maintenance procedures. In addition to this change, a second change to Procedure OPOP04-ZO-0002 provides guidance that, following any close tornado strike, specific HVAC exhaust fans will be secured in order to ensure that all tornado dampers that may have closed will reposition to their normally open condition.

5 GENERIC TORNADO DAMPER CONSIDERATIONS

Outside the scope of this inspection, the Office of Nuclear Reactor Regulation had initiated a study to generically evaluate the lack of testing requirements for tornado dampers. At present, there were no specific requirements for testing these dampers, either by periodic cycling or under simulated tornado conditions.

6 CLOSED ITEMS RELATED TO RESTART ISSUES (92701)

6.1 (Closed) Inspection Followup Item 498;499/9331-76: Failure of tornado dampers could prevent cooling of safety-related components and systems

This item was closed based on the licensee's corrective action described in paragraphs 2, 3, and 4 of this report.

7 ASSESSMENT OF MANagements RECEPTIVENESS TO IDENTIFYING AND CORRECTING PLANT PROBLEMS (92720)

The inspector determined that licensee management had responded in a proactive manner to the problems identified with the tornado dampers. Actions taken were appropriate and appeared to be taken in a manner commensurate with the safety significance of the issue.

ATTACHMENT 1

1 PERSONS CONTACTED

1.1 Licensee Personnel

V. Albert, Administrator, Engineering Projects, Plant Engineering Department
D. Bize, Licensing Engineer, Nuclear Licensing
T. Cloninger, Vice President, Nuclear Engineering
J. Conly, Licensing Engineer, Nuclear Licensing
J. Cottam, Engineering Supervisor, Plant Engineering Department
M. Grim, Licensing Engineer, Nuclear Licensing
J. Groth, Vice President, Nuclear Generation
S. Head, Deputy General Manager, Nuclear Licensing
T. Jordan, General Manager, Nuclear Engineering
J. Johnson, Supervisor, Nuclear Assurance
M. Kanavos, Manager, Mechanical and Nuclear Engineering, Design Engineering Department
D. Leazar, Manager, Plant Engineering Department
L. Myers, Plant Manager, Unit 1
G. Parkey, Plant Manager, Unit 2
M. Sicard, Unit Supervisor, Plant Operations
M. Smith, Senior Consultant, Assessments
S. Thomas, Assistant, Vice President Nuclear Engineering

In addition to the personnel listed above, the inspectors contacted other personnel during this inspection period.

1.2 NRC Personnel

M. Satorius, Project Engineer, Project Section A, Division of Reactor Projects
J. Pellet, Chief, Operations Section, Division of Reactor Safety

The above listed licensee and NRC personnel attended the exit meeting.

2 EXIT MEETING

An exit meeting was conducted on October 22, 1993. During this meeting, the inspectors reviewed the scope and findings of this report. The licensee did not take exception with any of the inspection findings nor identify as proprietary any information provided to, or reviewed by, the inspectors.

SOUTH TEXAS PROJECT

EXECUTIVE SUMMARY SEMIANNUAL PLANT PERFORMANCE REVIEW 94-02 APRIL 20, 1994

SALP CYCLE 010
(AUGUST 2, 1992 THRU SEPTEMBER 24, 1994)

I. OVERVIEW

Both units were shutdown for most of the assessment period, as a result of many concerns identified by Region IV, the Diagnostic Evaluation, and the licensee. Poor performance has been recently identified in maintenance activities, particularly in the area of control of contractor personnel; however, overall licensee performance has improved. The plant's material condition has improved significantly; the maintenance backlog has been reduced and approaches a manageable level; specific hardware issues are nearing resolution; and the post-maintenance testing and corrective action programs and the engineering backlog problems have improved.

Since the Confirmatory Action Letter (CAL) for Unit 1 was lifted on February 15, 1994, the unit has entered Modes 2 and 1. On February 28, while at 28 percent power and increasing to 50 percent power, Feedwater Regulating Valve D failed shut, ultimately resulting in the reactor being manually tripped by control room operators, prior to receiving an automatic reactor trip from low steam generator level. Following the trip, a primary-to-secondary leak was identified in Steam Generator C, and was subsequently quantified at approximately 160 gallons per day. The licensee decided to cool down, enter midloop operation, and repair the leak. Following repairs to the steam generator, while in mid-loop operation on March 10, an inadvertent safety injection actuation and loss of RHR for about 5 minutes was caused by operator errors during Solid State Protection System testing. Following evaluation, corrective actions, and a management meeting in the NRC office on March 16, the unit was restarted on March 21. The unit reached 100 percent power on April 7.

Unit 2 has completed fuel reload and is presently in Mode 5. The licensee's restart plan indicates Mode 3 in May and full power operation in June 1994. Critical path items include resolution of Emergency Diesel Generator 22 problems and completion of integrated engineered safety feature actuation system testing.

The licensee is developing a corrective action process which will consist of all station problems being identified using a single entry document. These problems will then be initially dispositioned by the first line supervisor, who will determine whether the problem is a hardware or a soft issue. Based on this decision, the resolution of the problem will be conducted utilizing the service request, plant change form, station problem report, or other system. The revised corrective action program at South Texas has similarities to other Region IV licensee's single entry document corrective action programs. The licensee acknowledges that they have a significant amount of

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procedure revision, training of personnel, and implementation work to accomplish prior to placing this new system in operation.

II. PERFORMANCE INDICATORS

The long term performance indicators (90-4 to 93-3) still show the number of automatic scrams recorded by Unit 2 trended higher than the peer group, with significant events, safety system failures, and forced outage rate trending higher than the peer group for both units.

The short term SHUTDOWN performance indicators and to a lesser extent the long term indicators reflect some improved performance. However, there have been several SSAs and SSFs for both units that are not yet reflected in the performance indicator data. These include a failure of a diesel generator to load because of a failed field flash, a manual reactor trip because of a failed feedwater regulating valve, a safety injection actuation signal because of operator error, inoperable batteries on the emergency ventilation system and inadvertent emergency diesel generator starts.

III. SUMMARY OF SIGNIFICANT REGULATORY ISSUES

There were no escalated enforcement actions initiated during this assessment period. A concern was identified for the personnel performance and management controls which lead to the engineered safety features actuation signal. There have also been several examples of contract workers working on the wrong component, failing to follow procedures, and failing to exercise adequate self-verification. In addition, equipment clearance order and configuration control problems have been identified; these later problems were not confined to contract workers. A recent finding by the resident inspectors identified the containment sumps as having unacceptable gaps and openings in their cover screens. The licensee had not responded effectively to prior NRC information notices on this subject.

IV. PLANT OPERATIONS

PREVIOUS RATINGS

SALP 91: 2 92: 2

QPPR 93-01: (NC) QPPR 93-02: (NC) QPPR 93-03: (-) SPPR 93-04: (-)

QPPR 94-01: (NC) SPPR 94-02: (NC)

STRENGTHS: The licensee has implemented 6-shift control room staffing. Additional reactor plant operators (RPOs) have also been hired and are presently in training; these new RPOs are intended to relieve shortages that have contributed to excessive overtime, operator errors due to overwork, and tight shift scheduling due to limited numbers of non-licensed operators. An additional RPO has been added to each crew.

Overall performance of plant operations was generally good. It was noted that professionalism in the control room, and attentiveness to plant indications and alarms was good. The level of oversight of the operation of the plant by the senior reactor operators was good, and the licensee appeared to have

succeeded in reducing both the level of general traffic in the control room and the burden on operators from work start, post-maintenance testing oversight, and maintenance planning and scheduling; weak areas that had been evident in the past and had been noted by the Diagnostic Evaluation and other NRC inspections. During the reactor trip and subsequent transient on February 28, the shift inspectors noted good to excellent performance by the control room staff. RPO attention to detail in identifying component deficiencies has been noted as another weakness.

WEAKNESSES: There were weaknesses noted with communications in some crews, as evidenced by an absence of formality in communications with other members of the licensee's staff and acknowledgements and repeat-backs of reports. Additionally, operators' use of self-verification was inconsistent, and in some cases failed to meet management's expectations. An example involved the operator performance and lack of management controls which lead to the engineered safety features actuation signal. The inspectors also noted examples of weak procedural compliance, as evidenced by a violation cited for the deletion of procedural steps without reviews being performed as procedurally required.

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: Overall, operations performance has shown some improvement in the conduct of routine activities and their ability to direct plant operations. However, the licensee's performance continues to reflect problems with the use of self-verification and their ability to consistently meet management's expectations.

MIP RECOMMENDATIONS: The MIP will be assessed during the STP panel meeting on April 19, 1994. The recommendations from this meeting will be presented during the SPPR meeting.

V. MAINTENANCE

PREVIOUS RATINGS

SALP 91: 2 92: 2D

QPPR 93-01: (-) QPPR 93-02: (-) QPPR 93-03: (-) SPPR 93-04: (-)

QPPR 94-01: (NC) SPPR 94-02: (NC)

STRENGTHS: It was determined that the licensee had successfully achieved their goal of reducing the service request (SR) backlog to less than 1000 open power production SRs. Although a significant number of SRs were generated during the plant's escalation to power, through effective utilization of the operations work control group (OWCG), backlog numbers were not increased significantly and remain at approximately 1200 open SRs. The maintenance rover concept of working minor maintenance activities by qualified craft permanently assigned to the OWCG has resulted in the licensee improving their efficiency in completing work and has permitted them to maintain the backlog numbers at what appears to be a manageable number. The plant's material condition has been much improved over the past operating periods.

The licensee continues to work off high priority items in an acceptably timely fashion. Their resolution of main control board deficiencies and inoperable

automatic functions continues. The numbers of outstanding main control board deficiencies and inoperable automatic functions has increased slightly since the CAL was lifted, primarily due to the return to service of systems, and the subsequent identification of problems. The licensee's efforts have been successful in reducing the previously identified burden on both licensed and non-licensed operators because of main control board deficiencies and inoperable automatic functions.

WEAKNESSES: Although the licensee has thus far been successful in maintaining the SR backlog at a reasonable level, there have been a number of examples of recurrent equipment malfunctions and failures that are indicative of a less than fully effective resolution of past hardware problems. These problems are especially troublesome due to their existence prior to the long forced outage of both units, and the fact that they appear to have persisted through extensive rework and improvements made to balance-of-plant and other equipment.

Concerns were identified with management oversight of the maintenance process, including inadequate control of scheduling pressure. One problem was the licensee's apparent reluctance to test reactor containment building 48-inch purge valves, in accordance with the requirements of the ASME Section XI and the TS. There have been several failures to properly implement equipment clearance orders, but none have been identified since January 1994.

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: The licensee has been effective in the maintenance backlog for Unit 1. However, its ability to maintain the backlog within the established goals has not been tested once resources are moved to Unit 2. Continuing secondary equipment problems represent a continuing concern in this area. Management involvement to ensure scheduling pressures do not result in inappropriate scheduling decisions was not effectively applied. Personnel performance has been mixed but improving.

MIP RECOMMENDATIONS: The MIP will be assessed during the STP panel meeting on April 19, 1994. The recommendations from this meeting will be presented during the SPPR meeting.

VI. ENGINEERING

PREVIOUS RATINGS

SALP 91: 2I 92: 2

QPPR 93-01: (NC) QPPR 93-02: (NC) QPPR 93-03: (-) SPPR 93-04: (NC)

QPPR 94-01: (NC) SPPR 94-02: (NC)

STRENGTHS: The licensee has added engineers to several of their organizations; for example, the number of full time HL&P design engineers has been increased and the vendor technical information program has added two engineers, bringing the total to three. In addition to these manpower increases, the licensee has adapted a more rigorous and state-of-the-art engineering tracking and management system. This computer tracking system is capable of being updated on a daily basis by supervising engineers and weekly planning meetings are conducted with these supervising engineers and

engineering managers in order to fine tune the workload, and shift resources or work assignments to support emergent plant requirements.

Additionally, the licensee's budget for engineering enhancements to update vendor manuals and drawings has been increased substantially for calendar year 1994.

WEAKNESSES: System engineer knowledge has shown improvement; however, were observed by NRC shift inspectors providing non-conservative guidance to operators. Repetitive equipment failures indicate a need for more thorough failure analysis.

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: In general, engineering activities have been good, providing appropriate support to operations and maintenance. It was noted that there have been few changes in the licensee's performance in engineering since the CAL was lifted. The excessive engineering backlogs identified by the Diagnostic Evaluation and other NRC inspections were adequately addressed and documented during Restart Issue inspections. Since that time, the licensee has concentrated on routine management of engineering activities and enhancing their processes.

MIP RECOMENDATIONS: The MIP will be assessed during the STP panel meeting on April 19, 1994. The recommendations from this meeting will be presented during the SPPR meeting.

VII. PLANT SUPPORT

PREVIOUS RATINGS

SALP 94:

SPPR 93-04: (-) QPPR 94-01: (NC) SPPR 94-02: (NC)

STRENGTHS: The radiological program implementation continued to be a strength. An inspection in January found the radiological environmental monitoring program to be excellent with thorough QA audits and strong internal program reviews. A routine security inspection performed in January found proper implementation of alarm stations and communications, properly maintained isolation zones.

WEAKNESSES: Some long standing security equipment problems remain to be resolved but the licensee has budgeted the necessary equipment upgrades.

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: The radiation protection organization performance remained strong. Previous performance concerns in EP have been corrected. The new management in the security organization is viewed as a positive step to correcting long standing problems with that organization's performance.

MIP RECOMENDATIONS: The MIP will be assessed during the STP panel meeting on April 19, 1994. The recommendations from this meeting will be presented during the SPPR meeting.

VIII. TIA STATUS

There are no open TIAs.

IX. MAJOR SITE ACTIVITIES

COMPLETED

- 9230 - MOVATS Inspection
- 9235 - OSTI
- 9327 - Check Valve TI 2515/110
- STIR
- DET
- SPEAKOUT Inspection
- Operational Readiness Assessment Team Inspection - December 1993/January 1994

PLANNED

- Several Regional based inspections during the Restart Inspection activities

SOUTH TEXAS PROJECT

SEMIANNUAL PLANT PERFORMANCE REVIEW 94-02
APRIL 20, 1994

SUMMARY OF MIP CHANGES - UNIT 1

MODULE	TITLE	AREA	ADD/ CHANGE	FM	TO	DELTA
73756	Inservice Testing	M	A	0	35	+35
NET CHANGE						+35

¹Justification:

73756-03 RI provide hours to review review implementation of IST program including installed instrumentation.

SOUTH TEXAS PROJECT

SEMIANNUAL PLANT PERFORMANCE REVIEW 94-02
APRIL 20, 1994

SUMMARY OF MIP CHANGES - UNIT 2

MODULE	TITLE	AREA	ADD/ CHANGE	FM	TO	DELTA
73756	Inservice Testing	M	A	0	35	+35
71715	Plant Restart	O	A	0	300	+300
92709	Corrective Action	ALL	A	0	100	+100
NET CHANGE						+435

¹Justification:

73756-03 RI to provide hours to review implementation of IST program including installed instrumentation.

71715-03 RI to provide Unit 2 sustained control room observation during restart.

92709-09 RI to review Unit 2 restart issues.

April 20, 1994

PRE-DECISIONAL

NARRATIVE SUMMARY OUTLINE FOR
PLANTS DISCUSSED AT THE LAST SMM
SOUTH TEXAS PROJECT

I. HISTORY

South Texas Project (STP) was first discussed at the January 1993, Senior Management Meeting (SMM), initially because of poor and declining performance for two systematic assessment of licensee performance periods. Repetitive hardware problems had resulted in numerous plant trips, transients, engineering safety features actuation, and forced outages. STP was subsequently discussed at the June 1993 SMM, when it was placed on the list of plants that were considered poor performers. Both units at STP were shutdown under a Confirmatory Action Letter (CAL) which was issued in February 1993, as a result of many NRC and licensee identified problems. As discussed in the Narrative Summary for the previous three SMM discussion papers, the identified problems were grouped into three broad areas, including material condition and housekeeping, human performance, and organizational performance. A Diagnostic Evaluation was conducted in March and April 1993, and the findings of that inspection were presented to the licensee on June 3, 1993.

The CAL for Unit 1 was lifted on February 15, 1994, and the unit subsequently entered Modes 2 and 1. The unit attained 28 percent power before a manual reactor trip was initiated because a feedwater regulating valve failed closed. The unit restart was delayed because of a steam generator tube plug leak. The unit was restarted on March 21 and full power operation was attained on April 7. Unit 2 completed reloading the reactor vessel on April 3, 1994, and entered Mode 5 on April 8.

II. CHANGES SINCE LAST SMM

Based on the results of the Operational Readiness Assessment Team, the February 14, 1994, public meeting, and Region IV's inspection efforts at STP since October 1993, the restart issues were found to have been adequately addressed and the CAL was lifted for Unit 1. The staff provided 24 hour coverage of plant activities during the startup and power ascension of Unit 1.

The STP Restart Panel developed a Restart Action Plan, following the guidance in Manual Chapter 0350, "Staff Guidance for Restart Approval." The Panel used this plan to ensure coordination of NRC resources associated with the restart of Unit 1. A similar approach has been taken for Unit 2. Management meetings with the licensee have been held approximately monthly. Most of these meetings have been held at the site. All of the management meetings have been open to public observation.

A portion of the licensee's own assessment of the adequacy of the effectiveness of their programs consists of independent self-assessments of performance that are being performed by the licensee's Nuclear Assurance Department. These assessments are being conducted at specific milestones during the recovery of both units. Region IV has conducted inspections which assessed both the quality and independence of these self-assessments and the thoroughness and degree of adequacy that the licensee had addressed previously and recently identified problems. In addition to this assessment, the licensee has conducted independent assessments utilizing an outside party. These assessments identified areas for improvement which included the size of the station problem report backlog. These improvement items were discussed by the licensee during the April 8, 1994, public meeting.

An Office of the Inspector General inspection report that received limited distribution and was issued February 18, 1993, identified that violations of 10 CFR 50.7 had occurred involving two former security force personnel. This

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issue was subsequently referred to the Department of Justice. A demand for information was sent to the licensee on September 29, 1993, and a response has been received. The licensee denied the violations.

The Operational Readiness Assessment Team completed its inspection activities in January 1994. The team identified continuing weaknesses with configuration management and the corrective action program but the team was generally supportive of Unit 1 restart.

A special inspection conducted by the resident inspector staff was performed in January 1994. The inspection addressed issues identified by the residents during a reactor containment building sump inspection. Specifically, the as-found condition of the emergency containment sump enclosures did not meet the design basis because openings in the sump screen were too wide and debris could enter the sump during the recirculation phase of the design basis accident.

An issue has been identified concerning non-Technical Specification governed; but safety-related heating, ventilation, and air conditioning tornado dampers. The specific issue, which was first identified by the Diagnostic Evaluation Team (DET), referred to the absence of any testing or maintenance documentation that would indicate that these components had been tested since their installation. Although this issue was not included in the DET report, it was assigned as a staff action, and the Restart Panel identified the issue as a Restart Issue. A Restart Issue inspection closed this issue in November 1993. However, the licensee has subsequently reported that a section of one tornado damper originally believed to be functional, would not have been capable of performing its safety-related function in the event of a tornado at the station. The regional staff performed a special inspection with the Office of Investigation to review details associated with the failure to make a 10 CFR 50.72 Notification and an inconsistency between the subject LER and restart issue inspection report. Two violations were cited.

The Regional Staff conducted an assessment of licensee performance as Unit 1 approached 90% power. The results of this assessment indicated that generally plant operators were performing acceptably, with a few exceptions noted in the areas of oversight and control of plant tests and surveillances. However, there were several persistent hardware issues that have not been fully resolved. These issues include continuing material condition and reliability problems with steam generator feedwater pumps, steam generator power-operated relief valves, emergency diesel generators, and feedwater regulating valves.

On March 10, 1994, while in mid-loop operation in support of the leaking steam generator tube repair, the licensee lost shutdown cooling for approximately five minutes. This event occurred during the performance of a solid state protection system surveillance when licensed operators failed to inform the control room of procedure adherence problems encountered during the performance of the activity. A management meeting was conducted with the licensee on March 16, 1994. During that meeting the licensee informed the staff that no hardware problems had been identified with the solid state protection system. The contributing factors to the loss of shutdown of cooling was a lack of management oversight and an unacceptable performance by the operators conducting the surveillance.

The licensee has experienced several problems with emergency diesel generators. These problems stemmed from former poor work practices, weak procedures, subcomponent failures, and failure to effectively use vendor information. Efforts in late 1993 by the licensee to improve maintenance practices and thereby improve the reliability of emergency diesel generators has resulted in extensive diagnostic testing that the staff considers to be

indicative of good responsiveness to resolving the previously identified problems in this area. However, other problems with emergency diesel generators have recently been identified. These problems consist of a relay problem with the field flash circuit of Standby Diesel Generator 11, which has been determined to have rendered the machine inoperable from February 3 to March 11, 1994; inadvertent starts of Standby Diesel Generator 21; and a broken piston and other signs of significant degradation of Standby Diesel Generator 22. A management meeting, open to public observation, was conducted with the licensee on March 16, 1994, to discuss these recently identified emergency diesel generator problems and the actions the licensee has taken, or plans to take, to resolve them. Subsequently, Standby Diesel Generator 22 experienced a fuel injection pump (jerk pump) hold down bolt failure. This has been a recurring failure on the these engines. The Region IV and NRR staffs are continuing to follow up on the potential standby diesel generator operational concerns.

A request by Thomas J. Saporito in accordance with 10 CFR 2.206 to shut down the facility due to a variety of issues has been acknowledged and denied. The final Director's Decision is still under review. This decision has been delayed until the Department of Justice completes its review of possible criminal violations in regard to whistleblower activities. Additionally, various allegations have been made at the facility by current and former plant workers, and these are under review.

III. FUTURE ACTIVITY

Region IV has scheduled the inspection activities required to assess the licensee's efforts to restart Unit 2. A public meeting following the completion of the inspection effort will be held to ascertain whether the Unit 2 restart CAL should be lifted. The licensee has scheduled May 16, 1994, as the date for the restart of Unit 2. Based on the preliminary results of the inspections conducted to date and an assessment of the licensee's restart plan, Region IV anticipates that this date is achievable. The largest threat to the schedule is resolution of diesel generator problems.

Unit 2 remains in its third refueling outage and is currently in Mode 5. The licensee has shifted the majority of the work activities to Unit 2 to facilitate completion of restart work activities.

LISTING OF SIGNIFICANT INSPECTIONS CONDUCTED WITHIN THE PREVIOUS YEAR

<u>DATE OF INSPECTION</u>	<u>AREA OF INSPECTION</u>
March-April 1993	Diagnostic Evaluation
December 1993	Employee Concern Program Review
December 1993-January 1994	Operational Readiness Assessment Team Inspection
February - April 1994	Continuous Control Room Observations

LISTING OF NRC SENIOR MANAGERS MEETINGS WITH THE LICENSEE'S BOARD OF DIRECTORS

<u>DATE OF MEETING</u>	<u>PURPOSE</u>	<u>NRC MANAGERS ATTENDING</u>
June 3, 1993	DET Exit	E. Jordan J. Parlow J. Milhoan
August 4, 1993	HL&P Board	J. Taylor T. Murley J. Milhoan

DATA SUMMARY

I. OPERATIONAL PERFORMANCE

A. Scram SummaryUnit 1

On February 28, 1994, the unit was manually tripped from 28 percent thermal power because of a failed closed feedwater regulating valve. An automatic reactor trip would have occurred because of decreasing steam generator level.

Unit 2

None

B. Significant Operator Errors

On March 10, 1994, with Unit 1 in Mode 5 an unexpected safety injection actuation occurred on all three trains during restoration from a solid state protection system logic functional test. The reactor operators transitioned from Train S to Train R which resulted in the safety injection actuation signal, a loss of shutdown cooling and a gravity feed path from the refueling water storage tank to the reactor coolant system. It was determined that the operators had conducted the surveillance test on the incorrect train and that inadequate management oversight had been provided in permitting the activity to be performed with the plant in midloop operation.

C. Procedures

A number of procedure weaknesses and examples of licensee personnel failing to follow procedures have been identified since the last SMM. These include:

- the reactor startup procedure did not provide clear guidance on linearly extrapolating the critical boron concentration,
- two temperature switches were replaced in a standby diesel generator room without first conducting a prejob briefing,
- valve maintenance technicians failed to verify the station component valve identifications matched resulting in work being conducted on the incorrect valve,
- operators performed a surveillance on the incorrect train resulting in a safety injection actuation signal and loss of shutdown cooling.

II. CONTROL ROOM STAFFING

A. Number of Licensed Operators

[HOLB]

B. Number and Length of Shifts

[HOLB]

C. Role of STA

One STA is shared between the two units. They are not assigned to a specific shift crew, nor do they receive training with a specific shift crew. STAs do not hold a senior operator's license. The STA's primary duty is to act as an accident prevention and mitigation advisor to the shift supervisor.

D. Recertification Program Evaluation

[HOLB]

III. PLANT-SPECIFIC AND UNIQUE DESIGN INFORMATION

A. Plant-Specific Information

Owners: Houston Lighting and Power Company
City of San Antonio
Central Power & Light Company
City of Austin

Reactor Supplier/Type: Westinghouse/4-loop PWR

Capacity, MWT: 3800 MWT

Architect/Engineer: Bechtel

Constructor: Ebasco

Commercial Operation: Unit 1: August 25, 1988
Unit 2: June 19, 1989

B. Unique Design Information

Containment: Dry, carbon steel lined, prestressed, reinforced concrete, cylindrical structure with a hemispherical dome

Emergency Core Cooling Systems: Three high head safety injection, low head safety injection, and containment spray pumps; three safety injection accumulators; three motor-driven, 50 percent capacity, auxiliary feedwater pumps, one turbine-driven, 50 percent capacity auxiliary feedwater pump per unit

AC Power: Eight 345 kV offsite sources; three 5500 kW Cooper-Bessmer emergency diesel generators per unit

DC Power: Four sets of batteries powering four independent Class 1E 125-VDC subsystems per unit

IV. SIGNIFICANT MPAS OR PLANT-UNIQUE ISSUES

A. Generic Licensing Items

PROJECTS

V. STATUS OF THE PHYSICAL PLANT

A. Problems Attributed to Aging

STP is a relatively new site and no major aging problems have manifested themselves. Because of the length of construction, however, equipment and components are not considered new. There have been many plant events and forced outages primarily because of balance-of-plant equipment problems.

B. Other Hardware Issues

Several longstanding problems associated with the EDGs, the main feedwater system, essential chillers, and MOVs were addressed prior to the Unit 1 startup. Continuing concerns with the adequacy of corrective actions to resolve standby diesel generator fuel injector pump (jerk pump) bolt failures are being addressed by the licensee.

The maintenance backlog has been reduced; however, the licensee's ability to maintain the backlog within reason remains to be demonstrated following the return to power operations.

VI. PRA

A. PRA Insights

[SPSB]

B. PRA Profile

[SPSB]

C. Core Damage Precursor Events

[SPSB]

VII. ENFORCEMENT HISTORY

[OE]

ATTACHED IS THE INFORMATION TO BE USED FOR
THE QPPR FOR

SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION

THE QPPR DISCUSSION WILL BE HELD IN THE DRP
CONFERENCE ROOM

**1400 HOURS
JULY 28, 1994**

B. BEACH
J. DYER
P. GWYNN
D. DIR/DRS
S. COLLINS
R. SCORANO
L. YANDELL
T. WESTERMAN
D. POWERS
I. BARNES
J. PELLET
E. COLLINS
B. MURRAY
* K. PERKINS
* B. ANG
* W. BECKNER
* T. ALEXION
* D. SKAY
* SRI
* SENT VIA E-MAIL

C/35

SOUTH TEXAS PROJECT
EXECUTIVE SUMMARY
QUARTERLY PLANT PERFORMANCE REVIEW 94-03
JULY 28, 1994

SALP CYCLE 010
(AUGUST 2, 1992 THRU SEPTEMBER 24, 1994)

I. OVERVIEW

In general, management influences were evident in the routine day-to-day activities associated with operating the facility. Improvements noted in the Unit 1 control room during the reactor startup were a direct reflection on the implementation of management expectations. Following previous findings that reflected poor attention to detail of the reactor plant operators, management developed a plan of action to correct the problems.

The licensee has been proactive in proposing several improvements to the Technical Specifications. They hope to take advantage of the 3-train design at South Texas to reduce some TS requirements. The licensee has found that this unique design has resulted in additional burdens associated with maintaining the additional train without the compensation expected in terms of less stringent TSs. The licensee also plans to submit TS change requests that are PRA-based and some cost-beneficial licensing actions in the near future. The licensee has actively kept NRR informed of these programs as they progress. NRR recently issued an amendment that included 10 TS changes based on PRA and is currently evaluating a proposal to reduce required diesel generator testing to reduce wear on the diesels. These are seen as positive steps. The licensee has proposed using PRA to satisfy its commitments for fire protection but the staff is not prepared to evaluate this unique approach at this time.

The licensee has been supportive in discussing plant events with NRR in response to NRR concerns. Some examples of events that resulted in conference calls are: (1) spurious starts of diesel generators and failure of the fuel injection pump hold down studs, (2) furmaniting of a leaking steam generator PORV, and (3) the turbine trip/ reactor trip on 6/25. The licensee was prompt in providing the appropriate personnel and relevant documentation to respond to NRC questions.

HL&P senior management has made two visits to NRC Headquarters recently to meet with the EDO and with the Chairman. These visits demonstrate HL&P's initiative to facilitate communication. The licensee has actively pursued meeting with the staff to discuss plans for improvement.

The licensee's response to Generic Letters, surveys, RAIs, etc. has generally been timely. When deadlines could not be met, the licensee anticipated the need for and requested extensions. The licensing organization at STP appears to be improving its work planning process and coordinates expected submittal and response dates with the project manager. HL&P does appear to be

overburdened currently with the extensive number of improvement programs and proposed licensing actions, and new submittals have been later than expected.

There have been two instances recently of incorrect information submitted in LERs. The LERs were subsequently corrected. This appears to be a problem in communication within the licensee's organization.

III. SUMMARY OF SIGNIFICANT REGULATORY ISSUES

There were no escalated enforcement actions initiated during this assessment period. The NRC is presently reviewing a pending DOL case involving the potential unlawful termination of a contract employee.

IV. PLANT OPERATIONS

PREVIOUS RATINGS

SALP 91: 2 92: 2

QPPR 93-01: (NC) QPPR 93-02: (NC) QPPR 93-03: (-) SPPR 93-04: (-)

QPPR 94-01: (NC) SPPR 94-02: (NC) QPPR 94-03: (NC)

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: Overall, licensed operator performance in the control room was found to be good. Generally, shift turnovers, communications, and response to annunciators improved over the inspection period. Improvements were noted in the areas of control room professionalism, pre evolution briefings, implementation of the clearance order program, self-assessment and corrective action, self-verification, control of operator license candidates, and senior operator command and control. It was also noted that attention to detail by reactor plant operators had improved significantly. The operators response to the Unit 2 reactor trip and loss of secondary plant electrical power was generally very good.

Some weaknesses and inconsistencies continued to be noted in the areas of: control room communications, procedural controls, and control room logkeeping. Additionally, reactor operators did not always follow through to determine the cause and correct the problems initiating plant annunciators. A lack of management attention to previously identified concerns involving Technical Specification required channel checks and use of danger tags for controlling locked equipment resulted in additional problems occurring. Several secondary plant configuration control problems were also identified.

The Integrated Assessment Team Inspection scheduled for August 1994 will provide a current review of this area prior to the completion of the SALP period in September. A total of 192 core and 316 regional initiative hours have been added to 40500 to accomplish this task.

MIP RECOMMENDATIONS: No change to the MIP is recommended.

V. MAINTENANCE

PREVIOUS RATINGS

SALP 91: 2 92: 2D

QPPR 93-01: (-) QPPR 93-02: (-) QPPR 93-03: (-) SPPR 93-04: (-)

QPPR 94-01: (NC) SPPR 94-02: (NC) QPPR 94-03: (+)

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: Maintenance practices observed during this inspection period supported continued plant operations. Equipment was properly removed from and returned to service and post-maintenance testing indicated that the equipment had been properly repaired and would continue to perform its intended safety function. Increased first line supervision and improved self-verification techniques were observed in the field; however, these principles were not clearly delineated in the maintenance administrative procedures. The maintenance backlog has continued to decline and plant material condition has been good.

In general, the plant surveillance testing implemented Technical Specification surveillance requirements, was performed in a controlled manner, and supported continued plant operations. Continued problems were noted in the use of procedures involving failure the failure to perform a test in the required sequence and the use of the incorrect surveillance test data sheet.

The Integrated Assessment Team Inspection scheduled for August 1994 will provide a current review of this area prior to the completion of the SALP period in September.

MIP RECOMMENDATIONS: No change to the MIP is recommended.

VI. ENGINEERING

PREVIOUS RATINGS

SALP 91: 2I 92: 2

QPPR 93-01: (NC) QPPR 93-02: (NC) QPPR 93-03: (-) SPPR 93-04: (NC)

QPPR 94-01: (NC) SPPR 94-02: (NC) QPPR 94-03: (NC)

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: In general, engineering activities were good, and provided appropriate support to operations and maintenance. Improved engineering support could reduce repetitive secondary system equipment problems. Throughout the restart efforts, the system engineers' knowledge showed improvement.

The engineering personnel's responses to the failure of a standby diesel generator fuel injection pump and a containment pressure transmitter were good. Appropriate interface with the vendor and calculations of transmitter accuracy permitted the timely return to service of two transmitters in

question. There were however several concerns identified with the engineering support for the IST program which in the aggregate were identified as an overall IST program weakness.

The Integrated Assessment Team Inspection scheduled for August 1994 will provide a current review of this area prior to the completion of the SALP period in September.

MIP RECOMMENDATIONS: No change to the MIP is recommended.

VII. PLANT SUPPORT

PREVIOUS RATINGS

SALP 94:

SPPR 93-04: (-) QPPR 94-01: (NC) SPPR 94-02: (NC) QPPR 94-03: (NC)

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: The radiation protection organization performance remained strong; however, a failure to control contaminated zones in accordance with radiological program procedures and indications that personnel were eating inside the RCA were identified. The licensee's plant housekeeping activities were generally good. The new management in the security organization is viewed as a positive step to correcting long standing problems with that organization's performance, but several concerns remain in the security area involving both hardware and personnel issues.

The Integrated Assessment Team Inspection scheduled for August 1994 will provide a current review of this area prior to the completion of the SALP period in September.

MIP RECOMMENDATIONS: No change to the MIP is recommended.

VIII. TIA STATUS

There are no open TIAs.

IX. MAJOR SITE ACTIVITIES

COMPLETED

- 9230 - MOVATS Inspection
- 9235 - OSTI
- 9327 - Check Valve TI 2515/110
- STIR
- DET
- 9352-Employee Concerns Program
- Operational Readiness Assessment Team Inspection - December 1993/January 1994
- Regional based Restart Inspection activities
- Augmented 24-hour startup coverage

PLANNED

- Integrated Assessment Team Inspection-August 1994

SOUTH TEXAS PROJECT

QUARTERLY PLANT PERFORMANCE REVIEW 94-03
JULY 28, 1994

SUMMARY OF MIP CHANGES - UNIT 1

MODULE	TITLE	AREA	ADD/ CHANGE	FM	TO	DELTA
NONE						
NET CHANGE						

Justification:

SOUTH TEXAS PROJECT

QUARTERLY PLANT PERFORMANCE REVIEW 94-03
JULY 28, 1994

SUMMARY OF MIP CHANGES - UNIT 2

MODULE	TITLE	AREA	ADD/ CHANGE	FM	TO	DELTA
NONE						
NET CHANGE						

Justification:

ATTACHED IS THE INFORMATION TO BE USED FOR
THE SPPR FOR

SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION

THE SPPR DISCUSSION WILL BE HELD IN THE DRP
CONFERENCE ROOM

**1330 HOURS
APRIL 20, 1994**

B. BEACH
P. GWYNN
S. COLLINS
D. CHAMBERLAIN
K. PERKINS
J. MITCHELL
P. HARREL
T. WESTERMAN
D. POWERS
I. BARNES
J. PELLET
E. COLLINS
B. MURRAY
*B. ANG
*S. BLACK
*SRI
*PM
* SENT VIA E-MAIL

SOUTH TEXAS PROJECT
EXECUTIVE SUMMARY
SEMIANNUAL PLANT PERFORMANCE REVIEW 94-02
APRIL 20, 1994

SALP CYCLE 010
(AUGUST 2, 1992 THRU SEPTEMBER 24, 1994)

I. OVERVIEW

Both units were shutdown for most of the assessment period, as a result of many concerns identified by Region IV, the Diagnostic Evaluation, and the licensee. Poor performance has been recently identified in maintenance activities, particularly in the area of control of contractor personnel; however, overall licensee performance has improved. The plant's material condition has improved significantly; the maintenance backlog has been reduced and approaches a manageable level; specific hardware issues are nearing resolution; and the post-maintenance testing and corrective action programs and the engineering backlog problems have improved.

Since the Confirmatory Action Letter (CAL) for Unit 1 was lifted on February 15, 1994, the unit has entered Modes 2 and 1. On February 28, while at 28 percent power and increasing to 50 percent power, Feedwater Regulating Valve D failed shut, ultimately resulting in the reactor being manually tripped by control room operators, prior to receiving an automatic reactor trip from low steam generator level. Following the trip, a primary-to-secondary leak was identified in Steam Generator C, and was subsequently quantified at approximately 160 gallons per day. The licensee decided to cool down, enter midloop operation, and repair the leak. Following repairs to the steam generator, while in mid-loop operation on March 10, an inadvertent safety injection actuation and loss of RHR for about 5 minutes was caused by operator errors during Solid State Protection System testing. Following evaluation, corrective actions, and a management meeting in the NRC office on March 16, the unit was restarted on March 21. The unit reached 100 percent power on April 7.

Unit 2 has completed fuel reload and is presently in Mode 5. The licensee's restart plan indicates Mode 3 in May and full power operation in June 1994. Critical path items include resolution of Emergency Diesel Generator 22 problems and completion of integrated engineered safety feature actuation system testing.

The licensee is developing a corrective action process which will consist of all station problems being identified using a single entry document. These problems will then be initially dispositioned by the first line supervisor, who will determine whether the problem is a hardware or a soft issue. Based on this decision, the resolution of the problem will be conducted utilizing the service request, plant change form, station problem report, or other system. The revised corrective action program at South Texas has similarities to other Region IV licensee's single entry document corrective action programs. The licensee acknowledges that they have a significant amount of

procedure revision, training of personnel, and implementation work to accomplish prior to placing this new system in operation.

II. PERFORMANCE INDICATORS

The long term performance indicators (90-4 to 93-3) still show the number of automatic scrams recorded by Unit 2 trended higher than the peer group, with significant events, safety system failures, and forced outage rate trending higher than the peer group for both units.

The short term SHUTDOWN performance indicators and to a lesser extent the long term indicators reflect some improved performance. However, there have been several SSAs and SSFs for both units that are not yet reflected in the performance indicator data. These include a failure of a diesel generator to load because of a failed field flash, a manual reactor trip because of a failed feedwater regulating valve, a safety injection actuation signal because of operator error, inoperable batteries on the emergency ventilation system and inadvertent emergency diesel generator starts.

III. SUMMARY OF SIGNIFICANT REGULATORY ISSUES

There were no escalated enforcement actions initiated during this assessment period. A concern was identified for the personnel performance and management controls which lead to the engineered safety features actuation signal. There have also been several examples of contract workers working on the wrong component, failing to follow procedures, and failing to exercise adequate self-verification. In addition, equipment clearance order and configuration control problems have been identified; these later problems were not confined to contract workers. A recent finding by the resident inspectors identified the containment sumps as having unacceptable gaps and openings in their cover screens. The licensee had not responded effectively to prior NRC information notices on this subject.

IV. PLANT OPERATIONS

PREVIOUS RATINGS

SALP 91: 2 92: 2

QPPR 93-01: (NC) QPPR 93-02: (NC) QPPR 93-03: (-) SPPR 93-04: (-)

QPPR 94-01: (NC) SPPR 94-02: (NC)

STRENGTHS: The licensee has implemented 6-shift control room staffing. Additional reactor plant operators (RPOs) have also been hired and are presently in training; these new RPOs are intended to relieve shortages that have contributed to excessive overtime, operator errors due to overwork, and tight shift scheduling due to limited numbers of non-licensed operators. An additional RPO has been added to each crew.

Overall performance of plant operations was generally good. It was noted that professionalism in the control room, and attentiveness to plant indications

and alarms was good. The level of oversight of the operation of the plant by the senior reactor operators was good, and the licensee appeared to have succeeded in reducing both the level of general traffic in the control room and the burden on operators from work start, post-maintenance testing oversight, and maintenance planning and scheduling; weak areas that had been evident in the past and had been noted by the Diagnostic Evaluation and other NRC inspections. During the reactor trip and subsequent transient on February 28, the shift inspectors noted good to excellent performance by the control room staff. RPO attention to detail in identifying component deficiencies has been noted as another weakness.

WEAKNESSES: There were weaknesses noted with communications in some crews, as evidenced by an absence of formality in communications with other members of the licensee's staff and acknowledgements and repeat-backs of reports. Additionally, operators' use of self-verification was inconsistent, and in some cases failed to meet management's expectations. An example involved the operator performance and lack of management controls which lead to the engineered safety features actuation signal. The inspectors also noted examples of weak procedural compliance, as evidenced by a violation cited for the deletion of procedural steps without reviews being performed as procedurally required.

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: Overall, operations performance has shown some improvement in the conduct of routine activities and their ability to direct plant operations. However, the licensee's performance continues to reflect problems with the use of self-verification and their ability to consistently meet management's expectations.

MIP RECOMMENDATIONS: The MIP will be assessed during the STP panel meeting on April 19, 1994. The recommendations from this meeting will be presented during the SPPR meeting.

V. MAINTENANCE

PREVIOUS RATINGS

SALP 91: 2 92: 2D

QPPR 93-01: (-) QPPR 93-02: (-) QPPR 93-03: (-) SPPR 93-04: (-)

QPPR 94-01: (NC) SPPR 94-02: (NC)

STRENGTHS: It was determined that the licensee had successfully achieved their goal of reducing the service request (SR) backlog to less than 1000 open power production SRs. Although a significant number of SRs were generated during the plant's escalation to power, through effective utilization of the operations work control group (OWCG), backlog numbers were not increased significantly and remain at approximately 1200 open SRs. The maintenance rover concept of working minor maintenance activities by qualified craft permanently assigned to the OWCG has resulted in the licensee improving their efficiency in completing work and has permitted them to maintain the backlog

numbers at what appears to be a manageable number. The plant's material condition has been much improved over the past operating periods.

The licensee continues to work off high priority items in an acceptably timely fashion. Their resolution of main control board deficiencies and inoperable automatic functions continues. The numbers of outstanding main control board deficiencies and inoperable automatic functions has increased slightly since the CAL was lifted, primarily due to the return to service of systems, and the subsequent identification of problems. The licensee's efforts have been successful in reducing the previously identified burden on both licensed and non-licensed operators because of main control board deficiencies and inoperable automatic functions.

WEAKNESSES: Although the licensee has thus far been successful in maintaining the SR backlog at a reasonable level, there have been a number of examples of recurrent equipment malfunctions and failures that are indicative of a less than fully effective resolution of past hardware problems. These problems are especially troublesome due to their existence prior to the long forced outage of both units, and the fact that they appear to have persisted through extensive rework and improvements made to balance-of-plant and other equipment.

Concerns were identified with management oversight of the maintenance process, including inadequate control of scheduling pressure. One problem was the licensee's apparent reluctance to test reactor containment building 48-inch purge valves, in accordance with the requirements of the ASME Section XI and the TS. There have been several failures to properly implement equipment clearance orders, but none have been identified since January 1994.

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: The licensee has been effective in the maintenance backlog for Unit 1. However, its ability to maintain the backlog within the established goals has not been tested once resources are moved to Unit 2. Continuing secondary equipment problems represent a continuing concern in this area. Management involvement to ensure scheduling pressures do not result in inappropriate scheduling decisions was not effectively applied. Personnel performance has been mixed but improving.

MIP RECOMMENDATIONS: The MIP will be assessed during the STP panel meeting on April 19, 1994. The recommendations from this meeting will be presented during the SPPR meeting.

VI. ENGINEERING

PREVIOUS RATINGS

SALP 91: 2I

92: 2

QPPR 93-01: (NC) QPPR 93-02: (NC) QPPR 93-03: (-) SPPR 93-04: (NC)

QPPR 94-01: (NC) SPPR 94-02: (NC)

STRENGTHS: The licensee has added engineers to several of their organizations; for example, the number of full time HL&P design engineers has been increased and the vendor technical information program has added two engineers, bringing the total to three. In addition to these manpower increases, the licensee has adapted a more rigorous and state-of-the-art engineering tracking and management system. This computer tracking system is capable of being updated on a daily basis by supervising engineers and weekly planning meetings are conducted with these supervising engineers and engineering managers in order to fine tune the workload, and shift resources or work assignments to support emergent plant requirements.

Additionally, the licensee's budget for engineering enhancements to update vendor manuals and drawings has been increased substantially for calendar year 1994.

WEAKNESSES: System engineer knowledge has shown improvement; however, were observed by NRC shift inspectors providing non-conservative guidance to operators. Repetitive equipment failures indicate a need for more thorough failure analysis.

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: In general, engineering activities have been good, providing appropriate support to operations and maintenance. It was noted that there have been few changes in the licensee's performance in engineering since the CAL was lifted. The excessive engineering backlogs identified by the Diagnostic Evaluation and other NRC inspections were adequately addressed and documented during Restart Issue inspections. Since that time, the licensee has concentrated on routine management of engineering activities and enhancing their processes.

MIP RECOMENDATIONS: The MIP will be assessed during the STP panel meeting on April 19, 1994. The recommendations from this meeting will be presented during the SPPR meeting.

VII. PLANT SUPPORT

PREVIOUS RATINGS

SALP 94:

SPPR 93-04: (-) QPPR 94-01: (NC) SPPR 94-02: (NC)

STRENGTHS: The radiological program implementation continued to be a strength. An inspection in January found the radiological environmental monitoring program to be excellent with thorough QA audits and strong internal program reviews. A routine security inspection performed in January found proper implementation of alarm stations and communications, properly maintained isolation zones.

WEAKNESSES: Some long standing security equipment problems remain to be resolved but the licensee has budgeted the necessary equipment upgrades.

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: The radiation protection organization performance remained strong. Previous performance concerns in EP have been corrected. The new management in the security organization is viewed as a positive step to correcting long standing problems with that organization's performance.

MIP RECOMENDATIONS: The MIP will be assessed during the STP panel meeting on April 19, 1994. The recommendations from this meeting will be presented during the SPPR meeting.

VIII. TIA STATUS

There are no open TIAs.

IX. MAJOR SITE ACTIVITIES

COMPLETED

- 9230 - MOVATS Inspection
- 9235 - OSTI
- 9327 - Check Valve TI 2515/110
- STIR
- DET
- SPEAKOUT Inspection
- Operational Readiness Assessment Team Inspection - December 1993/January 1994

PLANNED

- Several Regional based inspections during the Restart Inspection activities

X. ENCLOSURES

1. Master Inspection Plan Report 2
2. IFS Report 1
3. Performance Indicators

SOUTH TEXAS PROJECT

SEMIANNUAL PLANT PERFORMANCE REVIEW 94-02
APRIL 20, 1994

SUMMARY OF MIP CHANGES - UNIT 1

MODULE	TITLE	AREA	ADD/ CHANGE	FM	TO	DELTA
73756	Inservice Testing	M	A	0	35	+35
NET CHANGE						

Justification:

73756-03 RI provide hours to review review implementation of IST program including installed instrumentation.

SOUTH TEXAS PROJECT

SEMIANNUAL PLANT PERFORMANCE REVIEW 94-02
APRIL 20, 1994

SUMMARY OF MIP CHANGES - UNIT 2

MODULE	TITLE	AREA	ADD/ CHANGE	FM	TO	DELTA
73756	Inservice Testing	M	A	0	35	+35
71715	Plant Restart	O	A	0	300	+300
92709	Corrective Action	ALL	A	0	100	+100
NET CHANGE						

Justification:

73756-03 RI to provide hours to review implementation of IST program including installed instrumentation.

71715-03 RI to provide Unit 2 sustained control room observation during restart.

92709-09 RI to review Unit 2 restart issues.

ATTACHED IS THE INFORMATION TO BE USED FOR
THE QPPR FOR

SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION

THE QPPR DISCUSSION WILL BE HELD IN THE DRP
CONFERENCE ROOM

**1330 HOURS
JANUARY 18, 1994**

B. BEACH
P. GWYNN
P. HARRELL
S. COLLINS
A. HOWELL
T. WESTERMAN
L. CONSTABLE
D. POWERS
I. BARNES
J. PELLET
J. CALLAN
D. CHAMBERLAIN
B. MURRAY
SRI*
PM*
* SENT VIA E-MAIL

SOUTH TEXAS PROJECT
EXECUTIVE SUMMARY
QUARTERLY PLANT PERFORMANCE REVIEW 94-01
JANUARY 18, 1994

SALP CYCLE 010
(AUGUST 2, 1992 THRU JULY 2, 1994)

I. OVERVIEW

Both units have remained shutdown the entire quarter, as a result of many concerns identified by Region IV, the Diagnostic Evaluation, and the licensee. Poor performance has been recently identified in maintenance activities, particularly in the area of control of contractor personnel; however, overall licensee performance has improved. The plant's material condition has improved significantly; the maintenance backlog has been reduced and approaches a manageable level; specific hardware issues are nearing resolution; and the post-maintenance testing and corrective action programs and the engineering backlog problems have improved.

II. SUMMARY OF SIGNIFICANT REGULATORY ISSUES

No significant regulatory issues have been identified during this quarter; however, a trend has developed concerning the licensee's effectiveness in management and oversight of contract workers. There have been several examples of contract workers working on the wrong component, failing to follow procedures, and failing to exercise adequate self-verification. In addition, equipment clearance order and configuration control problems have been identified; these later problems are not confined to contract workers. A recent finding by the resident inspectors identified the containment sumps as having unacceptable gaps and openings in their cover screens. This deficiency could permit debris larger than the design permits to enter the suction of the safety-injection pumps and potentially clog the containment spray nozzles or block flow channels in the fuel assemblies.

III. PLANT OPERATIONS

PREVIOUS RATINGS

SALP 91: 2 92: 2

QPPR 93-01: (NC) QPPR 93-02: (NC) QPPR 93-03: (-) SPPR 93-04: (-)

QPPR 94-01: (NC)

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: (NC) Performance trend; control room professionalism and decorum has improved. The licensee's efforts to remove distractions from the control room has been successful and the addition of the sixth shift to the control room staff is viewed as positive. Several recent equipment clearance order and configuration control problems have been identified.

IV. MAINTENANCE

PREVIOUS RATINGS

SALP 91: 2 92: 2D

QPPR 93-01: (-) QPPR 93-02: (-) QPPR 93-03: (-) SPPR 93-04: (-)

QPPR 94-01: (NC)

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: (NC) Performance trend. The maintenance backlog has been significantly reduced; however, there is limited implementation information that would permit concluding that the licensee is able to maintain the maintenance backlog numbers at manageable levels. Recent problems have been identified in the area of contractor oversight and work performance.

V. ENGINEERING

PREVIOUS RATINGS

SALP 91: 2I 92: 2

QPPR 93-01: (NC) QPPR 93-02: (NC) QPPR 93-03: (-) SPPR 93-04: (NC)

QPPR 94-01: (NC)

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: (NC) performance trend. Engineering backlog numbers have been successfully reduced; restart activities continue to assess the licensee's efforts in this area.

VI. PLANT SUPPORT

PREVIOUS RATINGS

SALP 94:

SPPR 93-04: (-) QPPR 94-01: (NC)

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: (NC) performance trend. The weakness previously identified in emergency preparedness have been corrected. New management in the security department is viewed as a positive. Good performance in radiation protection continues.

VII. TIA STATUS

There are currently no open TIA's.

VIII. MAJOR SITE ACTIVITIES

COMPLETED

- 9230 - MOVATS Inspection
- 9235 - OSTI
- 9327 - Check Valve TI 2515/110
- STIR
- DET
- SPEAKOUT Inspection
- Operational Readiness Assessment Team Inspection - December 1993/January 1994--Week 1 completed
- Several Regional based Restart Issue Inspection activities have been completed

PLANNED

- Operational Readiness Assessment Team Inspection - December 1993/January 1994--Week 2 scheduled for January 13-21, 1994
- Several Regional based inspections prior to and during the Restart activities

IX. ENCLOSURES

1. Master Inspection Plan Report 2
2. IFS Report 1

SOUTH TEXAS PROJECT

QUARTERLY PLANT PERFORMANCE REVIEW 94-01
JANUARY 18, 1994

SUMMARY OF MIP CHANGES - UNIT 1

MODULE	TITLE	AREA	ADD/ CHANGE	FM	TO	DELTA
71715	Sustained Control Room and Plant Observations	OPS	A	0	504 ¹	+504
71707	Operational Safety Verification	OPS	A	0	30 ²	+30
92701	Followup	SA/QV	A	0	5 ³	+5
92720	Corrective Action	SA/QV	A	0	60 ⁴	+60
83750	Occupational Radiation Exposure	PS	a	0	35 ⁵	+35
NET CHANGE						+634

¹Justification: 24-hour coverage of the Unit 1 Restart for three weeks

²Justification: Special Inspection on Containment Sumps

³Justification: Service Request Backlog Restart Inspection

⁴Justification: Service Request Backlog Restart Inspection

⁵Justification: Extended SALP Cycle requires additional inspection in this area

SUMMARY OF MIP CHANGES - UNIT 2

MODULE	TITLE	AREA	ADD/ CHANGE	FM	TO	DELTA
71715	Sustained Control Room And Plant Observation	OPS	A	0	168 ¹	+168
71707	Operational Safety Verification	OPS	A	0	30 ²	+30
83750	Occupational Radiation Exposure	PS	A	0	35 ³	+35
NET CHANGE						+233

¹Justification: 24-hour coverage of the Unit 2 Restart for one week

²Justification: Special Inspection on Containment Sumps

³Justification: Extended SALP Cycle requires additional inspection in this area

ATTACHMENT A - PERFORMANCE SUMMARIES IN PREVIOUS OPPER'S
PLANT OPERATIONS

Jan 1993 OPPER

IR 92-26 Tapia, Evans

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, maintenance and surveillance observations, preparation for refueling (Unit 1), followup of a previously identified violation, followup of three inspection followup items, management meeting, and Temporary Instruction 2515/109.

Strengths:

None

Weaknesses:

Performance in the areas of plant operations and operational support was generally good; however, operator inattention contributed, in part, to a condition that resulted in the terminal voltage of a safety-related battery being less than the Technical Specification (TS) minimum required voltage.

IR 92-29 Tapia, Evans

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, engineered safety feature system walkdown (Unit 2), maintenance observations, refueling activities (Unit 1), management meeting, reliable decay heat removal during outages (Temporary Instruction 2515/113), followup on previously identified violations, inspection followup items, and licensee event reports.

Strengths:

A walkdown of the Unit 2 auxiliary feedwater system was performed and all components were identified as being properly positioned to support system operation.

Weaknesses:

A Notification of an Unusual Event was declared when three Unit 1 emergency diesel generators were out of service simultaneously. The declaration of the Notification of Unusual Event was late because of a shift supervisor failed to follow an Emergency Plan implementing procedure.

The licensee experienced five engineered safety features actuations during the inspection period. Two events were caused by equipment failure, two by procedure deficiencies, and one by human error. Although the events were not significant in nature, the number of events indicated a negative performance trend in the area of plant operations. Two of these events constituted violations of NRC requirements.

Low terminal voltage of a safety-related battery went unnoticed by plant operators for approximately 7 hours. A similar event occurred 4 days earlier.

Mar 1993 QPPR

IR 92-32 Tapia, Evans

Areas Inspected: Routine, unannounced inspection of plant status, operational safety verification, engineered safety feature system walkdown (Unit 1), maintenance and surveillance observations, complex surveillance (Unit 1), refueling activities (Unit 1), followup on previously identified violations, and licensee event report followup.

Strengths:

A walkdown of the Unit 1 Class 1E 125 volt direct current power system was performed. All components were correctly aligned and a good level of housekeeping was noted in the Electrical Auxiliary Building.

Weaknesses:

- The falsification of records (log sheets) by two chemical operators resulted in their dismissal.
- An acid spill occurred because of weaknesses in the equipment clearance order procedure.
- Failure to monitor plant drainage points resulted in an air handling unit failure and halon actuation because a plugged drain did not allow condensation to be diverted away from the air handling unit, causing an electrical short.
- The implementation of the reactor trip prevention program may have precluded Unit 2 from tripping when the startup feedwater pump tripped off line with a steam generator feedwater pump out of service for maintenance.

IR 92-35 OSTI

Areas Inspected: Non-routine, unannounced inspection of sustained control room observations, observation of maintenance and surveillance activities, technical support for operations, review of equipment hardware and corrective actions implemented to resolve deficiencies, and plant area tours.

Strengths:

- The team noted several notable strengths in the area of plant operations. Control room decorum and operator professionalism was good. Excellent operator communications were noted. Shift turnover activities were well conducted.
- Operator response to alarms and control board indications was very good.
- The operators maintained excellent control of equipment status. Equipment clearance orders were well documented and appropriately implemented. The operators logs accurately reflected plant evolutions and equipment status. Inoperable safety-related equipment was accurately documented in the operability tracking logs.
- The team concluded that operations was generally well supported by other plant organizations.
- The team noted that housekeeping has improved; however, some decline was noted during the 2 weeks the team was onsite.

Weaknesses:

- The team identified an issue of minor safety significance for a fire door which did not satisfy the National Fire Prevention Association

requirements and transient combustibles being in a diesel generator room without the required combustible fire load permit. The licensee promptly addressed these conditions.

It was noted that procedures for which the biennial review had been completed still had outstanding field change notices posted against them. Because the procedure review process for the biennial review was not as extensive as that required for procedure reviews, the team was concerned that the less formal procedure review process, along with the policy not to incorporate all field change notices at the time of the biennial review, may not ensure that high-quality procedures were always provided.

IR 92-36 Tapia, Evans

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, maintenance and surveillance observations, preparation for refueling (Unit 1), and followup on a previously identified inspection followup item, three deficiencies, and six observations.

Strengths:

None

Weaknesses:

An EDG was unintentionally tripped during a maintenance run because of inadequate venting of the lubricating oil piping.

IR 93-01 McKernon

Areas Inspected: Special announced inspection of the licensed operator requalification program, which included a review of administrative controls for licensed operator training, and observation of operators during the conduct of facility licensee annual licensed operator requalification examinations. The team also observed the performance of the examination evaluators in the simulator and during in-plant walkthroughs. The inspectors used the guidance provided in Temporary Instruction 2515/117, Revision 0, issued December 8, 1992.

Strengths:

Operators' performance during the operating examinations was good.

Weaknesses:

There appeared to be a prior lack of operations commitment to training needs identification.

July 1993 QPPR

IR 93-04 Tapia, Evans

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, maintenance observations, preparation for refueling (Unit 2), followup on a previously identified open item, and licensee event report followup.

Strengths:

None

Weaknesses:

- The failure to maintain the minimum shift crew composition during Mode 4 operation was a violation of TS requirements. The cause of the event was human error.
- A reactivity management issue was identified when plant operators accidentally diluted the reactor coolant system while they were attempting to add boron to the reactor coolant system. The cause of the event, in part, was inadequate understanding of boron thermal regeneration system operation during shutdown conditions.

IR 93-05 Satorius

Areas Inspected: A special inspection was conducted to determine the events surrounding the failure of the turbine driven auxiliary feedwater pumps (TDAFWPs) to start on demand in both Units 1 and 2. The inspection also reviewed a previously identified unresolved item involving the failure to satisfy Technical Specification (TS) requirements relative to Unit 1 emergency diesel generator (EDG) availability and mode change restrictions.

Strengths:

None

Weaknesses:

A violation involved a failure to follow procedures in accordance with the requirements of TS 6.8.1.a. Unauthorized valve positioning of Unit 2's Main Steam Valve (MS) 517 resulted in an overspeed trip on demand of the Unit 2 TDAFWP.

IR 93-07 AIT

Areas Inspected: In accordance with NRC Inspection Manual Chapter 0325, an AIT was dispatched to South Texas Project Electric Generating Station (STPEGS) on February 5, 1993, to review the circumstances surrounding the repetitive overspeed tripping of the Unit 1 turbine driven auxiliary feedwater pump (TDAFWP), and the failure of the Unit 2 TDAFWP to start on demand.

Strengths:

None

Weaknesses:

The team noted that the control room logs typically did not identify mode changes, plant heatup or cooldown conditions, and were inconsistent in their logging of test procedure initiation or completion.

IR 93-08 Runyan

Areas Inspected: Nonroutine, announced, special inspection of technical issues associated with the failure of motor-operated valve SI-31A, Unit 2, and the licensee's identification of five Unit 1 residual heat removal system motor-operated valves that were experiencing excessive torque.

Strengths:

None

Weaknesses:

During the sequence of events following the valve failure, SI-31A may have been torqued in excess of its actuator rating by application of excessive force to the manual handwheel. At the time of the inspection, the licensee had not addressed this potential problem.

IR 93-09 Singh

Areas Inspected: Routine, announced inspection of the licensee's fire protection/prevention program.

Strengths:

The inspection verified that the licensee has maintained an effective fire protection/prevention program.

Weaknesses:

None

IR 93-11 Tapia, Evans

Areas Inspected: Routine, unannounced inspection of plant status, operational safety verification, maintenance and surveillance observations, refueling activities (Unit 2), followup on previously identified violations and open items, and licensee event report followup.

Strengths:

None

Weaknesses:

- A violation of Technical Specifications occurred in Unit 2 when the plant operators failed to place two ventilation trains in the mode required by an action statement within the required time interval. The event was caused by a combination of operator oversight and reliance on an uncontrolled computer generated printout of the operability tracking log.
- A failure to follow procedures resulted in the loss of a nonclass electrical buss, which led to an unplanned reactor coolant system cooldown.
- Multiple violations of Technical Specifications occurred in Unit 1 when the plant operators failed to maintain an operable boron injection flow path and centrifugal charging pump during control rod testing. The causes of the event were inadequate operability tracking log review and postmaintenance testing. This event indicated that additional management oversight of the operability tracking log process is warranted.

IR 93-12 Tapia

Areas Inspected: Nonroutine, announced, special inspection of technical issues associated with undersized 120 volt vital ac fuses.

Strengths:

Reactor operators responded well to a loss of Residual Heat Removal during Mode 5 operation.

Weaknesses:

None

ENFORCEMENT SINCE BEGINNING OF SALP PERIOD

Unit 1

92-029	11-25-92	IV	Failure to Follow an Approved Procedure.
92-029	11-25-92	IV	Failure to Follow an Approved Procedure.
93-011	05-21-93	IV	TS violation due to boron injection flow path being operable during control rod testing.

Unit 2

92-029	11-25-92	IV	Failure to Follow an Approved Procedure.
92-029	11-25-92	IV	Failure to Follow an Approved Procedure.
93-004	04-16-93	IV	Both SRO's Absent From the Control Room
93-011	05-21-93	IV	TS violation due to control room ventilation being in the incorrect lineup.

LERs SINCE BEGINNING OF SALP PERIOD

Unit 1

92-012	09-03-92		Entry into TS 3.0.3 due to both channels of DRPI becoming inoperable.
92-015	10-03-92		Unplanned ESG actuation for a Component Cooling Water Pump due to operator inattention.
92-020	12-09-92		Toxic Gas Monitor Found in the Non-Tripped Condition
93-013	04-08-93		TS violation due to performing positive reactivity changes in Mode 5 without a CCP available.
93-014	04-23-93		TS violation due to control room envelope HVAC not operated in the correct mode.

Unit 2

92-010	12-27-92		Manual Reactor Trip Due to FWRV's Failing Shut
93-003	02-03-93		TS 3.0.3 entry due to the DRPI system being inoperable.
93-004	02-03-93		Reactor trip due to low steam generator level.
93-005	02-14-93		Control room unmanned by SRO.
93-007	03-10-93		TS violation due to the control room envelope HVAC not being in required mode of operation.

ATTACHMENT B - PERFORMANCE SUMMARIES IN PREVIOUS QPPR'S
RADIOLOGICAL CONTROLS

Jan 1993 QPPR

IR 92-31 Ricketson

Areas Inspected: Routine, announced inspection of radiation protection program activities related to the 1992 Unit 1 refueling outage (1RE04), including program changes, planning and preparation, external exposure controls, internal exposure controls, controls of radioactive materials and contamination, and the program for maintaining occupational exposures as low as reasonably achievable (ALARA).

Strengths:

- The licensee properly prepared for the refueling outage.
- Qualified contract radiation protection technicians supplemented the permanent staff.
- Excellent external controls were implemented.
- Very effective internal exposure controls were implemented.
- Superior performance was achieved concerning the control of radioactive material and contamination.
- The licensee set a challenging person-rem goal for the outage. Because the outage was extended, the actual person-rem might exceed the goal; however, total exposure should be relatively low.

Weaknesses:

None

Mar 1993 QPPR

IR 92-35 OSTI

Areas Inspected: Non-routine, unannounced inspection of sustained control room observations, observation of maintenance and surveillance activities, technical support for operations, review of equipment hardware and corrective actions implemented to resolve deficiencies, and plant area tours.

Strengths:

None

Weaknesses:

Two events of potential radiological safety significance were observed. An individual left and reentered the radiologically restricted area on several occasions, without frisking, while transferring storage drums at the 60-foot elevation of the maintenance auxiliary building. The team found that the radiological restricted area boundary had not been identified to the worker. A second individual violated a radiological posting by entering the control room while a radiation detector surveillance was in progress. The team noted that the radiological posting did not provide a conspicuous barrier to the restricted area.

IR 92-36 Tapis, Evans

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, maintenance and surveillance observations, preparation for refueling (Unit 1), and followup on a previously identified inspection followup item, three deficiencies, and six observations.

Strengths:

None

Weaknesses:

Numerous problems with the plant's toxic gas monitors were experienced because of equipment malfunctions. Two examples of the failure to adhere to TS requirements were identified. One of the TS violations involved the failure to maintain an out of service channel in the tripped condition. The second violation involved the failure to perform a channel check. The licensee's efforts to improve the reliability and availability of the toxic gas monitor systems have not been successful.

IR 93-01 McKernon

Areas Inspected: Special announced inspection of the licensed operator requalification program, which included a review of administrative controls for licensed operator training, and observation of operators during the conduct of facility licensee annual licensed operator requalification examinations. The team also observed the performance of the examination evaluators in the simulator and during in-plant walkthroughs. The inspectors used the guidance provided in Temporary Instruction 2515/117, Revision 0, issued December 8, 1992.

Strengths:

None

Weaknesses:

During the inspection a licensee health physicist entered the radiological control area without the required dosimetry.

Jul 1993 OPPER

IR 93-18 Ricketson

Areas Inspected: Routine, announced inspection of radiation protection program activities related to the forced outage of Unit 1 and the Unit 2 Refueling Outage 2RE03, including program changes, planning and preparation, external exposure controls, internal exposure controls, controls of radioactive materials and contamination, and the program for maintaining occupational exposures as low as reasonably achievable (ALARA).

Strengths:

The licensee made minor changes to its organization in an effort to increase the effectiveness of the ALARA group. State-of-the-art equipment was added to reduce radiation exposures, increase the efficiency of the radiation work permit generating process, and increase the amount of information depicted by radiation surveys.

The licensee sufficiently supplemented the permanent radiation

protection staff and stocked supplies and equipment to prepare properly for the refueling outage.

Contract radiation protection technicians were rigorously screened and met qualification requirements. Additional, specialized training was given to selected radiation workers to reduce exposures and contamination events.

Excellent external radiation exposure controls were maintained. Radiation work permits provided appropriate guidance. The content of pre-job briefings and job coverage by radiation protection personnel were excellent. Considerable effort was taken to familiarize radiation workers with good health physics practices.

All the elements of a superior internal exposure control program were implemented, and the program has been very effective. The licensee proceduralized a maintenance program it had lacked for self-contained breathing apparatuses.

Excellent performance was achieved by controls of radioactive materials and contamination. A low number of personnel contaminations had occurred. Radiological housekeeping within the radiological controlled area was good.

Total radiation exposures for the last refueling outage and for 1992 exceeded the licensee's goals; however, this was the result of the outage duration being extended. It appeared that the same may be true for Refueling Outage 2RE03, but the licensee's total exposures will likely be below the national average for pressurized water reactors. Management's commitment to maintaining radiation exposures ALARA was strong.

Weaknesses:

None

ENFORCEMENT SINCE BEGINNING OF SALP PERIOD

Unit 1

92-035	03-03-93	IV	Two Examples of Weak Radiological Controls
93-011	05-21-93	NCV	Failure to Post an NRC Notice of Violation.

Unit 2

92-035	03-03-93	IV	Two Examples of Weak Radiological Controls
93-011	05-21-93	NCV	Failure to Post an NRC Notice of Violation.

LERs SINCE BEGINNING OF SALP PERIOD

None

ATTACHMENT C - PERFORMANCE SUMMARIES IN PREVIOUS QPPR'S
MAINTENANCE AND SURVEILLANCE

Jan 1993 QPPR

IR 92-26 Tapia, Evans

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, maintenance and surveillance observations, preparation for refueling (Unit 1), followup of a previously identified violation, followup of three inspection followup items, management meeting, and Temporary Instruction 2515/109.

Strengths:

None

Weaknesses:

- The level of housekeeping in selected areas of the facility outside the radiological controlled areas was poor. Several equipment problems, some of which are recurring, were indicative of the need for increased management attention to improve the material condition of the facility.
- A violation was identified for an inadequate postmaintenance test of an essential chiller circuit breaker. This violation occurred because the corrective actions associated with a similar violation were not properly implemented.
- The repair of a steam generator power operated relief valve actuator was untimely.
- A violation occurred because an instrumentation and controls technician failed to sign four work instruction steps indicating the performance of work even though a second technician had signed the corresponding signature blocks for verification of the work performed.
- A minor weakness in a work package associated with an essential cooling water system preventive maintenance activity was identified.
- The inspectors identified examples of temporary procedure changes that were not being incorporated into procedure revisions in a timely manner.
- Unnecessary starts of a standby diesel generator occurred because of a procedure problem and human error.
- A new negative trend was developing in the area of surveillance and test procedure adequacy. Three examples of inadequate or weak surveillance procedures were identified during this inspection period, and two of these resulted in violations.

IR 92-27 McKernon

Areas Inspected: Routine, unannounced inspection of the STP maintenance program and its implementation.

Strengths:

Maintenance documents and records reviewed were in accordance with the licensee's procedures. The maintenance program appeared to be functioning adequately and as intended.

Weaknesses:

None

IR 92-28 McNiell

Areas Inspected: Routine, announced observation of work and work activities pertaining to inservice inspection of Unit 1. No inspections were performed of the Unit 2 facility.

Strengths:

The inservice inspection program was found to be very well defined and effectively implemented.

Weaknesses:

None

IR 92-29 Tapia, Evans

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, engineered safety feature system walkdown (Unit 2), maintenance observations, refueling activities (Unit 1), management meeting, reliable decay heat removal during outages (Temporary Instruction 2515/113), followup on previously identified violations, inspection followup items, and licensee event reports.

Strengths:

None

Weaknesses:

The licensee's discovery of inadequate surveillance procedures required both units to enter Technical Specifications 3.0.3 and 4.0.3. The inadequate surveillance procedures constituted a violation of Technical Specification 4.3.2.1.2.1.a. However, a violation was not cited because the criteria in Section VII.B.2 of the Enforcement Policy were satisfied.

Electricians failed to initiate a Unit 2 surveillance test on the correct reactor coolant pump underfrequency device.

During the 5-year inspection of Emergency Diesel Generator 12, numerous problems were encountered. A check valve seat separated from the swing arm and resulted in a valid emergency diesel generator failure. A lack of periodic testing of this check valve will be tracked by an unresolved item. An unexplained lockout relay actuation resulted in a second valid failure. Additionally, the emergency diesel generator was inadvertently started in the emergency mode.

Corrective actions were taken to improve the availability and the reliability of the Unit 1 source range monitors. The licensee believes that the long-standing problems associated with induced electrical noises in the circuitry have been resolved.

IR 92-33 Gilbert

Areas Inspected: Routine, announced inspection of erosion/corrosion monitoring activities.

Strengths:

- The licensee has developed a good erosion/corrosion program.
- The administrative procedures clearly defined responsibilities for the erosion/corrosion program.
- Personnel effectively implemented the erosion/corrosion program.
- Results to date indicate that no significant erosion/corrosion degradation has occurred in carbon steel piping systems.

Weaknesses:

None

Mar 1993 QPPR

IR 92-32 Tapia, Evans

Areas Inspected: Routine, unannounced inspection of plant status, operational safety verification, engineered safety feature system walkdown (Unit 1), maintenance and surveillance observations, complex surveillance (Unit 1), refueling activities (Unit 1), followup on previously identified violations, and licensee event report followup.

Strengths:

- Three surveillance tests were witnessed and good self-verification and supervisory oversight were observed. Two complex surveillances were effectively performed.

Weaknesses:

- The draining of oil from a reactor coolant pump motor, because of a false level indication, resulted in bearing damage. One of the causes of the event was a lack of knowledge of a standing order.
- Personnel errors occurred which resulted in work being performed on the wrong component, train, and unit. A similar example was documented during a previous, recent, NRC inspection.
- The discovery of an inadequate surveillance procedure resulted in a Technical Specification (TS) 3.0.3 entry. The criteria for enforcement discretion were satisfied. However, this was the third example in recent months in which a deficient surveillance procedure resulted in one or both units being placed in TS 3.0.3.
- The balance of plant (BOP) diesel generators (DGs) recently experienced a high number of start failures, which had an adverse impact on the reliability of the DGs.
- The liner of Cylinder 6R of Emergency Diesel Generator 13 was replaced because of indications of tin transfer. The unintentional automatic start of an emergency diesel generator was caused by human error and a deficient procedure. Weaknesses in the development and maintenance of design drawings were identified when the inspectors noted an inaccurate logic drawing.

IR 92-35 OSTI

Areas Inspected: Non-routine, unannounced inspection of sustained control room observations, observation of maintenance and surveillance activities, technical support for operations, review of equipment hardware and corrective actions implemented to resolve deficiencies, and plant area tours.

Strengths:

Work activities were clearly controlled through the control room. The team noted all observed work activities had received the required work start authority. Activities which required entry into limiting conditions for operation were appropriately considered and the required actions taken.

The operations staff input into maintenance scheduling was noted to be very good. In general, the team found that work activities were conducted in accordance with procedure requirements.

Weaknesses:

The team noted that a lack of qualified instrumentation and control technicians provided a significant challenge for performing Unit 2 work activities while the completing the Unit 1 refueling outage.

An instance was identified involving poor work planning which resulted in maintenance personnel having to reinstall the Unit 2 turbine auxiliary feedwater pump governor valve stem.

Three of the examples of repetitive corrective maintenance included a repetitive corrective maintenance activity on the Unit 2 turbine-driven auxiliary feedwater pump; an electrical load sequence problem with an essential chiller; and design modifications which had not been implemented on the essential chillers.

The licensee's implementation of their lubrication control program was poor. Vendor recommendations for system flush recommendations were not incorporated into work instructions. Several engineering request for action documents were not promptly responded to.

IR 92-36 Tapia, Evans

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, maintenance and surveillance observations, preparation for refueling (Unit 1), and followup on a previously identified inspection followup item, three deficiencies, and six observations.

Strengths:

None

Weaknesses:

Unit 2 was manually tripped when a secondary valve failed shut. Several additional secondary events occurred after the shutdown. Additionally, four power maneuvers were made because of secondary equipment problems. Higher levels of management oversight continue to be needed in this area because of the continuing negative trend in the reliability and availability of secondary components.

Both units were required to shut down because of the discovery of incorrectly calibrated components. The event was caused by deficient surveillance procedures. The failure to develop and maintain safety related surveillance procedures was a noncited violation of Technical

Specification (TS) requirements. Following the Units 1 and 2 TS 3.0.3 required shutdowns, teams of instrumentation and controls technicians were assembled to recalibrate suspect amplifiers.

A surveillance test on a supplemental containment purge system valve was not performed within the required time period specified in the TS. This was the first example of a failure to satisfy TS requirements and was a violation of the facility operating license.

During a plant cooldown to repair a leaking seal weld on a control rod drive mechanism housing, a steam generator power-operated relief valve failed to operate because of a defective pressure switch.

Emergency Diesel Generator (EDG) 11 experienced a valid failure to start during a monthly operability test as a result of excessive exhaust temperature on a cylinder. The excessive temperature resulted from the binding of a fuel lever arm which had never been lubricated. This failure to lubricate resulted from a less than adequate preventive maintenance (PM) procedure which did not require lubrication of the fuel lever arm.

In response to a previous commitment to review surveillance procedures to determine their technical adequacy, a number of deficient procedures were identified. This was the fourth instance that deficient procedures were identified during this review. The deficient procedures were considered to be noncited violations of NRC requirements. The high number of procedures being identified were a concern to the inspectors. The scope of the surveillance procedure review task force should be expanded because of the high number of deficient procedures that were identified.

The failure to maintain at least three channels of overtemperature differential temperature (OTDT) operable was the second example of a failure to satisfy TS requirements. The cause of the event was a deficient procedure.

The failure to perform a daily channel calibration on a nuclear instrument (NI) was the third example of a failure to satisfy TS requirements. A contributor to the event was the failure of a licensed operator to record a key entry in the control room logbook.

Problems continue to exist with one source range neutron flux monitor in Unit 1. This monitor has been intermittently inoperable since the Spring of 1992.

A crack was found and repaired in the Unit 1 ECW system piping. Although dealloying and crack problems continue to exist with the piping of the system, the licensee's response to the problems continues to be prompt and aggressive.

During the performance of a solid state protection system logic functional test, problems were encountered with a test pushbutton. This pushbutton has not worked properly since April 1992. This pushbutton was scheduled to be replaced during the upcoming refueling outage.

IR 93-03 Tapia

Areas Inspected: A special inspection was conducted to determine the circumstances surrounding the drift of nuclear instrumentation setpoints and the failure of Unit 1 Emergency Diesel Generator (EDG) 13 to start. The inspection also reviewed previously identified problems with personnel errors.

Strengths:

None

Weaknesses:

An unresolved item was identified involving EDG availability and mode change instructions.

Jul 1993 OPPR

IR 93-04 Tapia, Evans

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, maintenance observations, preparation for refueling (Unit 2), followup on a previously identified open item, and licensee event report followup.

Strengths:

None

Weaknesses:

- Unit 2 experienced two automatic trips during the inspection period. The first trip was caused by an electrohydraulic control (EHC) fluid tubing failure. The tubing failure was determined to be an isolated incident that was caused by a defective valve feedback device.
- The second Unit 2 trip was caused by a startup feedwater pump trip while at reduced power operation. This trip could have been prevented, however, past problems with the pump were not corrected in a timely manner. The failure to correct the pump problems in a timely manner was identified as a corrective action program weakness. A second weakness, involving maintenance implementation practices, was also identified.
- Both units were required to shut down because of continuing problems with the auxiliary feedwater system turbine driven pumps.
- The failure to place a reactor coolant system delta-temperature/average temperature ($\Delta T/T\text{-avg}$) loop instrument in the tripped condition was a violation of Technical Specification requirements. This violation was caused by inadequate procedure development and review.
- The use of the incorrect measuring and test equipment on a level transmitter resulted in an engineered safety features (ESF) actuation signal. The preventive maintenance work instructions did not specifically state the correct type of test equipment to use for the application. The failure to have maintenance work instructions appropriate to the circumstances was considered to be a violation of Technical Specification 6.8.1 requirements.
- A violation of TS was identified involving the failure to perform containment pressure channel checks while in Mode 4 operation. This was the second violation caused by a deficient surveillance procedure.
- Numerous events occurred involving secondary plant components which had a negative effect on primary plant components. Few improvements have been noted in this area of plant operations despite additional management oversight. One positive action taken by the licensee included the development of a steam generator power operated relief valve action plan.
- The licensee's essential chiller reliability and availability rates continue to be a concern.
- Extensive testing of the auxiliary feedwater turbine-driven pump was performed to verify pump operability and availability. During the testing process, one maintenance implementation weakness was identified

that resulted in unnecessary test delays. Two Temporary Waivers of Compliance were needed to complete the required testing during Mode 3 operation.

IR 93-05 Satorius

Areas Inspected: A special inspection was conducted to determine the events surrounding the failure of the turbine driven auxiliary feedwater pumps (TDAFWPs) to start on demand in both Units 1 and 2. The inspection also reviewed a previously identified unresolved item involving the failure to satisfy Technical Specification (TS) requirements relative to Unit 1 emergency diesel generator (EDG) availability and mode change restrictions.

Strengths:

None

Weaknesses:

- One violation involved a failure to follow procedures in accordance with the requirements of TS 6.8.1.a. The failure to follow procedures and test EDG 13 following painting the machine resulted in its inoperability from December 29, 1992, to January 22, 1993.
- One violation involved a failure to satisfy the requirements of TS 3.8.1.1.b for having three separate and independent standby diesel generators operable in Modes 1-4.
- A violation involved a failure to satisfy the requirements of TS 3.8.1.1, Action f, for restoring at least two operable EDGs within the TS required outage time while in Modes 1-4.
- A violation involved a failure to follow procedures in accordance with the requirements of TS 6.8.1.a. Unauthorized maintenance was conducted by unqualified personnel on the Unit 2 TDAFWP.
- A violation involved a failure to provide a test program in accordance with the requirements of 10 CFR 50, Appendix B, Criterion XI. Neither unit's TDAFWP had been consistently tested under suitable environmental conditions to identify deficient conditions that affected operability.
- A violation involved a failure to satisfy the requirements of TS 3.7.1.2.b by failing to maintain the Unit 1 TDAFWP operable while in Modes 1-3.
- A violation involved a failure to provide adequate procedures in accordance with the requirements of TS 6.8.1.a. The failure to have adequate procedures for the adjustment of the Unit 1 governor valve contributed to the Unit 1 TDAFWP overspeed trips.

IR 93-07 AIT

Areas Inspected: In accordance with NRC Inspection Manual Chapter 0325, an AIT was dispatched to South Texas Project Electric Generating Station (STPEGS) on February 5, 1993, to review the circumstances surrounding the repetitive overspeed tripping of the Unit 1 turbine driven auxiliary feedwater pump (TDAFWP), and the failure of the Unit 2 TDAFWP to start on demand.

Strengths:

None

Weaknesses:

For the Unit 1 TDAFWP 14, no definitive root cause was identified. However, the AIT considered the misadjustment of the governor valve linkage to be the most probable cause of the overspeed trips. This misadjustment, which occurred during the previous plant outage, reduced the governor's ability to control turbine speed.

For the Unit 2 TDAFWP 24 overspeed trip, the root cause was determined to be a condensate build up upstream of MOV-514 caused by an incorrect valve lineup combined with an inoperable or degraded steam trap in the drain line for the steam admission line. This caused a slug of water to enter the turbine and result in a turbine overspeed.

Contributing causes for these trips that affected both TDAFWPs included:

- The use of MOV-514 as the steam admission valve in lieu of MOV-143. This usage created a problem with the opening time coordination between MOV-514 and the governor valve. It also created additional demands on the steam admission line drain system which could have resulted in a condensate buildup in this line.
- Excessive seat leakage past MOV-514 which had the potential of reducing the governor control margin.

The AIT concluded that the licensee's Preventative Maintenance program was being accomplished for the TDAFWPs. The AIT also concluded that the licensee had performed the proper corrective maintenance on both unit's TDAFWPs, when the need for maintenance was identified. However, it appeared that the corrective maintenance program was only correcting specific problems. The AIT also noted that maintenance was not performing root cause analyses to assure that equipment reliability problems were being pursued when identified. As a result, it was evident that recurring problems were not being addressed. It was also evident that these problems are not being pursued because they are not being entered into the corrective action system (as evidenced by the lack of issuance of SPRs).

The AIT determined that the turbine speed control systems did not operate as intended. The licensee has committed that they will reset the linkage using the appropriate vendors to assure that they are properly set and will verify that the linkage is adjusted correctly during subsequent turbine testing. In addition, future adjustments to the turbine speed control system will be accomplished with the assistance of appropriate vendors until necessary plant procedures are verified as adequate and personnel are properly trained to make such adjustments.

The AIT determined that the leakage for MOV-514 was considerably above the manufacturer's acceptance criteria. It was noted that the valves have been repaired so that they are within the proper acceptance criteria and that the licensee committed that plant operation will not be conducted with degraded valves. The AIT considered that this seat leakage reduced the margin during the pump startup such that the potential for the overspeed was increased.

The AIT noted that the refueling outage (18-month) test had been performed three times on Unit 1 and one time on Unit 2. The AIT also noted, however, that there was a wide variance in the testing conditions which could have masked turbine performance degradation. The AIT determined that only one of these five tests was performed under actual

normal standby conditions. The licensee has committed to revise procedures to insure that all future testing is commenced with the TDAFWPs in their normal standby condition.

The team noticed examples of poor documentation of work activities. Examples were an absence of reasons for changes to procedures and surveillance data sheets that indicated anomalies with no explanation for these anomalies.

IR 93-08 Runyan

Areas Inspected: Nonroutine, announced, special inspection of technical issues associated with the failure of motor-operated valve SI-31A, Unit 2, and the licensee's identification of five Unit 1 residual heat removal system motor-operated valves that were experiencing excessive torque.

Strengths:

None

Weaknesses:

The licensee identified that Unit 2 had operated from April 1989 to October 1990 with valve SI-31A inoperable due to a burned out motor. During that time period, the licensee would have been unable to initiate hot leg recirculation on the "A" train of low head safety injection. This condition was in violation of Technical Specification 3.5.2. This item was identified as an apparent violation.

IR 93-09 Singh

Areas Inspected: Routine, announced inspection of the licensee's fire protection/prevention program.

Strengths:

None

Weaknesses:

The licensee failed to implement procedures for control of combustible and flammable materials, which resulted in a violation.

IR 93-10 Johnson

Areas Inspected (Unit 2): Routine, announced inspection of the inservice inspection program and implementing work activities.

Strengths:

- The inservice inspection program was well defined.
- Inservice inspection procedures contained sufficient details and instructions to enable the satisfactory performance of the examinations.
- The inservice inspection program was being effectively implemented.

Weaknesses:

None

IR 93-11 Tapia, Evans

Areas Inspected: Routine, unannounced inspection of plant status, operational safety verification, maintenance and surveillance observations, refueling activities (Unit 2), followup on previously identified violations and open items, and licensee event report followup.

Strengths:

None

Weaknesses:

- A surveillance program implementation weakness was identified when a section of a surveillance procedure was incorrectly performed because of human error and several subsequent reviews failed to detect the error.
- A continuation of a negative trend in personnel performance was noted. Three examples of work performed erroneously or on the wrong component resulted from a failure to adequately perform self-verification.
- Numerous problems were experienced during maintenance on an emergency diesel generator. The failure to correctly assemble a strainer was an example of a maintenance implementation weakness. The failure of fuel injection pump mounting bolts was suspected to be the result of improper torque. The use of an independent firm to evaluate the bolt failures was a proactive initiative on the part of the licensee. A second example of a weakness in the control and use of vendor supplied information was identified when a torque setting was not included in maintenance work instructions.
- Two turbine-driven auxiliary feedwater pump surveillance tests were witnessed. Both surveillance tests were unsatisfactorily completed the first time they were performed. One maintenance implementation weakness was identified when a recorder was found to be incorrectly connected.

IR 93-13 Paulk

Areas Inspected: Reactive, unannounced inspection of motor-operated valve maintenance activities.

Strengths:

None

Weaknesses:

- The licensee's motor-operated valve (MOV) maintenance activities tend to address the symptoms and not the cause. This has resulted in repeat maintenance being performed.
- The licensee had not issued MOV maintenance procedures in a timely manner. This was in part the basis for voiding Station Problem Report (SPR) 920045.
- Based on the sample of maintenance instructions reviewed by the inspection, no degradation of the MOVs was caused by inadequate maintenance instructions. The maintenance instructions were being utilized pending development of maintenance procedures.

IR 93-14 Barnes

Areas Inspected: Nonroutine, announced special inspection of technical issues associated with identified steam generator primary side manway cover and secondary side hand hole cover leakage.

Strengths:

Measures were established to effectively provide for ongoing surveillance and corrective maintenance of identified reactor coolant system leakage. Similar programmatic controls were not apparent with respect to identification and evaluation of recurring leakage conditions.

Weaknesses:

None

ENFORCEMENT HISTORY SINCE BEGINNING OF SALP PERIOD

Unit 1

92-026	10-16-92	IV	Failure to adequately document work completion.
92-029	11-25-92	NCV	Inadequate surveillance procedures required both units to enter Technical Specifications 3.0.3 and 4.0.3. The inadequate surveillance procedures constituted a violation of Technical Specification 4.3.2.1.2.1.a.
92-035	03-03-92	IV	TS Violation - Failure to Adequately Test Loading Sequencer.
92-035	03-03-92	IV	Two Examples of Poor Work Controls That Results in Fire Protection Violations.
92-036	03-05-92	IV	Failure to Provide Adequate Preventive Maintenance Procedure.
92-036	03-05-92	IV	Five Examples of a Failure to conduct TS Required Surveillances.
93-004	04-16-93	IV	Two examples of a failure to adhere to TS because of inadequate procedures.
93-009	03-31-93	IV	Failure to follow procedures in that combustibles were inadequately stored overnight.
93-011	05-21-93	IV	TS violation due to failing to follow procedures for restoration of an electrical inverter.

Unit 2

92-026	10-16-92	IV	Failure to perform an adequate post-maintenance test.
92-029	11-25-92	NCV	Inadequate surveillance procedures required both units to enter Technical Specifications 3.0.3 and 4.0.3. The inadequate surveillance procedures constituted a violation of Technical Specification 4.3.2.1.2.1.a.

92-035	03-03-92	IV	TS Violation - Failure to Adequately Test Loading Sequencer.
92-035	03-03-92	IV	Two Examples of Poor Work Controls That Results in Fire Protection Violations.
92-036	03-05-92	IV	Failure to Provide Adequate Preventive Maintenance Procedure.
92-036	03-05-92	IV	Five Examples of a Failure to conduct TS Required Surveillances.
93-004	04-16-93	IV	Failure to maintain adequate maintenance work instructions.
93-009	03-31-93	IV	Failure to follow procedures in that combustibles were inadequately stored overnight.

LERs SINCE BEGINNING OF SALP PERIOD

Unit 1

92-010	08-08-92		Inadvertent ESF actuation due to a Component Cooling Water Pump Start.
92-011	08-24-92		Reactor Coolant Pump Undervoltage and Underfrequency trip not tested completely per TS.
92-021	12-15-92		Main Steam Isolation Response Time Testing Not Being Correctly Tested.
93-005	01-20-93		Failure of EDG #13 to Start Due to Inadequate Oversight During Painting.
93-008	02-06-93		TS violation due to a failure to perform RCB pressure surveillance.
93-010	02-24-93		Unplanned ESF actuation-halon system.
93-011	03-17-93		TS violation due to a failure to perform damper position verification during surveillance.
93-012	04-05-93		TS violation due to a incorrect settings of several molded case circuit breakers.
93-015	04-23-93		TS violation due to a non-conservative determination of equipment service time. circuit breakers.
93-016	05-03-93		TS violation due to a circuitry for the steam generator PORVs and RCS subcooling monitor being inoperable.

Unit 2

92-007	09-12-92		Unplanned ESF Actuation of an Isolation Valve for the MSIV above seat drain.
92-008	09-15-92		Control Room Ventilation Actuation to Recirculation Mode Due to a Failure of a Toxic Gas Analyzer.

92-009	12-17-92	Missed TS Required Surveillance on the Toxic Gas Monitoring System.
93-001	01-23-93	Reactor Trip Due to a Failed Main Turbine Electro-Hydraulic Control Line.
93-002	01-28-93	Unplanned ESF Actuation Due to Poor Maintenance Practices.
93-006	02-17-93	TS violation due to a LHSI cold leg injection MOV being inoperable for greater than 72 hours.
93-009	04-26-93	TS violation due to the use of inappropriate reference value data for a RHR pump IST.
93-010	05-26-93	Failure of ECW traveling screen coupling.

ATTACHMENT D - PERFORMANCE SUMMARIES IN PREVIOUS QPPR'S
EMERGENCY PREPAREDNESS

Jan 1993 QPPR

No Inspection Effort

Mar 1993 QPPR

No Inspection Effort

Jul 1993 QPPR

IR 93-17 Spitzberg

Areas Inspected: Routine, announced inspection of the licensee's performance and capabilities during an annual exercise of the emergency plan and implementing procedures. The inspection team observed activities in the control room (simulator), Technical Support Center, Operational Support Center, and the Emergency Operations Facility.

Strengths:

- Strong command and control were observed in the control room in response to plant transients and the early scenario events. Emergency classifications and notifications were made in an accurate and timely manner by the control room staff.
- The area of radiological assessment was noted to be a strength in the Technical Support Center.
- The actions taken by the Operational Support Center to support in-plant teams and to protect radiation workers were found to be effective.
- The post accident sampling team was effective in simulating the safe acquisition of coolant and containment atmosphere samples.
- The Emergency Operations Facility was activated in an efficient and timely manner and performed well during the exercise. The performance of the radiological/dose assessment group was noted to be a strength.

Weaknesses:

- An exercise weakness was identified for failure to recognize plant conditions corresponding to a General Emergency.
- Licensee performance in providing technical assessment, diagnosis, and mitigative activities was identified as an exercise weakness.
- Insufficient administrative staffing in the Technical Support Center and the failure to obtain additional staffing or to reassign the missing staff's responsibilities were identified as an exercise weakness.
- An exercise weakness was identified for unnecessary delays noted in providing proper treatment for the victim of a medical emergency and in removing the victim from the site by ambulance.
- A repeat exercise weakness was identified for several problems associated with the issuance of complete and accurate notification messages (Section 6.1).

The licensee self-critique process failed to identify or properly characterize several areas in need of corrective action and was, therefore, identified as an exercise weakness.

Two potential areas for emergency response procedure improvement were discussed with licensee representatives.

ENFORCEMENT HISTORY SINCE BEGINNING OF SALP PERIOD

None

LEs SINCE BEGINNING OF SALP PERIOD

None

ATTACHMENT E - PERFORMANCE SUMMARIES IN PREVIOUS QPPR'S
SECURITY

Jan 1993 QPPR

IR 92-26 Tapia, Evans

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, maintenance and surveillance observations, preparation for refueling (Unit 1), followup of a previously identified violation, followup of three inspection followup items, management meeting, and Temporary Instruction 2515/109.

Strengths:

None

Weaknesses:

The licensee identified a willful violation involving falsification of NRC required security records. This violation is not being cited because the criteria in Section VII.B.2 of the Enforcement Policy were satisfied.

Mar 1993 QPPR

IR 92-35 OSTI

Areas Inspected: Non-routine, unannounced inspection of sustained control room observations, observation of maintenance and surveillance activities, technical support for operations, review of equipment hardware and corrective actions implemented to resolve deficiencies, and plant area tours.

Strengths:

None

Weaknesses:

A concern was noted by the team that operations personnel may be unnecessarily delayed in responding to an actual plant event if the immediate need for the operator's response is not promptly conveyed to security personnel.

IR 93-02 Dexter

Areas Inspected: Routine, unannounced inspection of the licensee's physical security program. The areas inspected included assessment aids, compensatory measures, and communications.

Strengths:

- Some improvement was noted in the overall picture quality of assessment aids. An unresolved item was identified regarding a degraded assessment aid (Closed-circuit Television System camera).
- Effective action had been taken to identify prepositioned compensatory post locations.
- Communications equipment was readily available and communications checks were being conducted in accordance with established procedures.

Weaknesses:

None

Jul 1993 OPPER

IR 93-11 Tapia, Evans

Areas Inspected: Routine, unannounced inspection of plant status, operational safety verification, maintenance and surveillance observations, refueling activities (Unit 2), followup on previously identified violations and open items, and licensee event report followup.

Strengths:

None

Weaknesses:

- Ongoing problems in the security area are causing excessive use of overtime and are negatively impacting employee morale.

IR 93-16 Dexter

Areas Inspected: Routine, announced inspection of management effectiveness, records and reports, security system power supply, security locks and keys, testing and maintenance, assessment aids, compensatory measures, protective area barrier, and security plans and procedures.

Strengths:

- Security events were being properly recorded and reported to the NRC.
- Security lock and key procedures were consistent with commitments in the Physical Security Plan. Control and accountability were properly documented.
- The protected area barrier and isolation zones were effectively maintained to protect the plant and allow proper assessment of isolation zones.
- Implementing procedures are adequate and appropriate to meet general performance requirements in accordance with the Physical Security Plan.
- The licensee's test of the security emergency power supply demonstrated that the batteries and the security diesel performed as designed.
- All access control equipment tested, performed as required. Security equipment was generally repaired in a timely manner.

Weaknesses:

- A vulnerability was discovered in the security system by instrumentation and controls technicians. It did not appear that the root cause of the problem was pursued in a timely manner by security management. This also affected the timely implementation of compensatory measures. The licensee's process for problem identification and implementation of corrective action or compensatory action will be reviewed further during a future inspection.
- Compensatory measures were adequate when implemented; however, the licensee was slow at times to implement compensatory measures. It

appears that compensatory postings also contributed to excessive overtime for some members of the security force. This area will be reviewed further during a future inspection.

The licensee continued to experience assessment aids problems. However, instrumentation and controls technicians were routinely repairing problems as they were reported. An independent engineering firm evaluation recommended that the entire assessment aids system be replaced. The licensee was evaluating the recommendation and possible approaches.

ENFORCEMENT HISTORY SINCE BEGINNING OF SALP PERIOD

Unit 1

92-026	10-16-92	NCV	Licensee identified violation involving falsification of NRC required security records.
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Unit 2

92-026	10-16-92	NCV	Licensee identified violation involving falsification of NRC required security records.
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SERs SINCE BEGINNING OF SALP PERIOD

None

ATTACHMENT F - PERFORMANCE SUMMARIES IN PREVIOUS QPPR'S
ENGINEERING/TECHNICAL SUPPORT

Jan 1993 QPPR

IR 92-26 Tapia, Evans

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, maintenance and surveillance observations, preparation for refueling (Unit 1), followup of a previously identified violation, followup of three inspection followup items, management meeting, and Temporary Instruction 2515/109.

Strengths:

The Unit 1 fourth refueling outage appeared to be well planned, but the schedule appeared to be aggressive because of the extensive motor-operated valve testing that will be conducted. Several positive initiatives pertaining to the outage were identified.

The licensee had developed a comprehensive action plan to correct problems in the MOV program.

Weaknesses:

A condition that resulted in the terminal voltage of a safety-related battery being less than the Technical Specification minimum required voltage was partially contributed to an inadequate procedure.

An inadequate Class 1E direct current distribution system operating procedure was identified as a violation.

IR 92-28 McNiell

Areas Inspected: Routine, announced observation of work and work activities pertaining to inservice inspection of Unit 1. No inspections were performed of the Unit 2 facility.

Strengths:

None

Weaknesses:

The licensee substituted a volumetric examination for the ASME Code required surface examination of the threaded inside diameter of the reactor vessel closure head nuts, without filing a relief request as required by 10 CFR Part 50.55a(g)(5). This was identified as a noncited violation.

IR 92-29 Tapia, Evans

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, engineered safety feature system walkdown (Unit 2), maintenance observations, refueling activities (Unit 1), management meeting, reliable decay heat removal during outages (Temporary Instruction 2515/113), followup on previously identified violations, inspection followup items, and licensee event reports.

Strengths:

None

Weaknesses:

Delays in the Unit 1 outage of approximately 2 weeks were caused by polar crane and refueling machine problems, Emergency Diesel Generator 12 repairs, and motor-operated valve testing.

IR 92-30 Runyan

Areas Inspected: Reactive, announced inspection of safety-related motor-operated valve testing and surveillance, and followup.

Strengths

- The licensee's MOV program showed improvement with strong management support.
- The licensee had reduced the number of Unit 1 MOVs in an overthrust condition and had acceptable justification for those remaining overthrust except for three MOVs with SB-00 actuators.
- The licensee committed to document an engineering justification for three MOVs with SB-00 actuators that were subject to stem thrusts in excess of 16,000 pounds. Both Westinghouse and Kalsi Engineering, Inc., have recently completed testing SB-00 type actuators and the preliminary review indicates comparable overthrust capability to SMB devices.
- The licensee had sufficient calculations and test results to permit justifying valve operability without relying on Westinghouse stall thrust values.
- Two observations were noted in the licensee's procedure for analyzing diagnostic test data for final acceptance. The licensee's acknowledged the observations and plan to revise their final acceptance criteria.

Weaknesses

- A deficiency was identified regarding the timeliness of analyzing diagnostic test data, but was satisfactorily addressed by the licensee during the inspection.
- A review of diagnostic test data revealed that assumptions made for stem friction may not have been conservative in all cases.

Mar 1993 QPPR

IR 92-32 Tapia, Evans

Areas Inspected: Routine, unannounced inspection of plant status, operational safety verification, engineered safety feature system walkdown (Unit 1), maintenance and surveillance observations, complex surveillance (Unit 1), refueling activities (Unit 1), followup on previously identified violations, and licensee event report followup.

Strengths:

None

Weaknesses:

- The Unit 1 fourth refueling outage was several weeks behind schedule because of refueling equipment problems and unanticipated emergency diesel generator rework.

IR 93-01 McKernon

Areas Inspected: Special announced inspection of the licensed operator requalification program, which included a review of administrative controls for licensed operator training, and observation of operators during the conduct of facility licensee annual licensed operator requalification examinations. The team also observed the performance of the examination evaluators in the simulator and during in-plant walkthroughs. The inspectors used the guidance provided in Temporary Instruction 2515/117, Revision 0, issued December 8, 1992.

Strengths:

- Evaluators' performance during the operating examinations was good.
- The training department appeared effective in implementing the licensed operator requalification training program.
- Simulator fidelity appeared acceptable with one minor inconsistency observed regarding the safety injection accumulators modeling.

Weaknesses:

- The training department did not have an approved biennial licensed operator training plan.

Jul 1993 QPPR

IR 93-04 Tapia, Evans

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, maintenance observations, preparation for refueling (Unit 2), followup on a previously identified open item, and licensee event report followup.

Strengths:

- The Unit 2 refueling outage scope appears to be well planned by the licensee, however, the work scope is aggressive because of the number of motor operated valves (MOVs) scheduled to be tested. Shutdown risk assessment and outage management staffing continue to be licensee strengths (Section 5.0).

Weaknesses:

- Unit 2 entered Technical Specifications (TS) 3.0.3 when power to the digital rod position indication was lost for 16 minutes. Contributing factors to the event included discovery of a design application error involving two pumps being connected to the same electrical panel.

IR 93-08 Runyan

Areas Inspected: Nonroutine, announced, special inspection of technical issues associated with the failure of motor-operated valve SI-31A, Unit 2, and the licensee's identification of five Unit 1 residual heat removal system motor-operated valves that were experiencing excessive torque.

Strengths:

None

Weaknesses:

The inspection frequency of actuator springpacks may not be sufficient to anticipate conditions leading to hydraulic lock.

The licensee identified that five Unit 1 residual heat removal suction isolation valves had been torqued to levels exceeding 110 percent of the nominal actuator rating for approximately 50 cycles.

The apparent unacceptable operability determination of the overtorque condition was similar to a previous violation issued for unacceptable determinations of operability for valves that were subject to excessive thrust.

IR 93-09 Singh

Areas Inspected: Routine, announced inspection of the licensee's fire protection/prevention program.

Strengths:

The licensee's detailed and comprehensive administrative procedures and quality assurance audits were considered strengths.

Weaknesses:

None

IR 93-10 Johnson

Areas Inspected (Unit 2): Routine, announced inspection of the inservice inspection program and implementing work activities.

Strengths:

Nondestructive examination personnel were well qualified.

Weaknesses:

None

IR 93-11 Tapia, Evans

Areas Inspected: Routine, unannounced inspection of plant status, operational safety verification, maintenance and surveillance observations, refueling activities (Unit 2), followup on previously identified violations and open items, and licensee event report followup.

Strengths:

None

Weaknesses:

- The failure to post an NRC Notice of Violation within 2 working days was a violation of 10 CFR Section 19.11 requirements. The violation was not cited because it was identified by the licensee and prompt corrective actions were taken.
- Inoperable electrical breakers resulted from the erroneous use of the incorrect setpoint values by maintenance planners. This error led to exceeding several Technical Specification limiting condition for

operation requirements and remains unresolved pending further review.

- An inadequate temporary modification, resulting from a weak engineering review, caused a loss of automatic reactor coolant system volume control.
- Selected toxic gas monitor modifications were inspected. The toxic gas monitors, which have a history of being unreliable, are expected to experience improved reliability and availability rates because of the modifications.
- The failure to incorporate vendor supplied technical information into the plant cooldown procedures resulted in stuck control rods and was another example of weakness in the use and distribution of vendor documents.
- The Unit 2 third refueling outage scope significantly increased during the inspection period. Manpower shortages, because of the Unit 1 maintenance outage, also had a negative effect on the outage schedule.

IR 93-12 Tapia

Areas Inspected: Nonroutine, announced, special inspection of technical issues associated with undersized 120 volt vital ac fuses.

Strengths:

- The licensee's investigation to define the scope of undersized fuses was extensive and did not disclose other operability or safety concerns.
- The licensee's responses to notifications from the industry and from the NRC concerning related issues has been adequate.

Weaknesses:

- The licensee did not adequately incorporate all design loads in the design of the circuit between the Solid State Protection System (SSPS) Actuation Cabinets and their associated power supplies. This item was identified as an apparent violation of 10 CFR Part 50, Appendix B, Criterion III.
- Since plant startup the licensee operated both units in violation of Technical Specification (TS) 3.3.2 requirements for having the actuation relays for safety injection, containment isolation, main steam line isolation, turbine trip, main feedwater isolation, and auxiliary feedwater operable. This item was identified as an apparent violation.

IR 93-14 Barnes

Areas Inspected: Nonroutine, announced special inspection of technical issues associated with identified steam generator primary side manway cover and secondary side hand hole cover leakage.

Strengths:

- The boric acid corrosion prevention program procedure appropriately addressed the criteria articulated in Generic Letter 88-05, with the exception of absence of guidance on engineering evaluation methods to be used in determining the impact of identified leakage on the reactor coolant system boundary.

Weaknesses:

A violation was identified in regard to the failure to issue Form (-2)s from Station Procedure OPGP03-ZE-0033 in regard to description of observed evidence of leakage and verification of issue of corrective maintenance documents.

Some inconsistencies were noted between the results from different personnel performing boric acid corrosion prevention walkdown inspections.

Training of Plant Engineering staff for performing boric acid corrosion prevention walkdown inspections was solely on-the-job training.

Installation criteria recommended by Design Engineering for steam generator secondary side hand hole covers were not incorporated by Maintenance into the installation procedure.

ENFORCEMENT HISTORY SINCE BEGINNING OF SALP PERIOD

Unit 1

92-026	10-16-92	IV	Failure to have procedures appropriate to the circumstances.
92-028	10-27-92	NCV	The licensee substituted a volumetric examination for the ASME Code required surface examination of the threaded inside diameter of the reactor vessel closure head nuts, without filing a relief request as required by 10 CFR Part 50.55a(g) (5).
92-032	01-19-93	NCV	Failure to Completely Test Feedwater Isolation Logic Slave Relays
92-036	03-05-93	NCV	Inadequate TS Surveillance Procedures
93-001	02-11-93	NCV	Failure to Follow Procedures When Entering the RCA
92-036	03-05-93	IV	Failure to Include Valves in IST Program
92-036	03-05-93	IV	Failure to Request Relief from ASME Code Requirements
93-001	02-11-93	IV	Failure to Follow Procedures
93-014	04-13-93	IV	Two examples of a failure to follow procedures regarding the documentation of boric acid leaks.

Unit 2

92-026	10-16-92	IV	Failure to have procedures appropriate to the circumstances.
92-028	10-27-92	NCV	The licensee substituted a volumetric examination for the ASME Code required surface examination of the threaded inside diameter of the reactor vessel closure head nuts, without filing a relief request as required by 10 CFR Part 50.55a(g) (5).

92-032	01-19-93	NCV	Failure to Completely Test Feedwater Isolation Logic Slave Relays
92-036	03-05-93	NCV	Inadequate TS Surveillance Procedures
93-001	02-11-93	NCV	Failure to Follow Procedures When Entering the RCA
92-036	03-05-93	IV	Failure to Include Valves in IST Program
92-036	03-05-93	IV	Failure to Request Relief from ASME Code Requirements
93-001	02-11-93	IV	Failure to Follow Procedures
93-012	04-14-93	NCV	Failure to include all loads in determining the size of SSPS fuses.
93-014	04-13-93	IV	Two examples of a failure to follow procedures regarding the documentation of boric acid leaks.

LERs SINCE BEGINNING OF SALP PERIOD

Unit 1

92-013	09-15-92		Containment Spray Channels not being completely verified as required per TS.
92-014	09-28-92		Containment Ventilation Isolation Occurred Prior to Expected Actuation During Surveillance Testing.
92-016	09-28-92		Unplanned ESF Actuation of a Component Cooling Water Pump Due to an Inadequate Procedure.
92-018	10-21-92		Pressurizer Safety Valve Setpoints Outside Required Tolerance.
92-019	12-02-92		Calculation Errors in the Setpoint Curves for the Cold Overpressure Mitigation System.
93-001	01-05-93		TS 3.0.3 Entry Due to Two RCS Delta-T Channels Being Inoperable
93-002	01-09-93		TS 3.0.3 Entry Due to Two Power Range NIs Being Inoperable
93-003	01-12-93		TS 3.0.3 Required Shutdown Due to Inoperable Steam Line Pressure Channels
93-004	01-12-93		TS Violation Due to the Failure to Perform a Surveillance Required by ASME Section XI
93-006	01-21-93		TS Violation Due to RCS Delta Temperature/Average Temperature Loop Found Out-of Tolerance
93-009	02-17-93		Plant in an unanalyzed condition due to undersized fuses in the SSPS.
93-017	05-27-93		Extension of FWIBV positioner and solenoid equipment beyond qualification life.

Unit 2

93-008

05-05-97

TS violation due to the failure to maintain
environmental qualification of a RHR MOV.

ATTACHMENT G - PERFORMANCE SUMMARIES IN PREVIOUS QPPR'S
SAFETY ASSESSMENT/QUALITY VERIFICATION

Jan 1993 QPPR

IR 92-26 Tapia, Evans

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, maintenance and surveillance observations, preparation for refueling (Unit 1), followup of a previously identified violation, followup of three inspection followup items, management meeting, and Temporary Instruction 2515/109.

Strengths:

A management meeting between NRC and the licensee was conducted at South Texas Project in order to review the schedule and scope of the planned Unit 1 fourth refueling outage.

Weaknesses:

Three inadvertent engineered safety features actuations occurred during this inspection period. Two of these resulted in violations because of untimely reporting to NRC and an inadequate surveillance procedure. The licensee initiated the Unplanned ESF Actuations Task Force to prevent future unplanned ESF actuations.

IR 92-27 McKernon

Areas Inspected: Routine, unannounced inspection of the STP maintenance program and its implementation.

Strengths:

The staff appeared aggressive in pursuing problems, finding solutions, and making improvements to the program.

Weaknesses:

None

IR 92-29 Tapia, Evans

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, engineered safety feature system walkdown (Unit 2), maintenance observations, refueling activities (Unit 1), management meeting, reliable decay heat removal during outages (Temporary Instruction 2515/113), followup on previously identified violations, inspection followup items, and licensee event reports.

Strengths:

The licensee has a systematic and effective method for ensuring that reliable sources of residual heat removal are maintained during outages.

Weaknesses:

None

May 1993 OPPER

IR 92-32 Tapia, Evans

Areas Inspected: Routine, unannounced inspection of plant status, operational safety verification, engineered safety feature system walkdown (Unit 1), maintenance and surveillance observations, complex surveillance (Unit 1), refueling activities (Unit 1), followup on previously identified violations, and licensee event report followup.

Strengths:

None

Weaknesses

Four Unit 1 residual heat removal pump trips, occurring in an 11-day period, were caused, in part, by procedure weaknesses and operator inattention. A station problem report (SPR) was not initiated until the fourth occurrence. Similar instances of failure to initiate an SPR for conditions adverse to quality were identified by NRC during the conduct of an Operational Safety Team Inspection, which was ongoing at the end of this inspection period. These instances of failure to initiate an SPR will constitute an additional example of a violation for failure to follow the SPR procedure which will be documented in the OSTI inspection report.

The startup feedwater pump tripped because of a long-standing problem with rainwater intrusion into plant equipment.

IR 92-35 OSTI

Areas Inspected: Non-routine, unannounced inspection of sustained control room observations, observation of maintenance and surveillance activities, technical support for operations, review of equipment hardware and corrective actions implemented to resolve deficiencies, and plant area tours.

Strengths:

None

Weaknesses:

The team found that the licensee's program for the identification and resolution of hardware and program implementation deficiencies was well defined. It was noted that the station problem report (SPR) process provided the means for prompt identification of concerns to the shift supervisor and plant management. However, the team was concerned that the process was not consistently well implemented.

The team noted that the licensee had not been effective in identifying potential causes for erratic motor operated inservice test results. An additional burden has been placed on the plant operators because of the required increased testing frequency. The guidance for accessing equipment operability based on inservice test results was not conservative in that the time permitted to evaluate the test results often exceeded the Technical Specification limiting condition for operation time requirements.

The team noted that maintenance personnel had not received specific training on the revised corrective action process. The method used to disseminate information to maintenance personnel was not effective in assuring they were cognizant of the recent changes to the corrective action process. In addition, many plant workers indicated that they had never initiated an SPR. It was determined that management emphasized

that plant workers should report deficiencies, which could result in SPRs, to their supervisors and that it was not their expectation for the plant worker to initiate an SPR. This expectation was found to contradict the specific requirements for initiating an SPR. The team was concerned that an informal undocumented review process may occur which could result in potentially generic or programmatic concerns not being identified to the shift supervisor or management. The team identified instances where SPRs were not initiated in accordance with the corrective action program. The team also identified several concerns with the resolution of known and sometimes repetitive problems.

The team identified five examples where safety-related equipment or program implementation deficiencies were not properly identified or inadequate corrective actions were taken. Three of the examples included a repetitive corrective maintenance activity on the Unit 2 turbine-driven auxiliary feedwater pump; an electrical load sequence problem with an essential chiller; and design modifications which had not been implemented on the essential chillers.

An unresolved item was identified concerning the adequacy of corrective actions for a number of motor-operated valves (MOVs) that require an increased inservice test frequency per the American Society of Mechanical Engineers code.

An additional concern was identified for an SPR which was voided for MOV corrective maintenance procedures and other programmatic concerns relating to MOV maintenance.

The team identified two observations where corrective actions were implemented to correct the immediate deficiency; however, the reason for the deficiencies occurring had not been determined. The deficiencies involved a residual heat removal MOV breaker that was upgraded per a temporary modification without determining the root cause for the breaker tripping and a reactor trip breaker bypass breaker chafed wire.

IR 92-36 Tapia, Evans

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, maintenance and surveillance observations, preparation for refueling (Unit 1), and followup on a previously identified inspection followup item, three deficiencies, and six observations.

Strengths:

None

Weaknesses:

During the performance of a surveillance test on a component cooling water (CCW) system valve, a broken terminal lug was identified. Licensee personnel failed to issue a station problem report (SPR) to investigate the cause of the event. After prompting by the inspector, licensee personnel issued an SPR to assess the root cause of the failure. This was an additional example of problems in the generation of SPRs and may be further addressed in NRC Operational Safety Team Inspection Report 50-498/92-35; 50-499/92-35.

IR 93-01 McKernon

Areas Inspected: Special announced inspection of the licensed operator requalification program, which included a review of administrative controls for licensed operator training, and observation of operators during the conduct of facility licensee annual licensed operator requalification examinations. The team also observed the performance of the examination

evaluators in the simulator and during in-plant walkthroughs. The inspectors used the guidance provided in Temporary Instruction 2515/117, Revision 0, issued December 8, 1992.

Strengths:

None

Weaknesses:

- The lack of a formal approved training plan or formal sample plan, over at least a 6 month period, is indicative of a lack of effective self-analysis and prompt corrective actions.
- The lack of a formal revision system for the training plan is indicative of a weak tracking system.

IR 93-03 Tapia

Areas Inspected: A special inspection was conducted to determine the circumstances surrounding the drift of nuclear instrumentation setpoints and the failure of Unit 1 Emergency Diesel Generator (EDG) 13 to start. The inspection also reviewed previously identified problems with personnel errors.

Strengths:

None

Weaknesses:

- One apparent violation was identified that involved eight examples of a failure to follow procedural requirements for performing self-verification. These examples, of which seven were previously identified and documented as unresolved items in NRC inspections, represent instances in which work was performed on the wrong component, wrong train, and, in one case, on the wrong unit.
- The verification process associated with setpoints and the lack of procedural requirements for assuring independent verification of the nuclear instrumentation system are considered a weakness and a contributing cause of the apparent violation identified.

Jul 1993 OPPER

IR 93-04 Tapia, Evans

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, maintenance observations, preparation for refueling (Unit 2), followup on a previously identified open item, and licensee event report followup.

Strengths:

None

Weaknesses:

- Unit 2 entered Technical Specifications (TS) 3.0.3 when power to the digital rod position indication was lost for 16 minutes. Contributing factors to the event included the failure of the licensee to work a service request on a defective sample pump in a timely manner.

IR 93-05 Satorius

Areas Inspected: A special inspection was conducted to determine the events surrounding the failure of the turbine driven auxiliary feedwater pumps (TDAFWPs) to start on demand in both Units 1 and 2. The inspection also reviewed a previously identified unresolved item involving the failure to satisfy Technical Specification (TS) requirements relative to Unit 1 emergency diesel generator (EDG) availability and mode change restrictions.

Strengths:

None

Weaknesses:

The actions taken by plant management to resolve problems on Unit 1 Valves MS 148 and MS 218, following the identification of their deficient condition (hard to operate); and to correct the excessive leakage on Unit 1's Motor-Operated Valve (MOV) 514 was not considered to be proactive.

IR 93-07 AIT

Areas Inspected: In accordance with NRC Inspection Manual Chapter 0325, an AIT was dispatched to South Texas Project Electric Generating Station (STPEGS) on February 5, 1993, to review the circumstances surrounding the repetitive overspeed tripping of the Unit 1 turbine driven auxiliary feedwater pump (TDAFWP), and the failure of the Unit 2 TDAFWP to start on demand.

Strengths:

None

Weaknesses:

The AIT ascertained that there were two TDAFWP trips that were attributed to an overspeed condition prior to the December 27, 1992, through February 3, 1993 events. One of these trips occurred on TDAFWP 14 on June 11, 1990, and was attributed to a low governor oil pressure that results when a turbine restart is attempted prior to allowing the oil pressure to bleed off from the governor. The other trip occurred on TDAFWP 24 on September 16, 1991, and was attributed to a mechanical overspeed trip. Effective followup was not conducted to determine the reason for this overspeed trip during the response time test conducted prior to the first refueling outage. Followup to correct the problem with the sticking overspeed trip plunger was slow and considered to be less than adequate.

IR 93-08 Runyan

Areas Inspected: Nonroutine, announced, special inspection of technical issues associated with the failure of motor-operated valve SI-31A, Unit 2, and the licensee's identification of five Unit 1 residual heat removal system motor-operated valves that were experiencing excessive torque.

Strengths:

None

Weaknesses:

The licensee did not undertake corrective actions following a 1989 failure of valve SI-31A, Unit 2, to prevent recurrence of the event. The same valve failed under similar circumstances in February 1993. This item was identified as an apparent violation of 10 CFR 50, Appendix B, Criterion XVI.

The apparent failure to provide a proper operability determination for the five residual heat removal valves was identified as an apparent violation of 10 CFR 50, Appendix B, Criterion XVI. This judgment was based on the fact that there are no vendor or industry rerating programs providing for the acceptance of motor-operated valves in an overtorqued condition.

IR 93-11 Tapia, Evans

Areas Inspected: Routine, unannounced inspection of plant status, operational safety verification, maintenance and surveillance observations, refueling activities (Unit 2), followup on previously identified violations and open items, and licensee event report followup.

Strengths:

None

Weaknesses:

- A lack of timeliness in resolving a long-standing problem with a centrifugal charging pump breaker was another indication of the programmatic failure to take prompt and effective corrective actions and to determine the cause of identified hardware problems.

IR 93-12 Tapia

Areas Inspected: Nonroutine, announced, special inspection of technical issues associated with undersized 120 volt vital ac fuses.

Strengths:

None

Weaknesses:

There has been one other similar fuse failure for which a root cause was never defined.

IR 93-13 Paulk

Areas Inspected: Reactive, unannounced inspection of motor-operated valve maintenance activities.

Strengths:

The licensee responded properly after being notified of a condition adverse to quality related to the use of load washers in the testing of motor-operated valves by initiating SPR 930885.

Weaknesses:

None

IR 93-14 Barnes

Areas Inspected: Nonroutine, announced special inspection of technical issues associated with identified steam generator primary side manway cover and secondary side hand hole cover leakage.

Strengths:

None

Weaknesses:

System engineer assessments of needed corrective actions were based, in part, on the erroneous understanding that steam generator primary side manways would be opened during each refueling outage.

A violation was identified in regard to the failure to promptly correct identified evidence of leakage at the Steam Generator 1B hot leg primary side manway and to identify and formally evaluate primary side manway stud elongation values which exceeded the acceptance range of Department Procedure RC-0004.

IR 93-21 Tapas

Areas Inspected: An inspection was conducted to determine the circumstances surrounding the inappropriate dispositioning of a service request that had identified deficiencies in the seismic qualifications of the qualified display processing system. The inspection also reviewed a previously identified unresolved item involving incorrect breaker setpoints for Class 1E 480 VAC magnetic adjustable molded case circuit breakers.

Strengths:

None

Weaknesses:

A violation was identified that concerned a potential operability issue was not recognized and promptly resolve and, as a result, the appropriate Technical Specification (TS) Limiting Condition for Operations were not entered. Personnel error also contributed to this TS violation when a request for a conditional release was incorrectly processed.

ENFORCEMENT HISTORY SINCE BEGINNING OF SALP PERIOD

Unit 1

92-026	10-16-92	IV	Failure to satisfy reporting requirements.
92-035	03-03-93	IV	Four Examples of a Failure to Assure Adequate Corrective Actions Are Completed
93-008	03-17-93	IV	Failure to take adequate corrective action regarding over-torquing of RHR valves.
93-014	04-13-93	IV	Two examples of a failure to take adequate corrective action regarding steam generator manway cover installation.
93-021	06-30-93	IV	Failure to take adequate corrective action regarding QDPS seismic qualification.

Unit 2

92-026	10-16-92	IV	Failure to satisfy reporting requirements.
92-035	03-03-93	IV	Four Examples of a Failure to Assure Adequate Corrective Actions Are Completed
93-008	03-17-93	IV	Failure to take adequate corrective action regarding over-torquing of RHR valves.

LERs SINCE BEGINNING OF SALP PERIOD

Unit 1

93-007	02-04-93		TS required shutdown due to the inoperability of the turbine-driven auxiliary feedwater pump.
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Unit 2

None

ENFORCEMENT AND REGULATORY ISSUES

A. ESCALATED ENFORCEMENT

APRIL 1993

CIVIL PENALTY - The action was based on a number of violations of established procedures which resulted in the failure to inform NRC licensed operators in the control room of potentially significant conditions that could have affected the operation of the plant. Because the failures to follow established procedures involved plant management personnel, these violations were classified as a Severity Level III problem. A civil penalty was issued to emphasize the need for managers, when necessary, to promptly and properly interface with the NRC-licensed personnel in the control room and the importance of plant management personnel following or properly modifying established procedures. Mitigation of the civil penalty was appropriate for the licensee's corrective actions, but it was offset by the escalation for NRC identification and the licensee's prior opportunity to identify one of the violations. (\$75,000)

APRIL 1993

CIVIL PENALTY - The action was based on numerous examples of failures to adhere to procedural requirements regarding self-verification that primarily involved the failure to verify the correct unit, correct train, or correct device before conducting testing or maintenance activities. Although none of the errors resulted in adverse safety consequences, collectively they represented a significant regulatory concern and were classified as a Severity Level III problem. A civil penalty was issued to emphasize the importance of attention to detail and the need for the licensee to be aggressive in implementing corrective actions of a lasting nature. The civil penalty was partially mitigated based on the licensee's corrective actions. (\$25,000)

APRIL 1993

CIVIL PENALTY - The action was based on the licensee's failure to take corrective actions for a failed motor on a motor operated valve in the Unit 2 Low Head Safety Injection System. The violations involved in this action were classified as a Severity Level III problem because (1) a safety-related valve went unrepaired for 18 months despite multiple opportunities to recognize the significance of the problem, and (2) operations personnel did not recognize the technical specification implications of operating the reactor with the valve inoperable. A civil penalty was issued to emphasize the importance of ensuring that identified problems that have the potential to affect the operability of safety systems are resolved in a timely manner and are resolved commensurate with their relevance to ensuring compliance with plant Technical Specifications. Mitigation of the civil penalty was appropriate for the licensee's aggressive identification of the root causes of the self-identifying event, but was offset by the escalation for the duration of the inoperable valve and the licensee's inadequate corrective actions. (\$75,000)

May 1993

CIVIL PENALTY - The followup inspection after the AIT inspection identified eight apparent violations; including one where the inappropriate voiding of a post maintenance test on a Unit 1 EDG resulted in its inoperability for 24 days and a second concerning an inadequate TDAFWP surveillance test program that resulted in the Unit 1 TDAFWP being inoperable for 33 days. In addition, the inspection identified a period of 61 hours during which a second Unit 1 EDG was inoperable. During this 61-hour period, all three of these safety-related components were determined to be inoperable concurrently. An

enforcement conference was conducted April 22, 1993, and a civil penalty was assessed. (\$325,000)

MAY 1993

A special inspection (February 13 to March 17, 1993) addressed the operability of the SSPS. This inspection identified a condition that had existed since initial startup where under a steam line break accident scenario, the SSPS might not have been capable of initiating an ESF signal necessary to mitigate the consequence of the accident. An enforcement conference was conducted May 6, 1993, with one severity Level IV violation being cited.

SUMMARY OF NON-ESCALATED ENFORCEMENT SINCE START OF SALE

Unit 1

Functional Area	Level IV	Level V	NCV's	Dev
Plant Operations	3	0	0	0
Rad Controls	1	0	1	0
Maint & Surv	8	0	1	0
Emerg Preparedness	0	0	0	0
Security	0	0	1	0
Eng & Tech Support	5	0	4	0
SA/Qual Verification	5	0	0	0
Total	22	0	7	0

Unit 2

Functional Area	Level IV	Level V	NCV's	Dev
Plant Operations	4	0	0	0
Rad Controls	1	0	1	0
Maint & Surv	7	0	1	0
Emerg Preparedness	0	0	0	0
Security	0	0	1	0
Eng & Tech Support	5	0	5	0
SA/Qual Verification	3	0	0	0
Total	20	0	8	0

REGION IV
DIVISION OF REACTOR PROJECTS
QUARTERLY PLANT PERFORMANCE REVIEW

(Revised 01/10/94)

SOUTH TEXAS PROJECT
ELECTRIC GENERATING STATION

DATE: January 19, 1993

QUARTER: Fourth Quarter (October-December 1993)

SALP PERIOD: August 2, 1992 thru July 2, 1994

PERFORMANCE SUMMARY ATTACHMENTS:

Attachment A - Plant Ops Performance Summaries in Previous QPPR's
Attachment B - Rad Con Performance Summaries in Previous QPPR's
Attachment C - M/S Performance Summaries in Previous QPPR's
Attachment D - EP Performance Summaries in Previous QPPR's
Attachment E - Security Performance Summaries in Previous QPPR's
Attachment F - E/TS Performance Summaries in Previous QPPR's
Attachment G - SA/QV Performance Summaries in Previous QPPR's
South Texas Project QPPR Input from NRR
Performance Indicators
QPPR Executive Summary
MIP Form #2
IFS Form #1

1. PERFORMANCE INDICATORS

A. PI SUMMARY (DATA ATTACHED-1st QUARTER 1993 LATEST DATA AVAILABLE)

Unit 1

- 0 SCRAMs
- 0 Safety System Actuations
- 1 Significant Event
- 3 Safety System Failures

Unit 2

- 2 SCRAMs
- 0 Safety System Actuations
- 1 Significant Event
- 2 Safety System Failures

B. INSIGHTS FROM PIs

Unit 1 PIs trend with the peer group. Unit 2 SCRAMs, Safety System Actuations, and Significant Events are high when compared to the peer group. Both units have been in forced outages for the entire quarter.

2. ENFORCEMENT AND REGULATORY ISSUES

A. ESCALATED ENFORCEMENT

None

B. SUMMARY OF NON-ESCALATED ENFORCEMENT SINCE LAST QPPR

Unit 1

Functional Area	Level IV	Level V	NCV's	Dev
Plant Operations	0	0	1	0
Maintenance	0	0	1	0
Engineering	1	0	1	0
Plant Support	0	0	0	0
Total	1	0	3	0

Unit 2

Functional Area	Level IV	Level V	NCV's	Dev
Plant Operations	0	0	0	0
Maintenance	3	0	0	0
Engineering	1	0	1	0
Plant Support	0	0	0	0
Total	4	0	1	0

C. INSIGHTS FROM ENFORCEMENT

The licensee has demonstrated weak performance in the area of maintenance; particularly in the control of contract maintenance personnel.

D. LER SUMMARY

1 LER was issued by the licensee for Unit 1 since the last QPPR. 2 LERs were issued by the licensee for Unit 2 the last QPPR.

E. OTHER REGULATORY ISSUES

The STP Restart Panel has been active in identifying the inspection activities that will be necessary to be performed prior to either unit's restart. The first portion of a Headquarters lead ORAT Inspection was performed during the week of December 6, 1993; the second portion is presently scheduled for the weeks of January 10 and 17, 1994.

PLANT OPERATIONS

(1) Performance Summary

IR 93-30 Loveless

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, maintenance and surveillance observations, employee concerns program, licensee event report followup, and followup on an unresolved item.

Strengths:

None

Weaknesses:

A valid failure of Standby Diesel Generator 11 was caused by a preposition circuit board failure.

IR 93-36 Loveless

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, maintenance and surveillance observations, and review of system certification activities.

Strengths:

The identification and resolution of the loss of spent fuel pool (SFP) water inventory indicated an increased awareness in this area. The situation was handled well and corrective actions to prevent recurrence were taken.

Early in this inspection period, inspectors noted examples of poor communications and lack of professionalism in the control room. Throughout the period an improvement was noted. Operators exhibited a heightened sense of professionalism, and communications appeared to be more formal.

Weaknesses:

The overflowing of the reactor vessel while restoring the reactor coolant system was caused, in part, by the failure of a reactor plant operator (RPO) and a unit supervisor to fully evaluate and question abnormal indications.

The inspector identified equipment clearance order tags that had not been initialed as verified. Additionally, the inspector identified tags on a feedwater system clearance which were missing or unreadable because of exposure to the elements.

IR 93-41 Tapia

Areas Inspected: Routine, announced inspection of open items summarized in NRC Inspection Report 50-498/93-40; 50-499/93-40 and of the licensee's corrective action to resolve operations staffing issues (Restart Issue No. 6).

Strengths:

Control room personnel response to an inadvertent loss of 480 volt motor control center was observed to be very good.

Weaknesses:

None

(2) Attachment A & G - Performance Summaries in Previous QPPR's

ENFORCEMENT SINCE LAST QPPR

Unit 1

93-030 10-27-93 NCV Fouling HVAC boundary in the ECW intake structure with
a sump pump hose.

Unit 2

None

LERs SINCE LAST QPPR

Unit 1

None

Unit 2

93-016 11-29-93 Inadvertent ESF actuation due to CCW Pump start
resulting from operator error.

(3) DRP Recommendation

(4) Recommended MIP Changes

MAINTENANCE

(1) Performance Summary

IR 93-30 Loveless

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, maintenance and surveillance observations, employee concerns program, licensee event report followup, and followup on an unresolved item.

Strengths:

The inspectors observed routine daily work practices in the control room and at the work sites throughout the plant. Good work practices and adherence to procedures were observed in most cases. However, specific examples of failure to follow procedures are discussed in other sections.

Scheduled maintenance activities on Essential Chiller 11A were performed in an acceptable manner. The on-the-job training process was observed as being good.

Weaknesses:

During plant tours, the inspectors observed several equipment deficiencies which had not been identified on service requests.

One noncited violation was documented because a heating, ventilation, and air-conditioning boundary at the essential cooling water intake structure was found breached. No breach permit had been issued for the breach.

Excessive failures of the refueling machine caused a delay of the off-load of the Unit 1 core. The licensee's corrective actions will be tracked.

One violation was identified involving the failure to perform an engineering evaluation prior to installation of an alternate replacement part.

Standby Diesel Generator 23 was inoperable for an extended period of time because during the maintenance outage, the reverse power relay had not been properly modified prior to installation. This occurred as a result of inadequate procedures and errors in human performance.

Portions of maintenance on the electrical auxiliary building air handling unit fan were observed. While verifying the equipment clearance order the inspectors discovered that the clearance had not been accepted by the mechanics performing the job. One noncited violation was documented.

Postmaintenance test surveillance of the Standby Diesel Generator 11 were observed. Problems with alarms, speed, and voltage indications were observed. The failure of the voltage regulator to increase to the proper voltage was considered a valid failure.

IR 93-36 Loveless

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, maintenance and surveillance observations, and review of system certification activities.

Strengths:

Troubleshooting and repair of the standby diesel generators following the inadvertent starts of Standby Diesel Generators (SDGs) 12 and 22, indicated a marked improvement in the understanding and diagnosis of control circuit problems.

Reinstallation of the upper bearing housing cover on High Head Safety Injection Pump 2C and a vibration analysis run were observed to be well performed.

Good control of testing activities during a 10-hour operability run on Train B of the control room heating, ventilation, and air conditioning system was observed.

Weaknesses:

Operators failed to control configuration of fuses when two sets of fuses in the control cabinets of SDGs 12 and 13 were inadvertently reversed.

Failure to follow established procedures governing freeze stop plugs was a violation. The attempt at establishment of a freeze seal on Essential Cooling Water System A was observed. Lack of control over contractor activities and procedure weaknesses were noted.

IR 93-38 Satorius

Areas Inspected: Routine, announced inspection to determine the effectiveness of the licensee's actions to improve reliability and testing methodology of turbine-driven auxiliary feedwater pumps (TDAFWPs).

Strengths:

The preventive maintenance (PM) program has been re-written, with enhanced maintenance procedures that incorporated the latest revisions of the turbine, governor, and trip/throttle valve vendor manuals.

Acceptable repairs have been accomplished on both unit's TDAFWPs to adequately address material deficiency issues identified in NRC Inspection Reports 50-498/93-05; 50-499/93-05 and 50-498/93-07; 50-499/93-07.

Weaknesses:

None

IR 93-39 McKernon

Areas Inspected: Routine, announced inspection of postmaintenance testing program (Restart Issue 4 of NRC Inspection Report 50-498/93-31; 50-499/93-31) and related previous inspection findings.

Strengths:

The licensee had restructured the postmaintenance testing program. The revised program was adequate to address those programmatic weaknesses noted in the related items reviewed during this inspection.

Weaknesses:

At the conclusion of this inspection, Restart Issue 4 remained open. Evaluation of the postmaintenance testing program will be continued in a future inspection.

IR 93-46 McKernon

Areas Inspected: Routine, announced inspection to ascertain the effectiveness of the licensee's improved postmaintenance testing (PMT) program.

Strengths:

The improved PMT program resolved many of the problems of the prior program; however, some implementation weaknesses still exist.

The licensee was effective in identifying and pursuing problems related to the PMT program.

Weaknesses:

None

IR 93-53 Satorius

Areas Inspected: Routine, announced inspection to determine the effectiveness of the licensee's efforts to reduce and maintain the maintenance backlog.

Strengths:

- The licensee had made notable progress in reducing the service request (SR) backlog and the material condition of the station had improved significantly during the past 6 months. However, the inspectors considered that the achievement of the licensee's goal of less than 1000 Common and Unit 1 SRs and the subsequent management of that maintenance backlog, given the planned shift of maintenance resources to Unit 2, was a significant challenge.
- Licensee activities to repair station automatic functions and main control board deficiencies was viewed as a positive initiative.
- Although well behind schedule, the maintenance procedure upgrade program should improve the quality of maintenance procedures.
- The Operations Work Control Group had been effective in reducing the administrative burden on control room operators.
- The Maintenance Rover Work Program was considered a good initiative, and that program's success was regarded as pivotal in the licensee's efforts to improve maintenance activity efficiency and reach and maintain the SR backlog goal.
- The planned maintenance (PM) deferral rate was less than one percent and had trended at that level for the past 6 months.
- With the exception of two deferred SRs that constituted operator work-arounds and several relatively minor coding errors, the licensee's deferral process was effective.
- SRs voided to PMs were being appropriately tracked to ensure that deficient conditions were not being removed from the SR backlog prior to being corrected.
- Nonsystem certification and acceptance systems were being effectively monitored for deferral of maintenance activities.

Weaknesses:

- The licensee's walkdowns conducted as a part of their system certification and acceptance programs were generally effective in problem identification; however, the inspectors noted several examples of poor resolution of identified deficiencies and inconsistencies in identification of deficient conditions.

(2) Attachment C & G - Performance Summaries in Previous QPPR's

ENFORCEMENT SINCE LAST QPPR

Unit 1

93-030	10-27-93	NCV	Failure of personnel to sign onto an equipment clearance order.
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Unit 2

93-030	10-27-93	IV	Failure of maintenance personnel to follow procedures when installing a replacement reverse power relay.
93-035	12-17-93	IV	Failure to maintain environmental qualification of motor-operated valves due to failing to install T-drains to the actuators.
93-036	12-02-93	IV	Failure to maintain adequate control of contractor personnel during the formation of a freeze seal on an ECW pipe to the essential chillers.

LERs SINCE LAST QPPR

None

(3) DRP Recommendation

(4) Recommended MIP Changes

ENGINEERING

(1) Performance Summary

IR 93-28 Barnes

Areas Inspected: Regional initiative, announced inspection to review the history and material condition of Units 1 and 2 steam generator tubing, and to assess the effectiveness of licensee programs in detection and analysis of degraded tubing, repair of defects, and correction of conditions contributing to tube degradation.

Strengths:

Actions were taken by the licensee to minimize tubing wear in the preheater section of the steam generators by expanding the tubes at two baffle plate locations; and actions were taken to improve resistance to stress corrosion cracking by peening of tube expansion transition areas and heat treatment of low radius U-bends.

The 1993 eddy current examination results for South Texas Project, Units 1 and 2, indicated that limited tube degradation had occurred in Unit 1. Similar damage indications were not identified in Unit 2 tubing. Tube pull samples will be subjected to laboratory examination to verify whether tube degradation has occurred and the nature, as applicable, of the damage mechanisms.

The licensee adopted a comprehensive eddy current examination strategy for the current steam generator examinations. With one exception, prior inservice examinations were performed using only the bobbin method and a sample size at or near the minimum required by the Technical Specifications.

The current eddy current examination program requirements were found to be good, with the primary area of improvement being the adoption of formalized training and testing of data analysts.

The 1993 eddy current data were observed to exhibit low noise, with the performance of the contractor analysts being found to be satisfactory for the tube data sample that was reviewed.

Visual examination of Unit 2 steam generators appeared to have been well performed for the documented inspection scope. Procedural guidance lacked specificity, however, on inspection scope expectations.

Since commercial operation of STP, Units 1 and 2, the secondary water chemistry program for both units had continually been upgraded to incorporate industry guidelines as they were made available.

The licensee has maintained excellent control of the secondary water chemistry, with only two significant out-of-specification chemistry conditions noted since plant startup. These conditions both involved out-of-specification sodium concentrations that occurred in Unit 1 during 1990 and again in 1993. In each case, the out-of-specification condition was promptly identified and corrected.

Weaknesses:

Operational experience is limited since South Texas Project, Units 1 and 2, are the only U.S. pressurized water reactors which utilize Westinghouse Model E steam generators in the plant design.

These units have been operated with a hot leg temperature of 626°F, which appeared from available information to be the highest temperature used by any domestic pressurized water reactor. It was noted by the inspectors that reduction of hot leg temperature is being pursued by other individual licensees, including South Texas Project, as an approach to limit initiation and propagation of stress corrosion cracking.

Belgian operating experience data provided by the licensee indicated that significant stress corrosion cracking damage had occurred in their Model E steam generators since commercial operation began in 1985.

IR 93-30 Loveless

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, maintenance and surveillance observations, employee concerns program, licensee event report followup, and followup on an unresolved item.

Strengths:

During this inspection period, the licensee performed steam generator tube inspections on Units 1 and 2. A very small number of tubes in both units were identified as requiring plugging. One tube in Unit 1 appeared to have degraded at a greater rate than anticipated. A review of records showed that the tube had a 59 percent through-wall indication when tested in 1985 and was not plugged or reported as required.

Weaknesses:

None

IR 93-35 Ellershaw

Areas Inspected: Routine, announced inspection of onsite followup of previous inspection findings and followup of licensee event reports.

Strengths:

Based on the results of this inspection, it was concluded that significant progress has been made concerning Restart Issue 14, "Adequacy of the Licensee's Resolution of the Reliability of the Feedwater Isolation Bypass Valves." However, this restart issue will remain open pending completion of the open findings specified in the report.

Weaknesses:

None

IR 93-36 Loveless

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, maintenance and surveillance observations, and review of system certification activities.

Strengths:

The conduct of an inservice inspection of Component Cooling Water Pump 1B was good.

Weaknesses:

One unresolved item was opened to review the licensee's investigation and root cause of a continuing fuse configuration control problem.

IR 93-38 Satorius

Areas Inspected: Routine, announced inspection to determine the effectiveness of the licensee's actions to improve reliability and testing methodology of turbine-driven auxiliary feedwater pumps (TDAFWPs).

Strengths:

Enhancements to the condensate removal system have been completed and tested to ensure adequate operation, and monitoring instrumentation installed to alert operators and engineers of potential system degradation.

Weaknesses:

None

IR 93-42 Satorius

Areas Inspected: Routine, announced inspection to resolve the issue of testing tornado dampers installed on safety-related heating, ventilation, and air conditioning (HVAC) systems.

Strengths:

The inspector concluded that no further review of tornado damper issues was required prior to the restart of Unit 1 and that Restart Issue 15 could be considered resolved.

Weaknesses:

None

(2) Attachment F - Performance Summaries in Previous QPPR's

ENFORCEMENT SINCE LAST QPPR

Unit 1

93-035	12-17-93	IV	Failure to promptly disposition engineering change notice packages concerning the qualification of positioners on main feedwater isolation bypass valves.
93-035	12-17-93	NCV	Failure to properly reclassifiy positioners for the main feedwater isolation bypass valves.

Unit 2

93-035	12-17-93	IV	Failure to promptly disposition engineering change notice packages concerning the qualification of positioners on main feedwater isolation bypass valves.
93-035	12-17-93	NCV	Failure to properly reclassifiy positioners for the main feedwater isolation bypass valves.

LERs SINCE LAST QPPR

Unit 1

93-021	10-29-93		Failure to provide backup overcurrent protection for penetration conductors.
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Unit 2

93-015	11-29-93		Inadvertent start of EDG 22 due to spurious operation of a transistor.
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(3) DRP Recommendation

(4) Recommended MIP Changes

PLANT SUPPORT

(1) Performance Summary

IR 93-30 Loveless

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, maintenance and surveillance observations, employee concerns program, licensee event report followup, and followup on an unresolved item.

Strengths:

- The inspectors reviewed characteristics of the licensee's employee concerns program.

Weaknesses:

None

IR 93-31 Satorius

Areas Inspected: Routine in-office inspection of the issues contained in the Diagnostic Evaluation Team (DET) Report, Confirmatory Action Letter (CAL) and Supplements, the licensee's Operational Readiness Plan (ORP), routine and special NRC inspection reports, licensing actions, and NRC staff actions.

Results:

- The DET report, CAL and Supplements, ORP, routine and special NRC inspection reports, licensing issues, and NRC staff actions assigned by the NRC Executive Director for Operations following the Diagnostic Evaluation were reviewed. Based on this review, issues that the NRC considers necessary to be addressed prior to the restart of either unit (Restart Issues) were identified and listed.

IR 93-33 McKernon

Areas Inspected: Routine, announced inspection of the licensee's station problem report (SPR) backlog management and management of new incoming SPRs. The inspection also included a review of the licensee's planned corrective actions list (operational readiness items list), comparison to the NRC Region IV restart issues list, and review of the licensee's line management assessment process and the independent assessment process. Further, the inspection included a review of previous inspection findings.

Strengths:

- The inspection verified that the licensee was appropriately managing the SPR backlog.
- There was satisfactory correlation between the licensee's operational readiness items list and the NRC Region IV Restart Issues list.
- The independent assessment process was well structured but had not yet been implemented.

Weaknesses:

- While the licensee's direction for the line management assessment process appeared appropriate, only one department had formulated and submitted their self-assessment checklist.

IE 93-34 Lentz

Areas Inspected: Routine, announced inspection of the qualifications of applicants for operator licenses at the South Texas Project facility, which included an eligibility determination and administration of comprehensive written and operating examinations. The examination team also observed the performance of on-shift operators and plant conditions incident to the conduct of the applicant evaluations. The examiners used the guidance provided in NUREG-1021, "Operator Licensing Examiner Standards," Revision 7, Sections 201, 202, 203, 301, 302, 303, 401, 402, and 403, issued January 1993.

Strengths:

Four of the six applicants for reactor operator licenses satisfied the requirements of 10 CFR 55.33(a)(2).

Eight of the nine applicants for senior reactor operator licenses satisfied the requirements of 10 CFR 55.33(a)(2).

The reference material provided by the training department for examination development was adequate.

All applicants passed the written examinations, with scores ranging from a low of 82 percent to a high of 94 percent with averages of 86 percent for reactor operator applicants, 90 percent for senior reactor operator applicants, and 88.4 percent overall.

Weaknesses:

The crews examined exhibited generally effective, formal communications, with effective command and control on the part of crew supervision, with noted exceptions.

The applicants demonstrated a generic performance weakness which involved a hesitancy to secure equipment when abnormal conditions were noted immediately following equipment startup.

The applicants demonstrated a second generic performance weakness which involved a general unfamiliarity with low power and shutdown procedures.

Procedural guidance for loss of primary reactor coolant accident scenarios while shutdown was unclear.

Procedural guidance for abnormal response of a reactor coolant pump when starting was lacking.

Poor plant labeling was observed to adversely impact operator performance and was consistent with prior NRC inspection reports.

General observations were made of poor decorum on-shift control room operators and plant material conditions.

IE 93-35 Ellershaw

Areas Inspected: Routine, announced inspection of onsite followup of previous inspection findings and followup of licensee event reports.

Strengths:

Management was proactive by ensuring a more aggressive troubleshooting plan be developed to identify the cause of the erratic refueling machine behavior. Once the plan was developed, the licensee identified the root cause and took appropriate corrective action.

Weaknesses:

None

IR 93-36 Loveless

Areas Inspected: Routine, unannounced inspection of plant status, onsite followup of events, operational safety verification, maintenance and surveillance observations, and review of system certification activities.

Strengths:

Overall, plant housekeeping and material condition improved over the period. RPOs were noted assisting in this effort.

Security officers observed during a personnel accountability drill performed in an excellent manner.

Weaknesses:

None

IR 93-37 Whittemore

Areas Inspected: Routine, announced inspection of the licensee's corrective action to resolve previous inspection findings related to fire protection.

Strengths:

The licensee had verified that the training program for fire brigade leaders met the requirements specified in Appendix R of 10 CFR 50. Additional personnel were being qualified as fire brigade leader to reduce the burden on operations personnel.

The Unit 1 fire protection computer system had undergone hardware and software changes to enhance usability and reliability. As a result, the nuisance alarms and operator distraction attributed to the fire protection system computer had decreased significantly. Changes to computer alarm descriptions had improved system reliability.

The licensee had correctly identified all the work necessary to improve the material condition of the fire protection systems. However, a significant portion of the work remained to be done by a licensee contractor.

The licensee had correctly identified, investigated, and resolved the problems with fire barrier penetration seals. Additional occurrences of seal problems would be identified and corrected by the licensee's surveillance and corrective action programs.

The licensee program for control of transient combustibles had improved, but required additional management attention to improve the collective employee attitude toward fire safety.

STPEGS management appeared aggressive toward correcting identified problems and identifying additional problems.

Weaknesses:

None

IR 93-38 Satorius

Areas Inspected: Routine, announced inspection to determine the effectiveness of the licensee's actions to improve reliability and testing methodology of turbine-driven auxiliary feedwater pumps (TDAFWPs).

Strengths:

The licensee's surveillance testing procedures have been revised in order to address the testing inadequacies identified in NRC Inspection Reports 50-498/93-05; 50-499/93-05 and 50-498/93-07; 50-499/93-07. Specifically, these enhancements should provide assurance that future TDAFWP deficiencies that could degrade reliability will not be masked by an inadequate surveillance testing program.

Readiness Review Committee activities were conducted in a thorough manner. Division Managers that constituted the TDAFWP Readiness Review Committee were appropriately critical and circumspect with respect to system status and the acceptability of proposed deferral of maintenance activities.

Pending the satisfactory completion of MODE 3 testing of the Unit 1 TDAFWP, the inspector concluded that no further review was required prior to the restart of Unit 1 and that Restart Issue No. 1 could be considered resolved.

STPEGS management's receptiveness to identifying and correcting problems with respect to the TDAFWP issues, were considered to have improved since the original problems were identified and documented in NRC Inspection Reports 50-498/93-05; 50-499/93-05 and 50-498/93-07; 50-499/93-07.

Weaknesses:

None

IR 93-40 Pellet

Areas Inspected: Routine, announced inspection of open items summarized in NRC Inspection Report 50-498/93-31; 50-499/93-31 relating to operations staffing (Restart Issue No. 6) and required to be resolved prior to the restart of Unit 1.

Strengths:

The inspector found that the licensee had made substantial progress toward resolving Restart Issue No. 6 open items and that most of the remaining issues remained open to assess implementation effectiveness. As a result of observation of plant and control room activities, the inspector noted improvement in control room crew workload and communications practices.

Weaknesses:

None

IR 93-41 Tapia

Areas Inspected: Routine, announced inspection of open items summarized in NRC Inspection Report 50-498/93-40; 50-499/93-40 and of the licensee's corrective action to resolve operations staffing issues (Restart Issue No. 6).

Strengths:

The inspector found that the licensee's corrective actions have been effective in correcting the problems which existed as a result of inadequate operator staffing.

As a result of observation of plant and control room activities, the inspector noted improvements in communications practices and in the reduction of control room crew workload.

A review of the recent operator requalification training course content indicated increased training resources and additional focus on reactor startup, response to shutdown LOCA, and training on modifications made during the outage.

Weaknesses:

None

IR 93-43 Bundy

Areas Inspected: Routine, announced inspection of the licensee's self-assessment capability, information exchange with the industry, and followup on previous inspection findings.

Strengths:

- The licensee was performing high quality audits, surveillance, and special assessments. However, it appeared that identified deficiencies were not being addressed in a timely manner.
- The industry experience review program was acceptable. The backlog of open operating experience communications was high, but appeared manageable. The open operating experience review and vendor equipment technical information communications had been reviewed for plant restart impact.
- The nuclear safety review board appeared proactive in identifying safety issues to management; however, the backlog of nuclear safety review board action items was unacceptably high. An action plan existed for resolving the backlogged action items.
- The plant operations review committee was performing all Technical Specifications required activities and attempting to become more proactive in identifying adverse performance trends.
- Administration of the operating experience review program by the independent safety engineering group (ISEG) had detracted from its ability to perform its other duties. A minimal number of surveillance and assessments had been performed. However, contract personnel had recently been added to the staff to work on the operating experience review effort.
- The operational readiness assessment program appeared comprehensive and was effectively addressing safety issues.
- The licensee had demonstrated effective self-assessment capability. The personnel interviewed exhibited a safety conscious attitude and a desire to correct past errors. Everyone appeared to be working toward optimizing safety performance. Positive changes had been made in several site programs. However, several programs were still in transition, including the responsibilities of the ISEG and the corrective action group.
- The licensee was an active participant in the appropriate industry groups.
- The licensee was active in information exchange with other utilities and the information obtained was considered when making programmatic changes.

Weaknesses:

- The ISEG action item tracking system had inaccuracies. It indicated that the final action for Report 93-04, which involved a printed circuit board configuration control issue, was scheduled for completion in February 1994. The final action was actually scheduled for completion at the end of 1996.

IR 93-47 Spitzberg

Areas Inspected: Special, announced inspection of the emergency preparedness program including an evaluation of the licensee's emergency accountability capabilities during day shift hours to determine whether previous weaknesses in this area have been corrected and a review of recent organizational changes as they relate to emergency preparedness.

Strengths:

The licensee had performed a comprehensive analysis and developed a detailed set of corrective actions to address problems in accountability capabilities. Corrective actions had been implemented in training, procedures, personnel, and hardware to facilitate and improve the accountability process. Accountability drills conducted showed steady improvement and validated the effectiveness of the actions taken to correct previous licensee identified weaknesses in this area. Recent drills including one evaluated by the NRC demonstrated that the licensee can perform personnel accountability in a timely manner during day shift hours.

It was concluded that recent organizational changes would not diminish the licensee's capabilities to effectively respond to emergencies.

Weaknesses:

None

(2) Attachment G - Performance Summaries in Previous QPPR's

ENFORCEMENT SINCE LAST QPPR

None

LERs SINCE LAST QPPR

None

(3) DRP Recommendation

(4) Recommended MIP Changes

SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION

SMM PREBRIEF MATERIALS

OVERVIEW OF PERFORMANCE

SUMMARY STATEMENT

OVERALL STRENGTHS AND WEAKNESSES

PLANT OPERATIONS - MAINTENANCE

ENGINEERING - PLANT SUPPORT

BACKGROUND BRIEFING PACKAGE

POWER HISTORY

ORGANIZATION CHARTS

RA
DRA
DRP
DRS
DRSS
BC
PE



C/26

SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION

OVERVIEW OF PERFORMANCE


SUMMARY STATEMENT

OVERALL PERFORMANCE HAS BEEN MUCH IMPROVED DURING THE LAST NINE MONTHS COMPARED TO PREVIOUS PERIODS. SENIOR MANAGEMENT IS FOCUSED ON SAFETY AND PERFORMANCE IMPROVEMENT. PERFORMANCE IS MONITORED AND INDIVIDUALS ARE HELD ACCOUNTABLE. SELF-ASSESSMENT AND INDEPENDENT ASSESSMENT HAVE BECOME A PART OF THE SITE CULTURE. PERSONNEL ARE WILLING TO IDENTIFY PROBLEMS WITH AN REALISTIC EXPECTATION THAT THE ISSUES WILL BE ADDRESSED.

SINCE RESTART, THE UNITS HAVE PERFORMED WELL. THE PLANTS ARE IN VERY GOOD MATERIAL CONDITION. MAINTENANCE BACKLOGS HAVE BEEN REDUCED BELOW GOALS. APPROPRIATE PLANNING, SCHEDULING, AND COORDINATION HAVE BECOME THE NORM.

THE NEW MANAGERS HIRED IN 1993 HAVE HIGHER EXPECTATIONS OF PERFORMANCE AND A BROADER KNOWLEDGE OF INDUSTRY PERFORMANCE NORMS THAN DID THEIR PREDECESSORS. EMPLOYEE GROUPS ARE NOW COMMONLY SENT TO OTHER FACILITIES TO LEARN INDUSTRY GOOD PRACTICES. THIS IS A MATURING ORGANIZATION. THERE IS POTENTIAL FOR SIGNIFICANT FURTHER IMPROVEMENT.

THE LEVEL OF REGULATORY CONCERN HAS DECREASED DURING 1994.

 - October 17, 1994

SOUTH TEXAS PROJECT


OVERALL STRENGTHS AND WEAKNESSES


STRENGTHS

- OPERATOR PROFESSIONALISM
- CONSERVATIVE OPERATING PHILOSOPHY
- TEAMWORK BETWEEN DEPARTMENTS
- PERFORMANCE MONITORING AND INDIVIDUAL ACCOUNTABILITY
- OPERATOR RESPONSE TO TRANSIENTS
- INDEPENDENT ASSESSMENT AND SELF ASSESSMENT
- MANAGEMENT INVOLVEMENT
- PLANT MATERIAL CONDITION AND HOUSEKEEPING, MAINTENANCE BACKLOG REDUCTION
- SUPPORT FACILITIES - MAINTENANCE, TRAINING, EP
- RADIATION PROTECTION PROGRAM IMPLEMENTATION
- ENGINEERING BACKLOG REDUCTION

WEAKNESSES

- PROCEDURE QUALITY AND PROCEDURE COMPLIANCE
- ADDRESSING MINOR QUALITY AND SAFETY CONCERNS IN A TIMELY AND EFFECTIVE MANNER
- CONFIGURATION MANAGEMENT AND CLEARANCE PROGRAM IMPLEMENTATION
- BOP MAINTENANCE AND RELIABILITY
- IST PROGRAM
- SDG INADVERTENT STARTS
- CERTAIN ENGINEERING EVALUATIONS

 - October 17, 1994



SOUTH TEXAS PROJECT

PLANT OPERATIONS

● STRENGTHS

- GOOD MANAGEMENT INVOLVEMENT AND SAFETY FOCUS
- REDUCED WORK-AROUND ITEMS AND CONTROL ROOM DEFICIENCIES
- OPERATIONS STAFFING ISSUES ADDRESSED. SIX SHIFT ROTATION IMPLEMENTED
- BETTER RPO SUPERVISION AND PERFORMANCE
- BETTER SUPERVISION AND TRAINING OF TRAINEES
- IMPLEMENTATION OF LESSONS LEARNED, ONE UNIT TO THE OTHER
- OPERATIONS WORK CONTROL GROUP HAS REDUCED THE ADMINISTRATIVE ACTIVITIES IN THE CONTROL ROOM AND ALLOWED FOR OPERATORS TO BE LESS DISTRACTED AND BETTER ABLE TO FOCUS ON THE OPERATION OF THE PLANT
- OPERATOR DECORUM AND PROFESSIONALISM IN THE CONTROL IS VERY GOOD
- PRE-EVOLUTION BRIEFINGS AND SHIFT TURNOVERS VERY GOOD
- EXCELLENT RESPONSE TO TRANSIENTS
- SAFETY SYSTEM ALIGNMENTS PROPER

● WEAKNESSES

- RECURRENT EQUIPMENT CLEARANCE ORDER AND CONFIGURATION MANAGEMENT IMPLEMENTATION PROBLEMS CONTINUE, PARTICULARLY IN BOP
- PROCEDURAL WEAKNESSES - AOPs, SURVEILLANCE TESTS
- PROCEDURE COMPLIANCE - MINOR ERRORS
- MIDDLE MANAGEMENT RECOGNITION AND RESOLUTION OF MINOR ISSUES

MAINTENANCE

● STRENGTHS

- IMPROVED MANAGEMENT INVOLVEMENT AND SAFETY AWARENESS
- WORK PLANNING AND IMPLEMENTATION MUCH IMPROVED
- MAINTENANCE BACKLOG REDUCED, UNDER CONTROL, AND MANAGEABLE
- STATION IN EXCELLENT MATERIAL CONDITION
- TWO SUPERVISORS PER CREW, GOOD JOB SUPERVISION
- MAINTENANCE TRAINING CERTIFICATIONS HAVE BEEN ACCOMPLISHED BEYOND LICENSEE GOALS
- SUPERIOR FACILITIES
- GENERALLY GOOD TECHNICIAN PERFORMANCE
- FEW REPETITIVE MAINTENANCE PROBLEMS - TOXIC GAS MONITORS ARE AN EXCEPTION

● WEAKNESSES

- SURVEILLANCE AND MAINTENANCE PROCEDURE ADEQUACY AND ADHERENCE - EXTENSIVE USE OF SKILL OF THE CRAFT IN MAINTENANCE
- HUMAN PERFORMANCE PROBLEMS WITH CLEARANCES
- TECHNICIAN CERTIFICATION IMPROVED BUT MORE WORK NEEDED

[REDACTED]

[REDACTED] October 17, 1994

SOUTH TEXAS PROJECT

ENGINEERING

● STRENGTHS

- SOME PROGRAMS STRONG AND EFFECTIVELY IMPLEMENTED - EG: SYSTEM CERTIFICATION FOR RESTART
- EFFECTIVE NEW MANAGEMENT, GOOD SAFETY FOCUS
- GOOD EFFORT TO RESOLVE STANDBY DIESEL GENERATOR PROBLEMS, BUT NOT FULLY RESOLVED YET
- BACKLOGS REDUCED TO MANAGEABLE LEVELS AND HAVE REDUCING TREND
- IMPROVEMENTS IN WORK MANAGEMENT
- GENERALLY GOOD SUPPORT TO OPERATIONS AND MAINTENANCE
- IMPROVED CORRECTIVE ACTIONS IN RESPONSE TO ISSUES

● WEAKNESSES

- STAFF KNOWLEDGEABLE IN PLANT DESIGN BUT SOMETIMES WEAK IN APPLYING KNOWLEDGE TO SPECIFIC PROBLEMS
- INSERVICE TEST PROGRAM IMPLEMENTATION
- PROBLEM RESOLUTION IN SOME CASES
- POST-MODIFICATION TESTING INCONSISTENT
- SOME EVALUATIONS WEAK - 50.59 SCREENING NOT ALWAYS PERFORMED WHEN REQUIRED


PLANT SUPPORT

● STRENGTHS

- IMPROVING PERFORMANCE IN SECURITY
- IMPROVING MORAL WITHIN THE SECURITY FORCE
- SECURITY OVERTIME HAS DECREASED
- IMPROVED SECURITY EQUIPMENT MAINTENANCE WITH REDUCED BACKLOG
- STRONG MANAGEMENT SUPPORT FOR SECURITY - EQUIPMENT UPGRADES UNDERWAY
- OVERALL STRONG PERFORMANCE IN RADIATION PROTECTION

● WEAKNESSES

- DEGRADED SECURITY ASSESSMENT AIDS
- SEVERAL WEAKNESSES IN LAST ANNUAL EP EXERCISE

 - October 17, 1994

BACKGROUND INFORMATION

ON
SOUTH TEXAS PROJECT

Utility: Houston Lighting & Power Company
Location: Bay City, Texas (95 miles southwest of Houston)
County: Matagorda County, Texas

	<u>Unit 1</u>	<u>Unit 2</u>
Docket Nos.:	50-498	50-499
CP Issued:	December 22, 1975	Same
Low Power License:	August 21, 1987	December 16, 1988
Full Power License:	NPF-76, 03/22/88	NPF-80, 03/28/89
Initial Criticality:	March 8, 1988	March 12, 1989
Elec. Ener. 1st Gener:	March 30, 1988	April 11, 1989
Commercial Operation:	August 25, 1988	June 19, 1989
Reactor Type:	Four-loop PWR(RESAR-41)	Same
Containment Type:	Dry atmospheric post-tensioned concrete with a steel liner	
Power Level:	3800 MWT	Same
Architect/Engineer:	Bechtel	Same
NSSS Vendor:	Westinghouse	Same
Constructor:	Ebasco	Same
Turbine Supplier:	Westinghouse	Same
Condenser Cooling Method:	Three-shell once-through	Same
Condenser Cooling Water:	Cooling Lake	Same
Project Manager:	Tom Alexion, NRR (301) 504-1326	
AEOD Contact:	M. Padovan (301) 415-6374	
NRC Responsible Region:	Region IV, Arlington, Texas L. Joseph Callan, Regional Administrator (817) 860-8225 John M. Montgomery, Deputy Regional Administrator (817) 860-8226	
Div. of Reactor Projects:	A. Bill Beach, Director (817) 860-8223 William D. Johnson, Chief, Project Branch A (817) 860-8148 William B. Jones, Project Engineer (817) 860-8147	
Sr. Resident Inspector:	David Loveless (512) 972-2507	
Resident Inspectors:	Jack Keeton (512) 972-2507 Denise Garcia (512) 972-2507	
Report Coordinated by:	William D. Johnson (817) 860-8148	

Corporate Management Personnel (Site)

W. T. Cottle, Group Vice President, Nuclear
J. F. Groth, Vice President, Nuclear Generation
T. H. Cloninger, Vice President, Nuclear Engineering

South Texas Project

Site Management Personnel

L. Myers, Plant Manager, Unit 1
R. Masse, Plant Manager, Unit 2
L. Martin, General Manager, Nuclear Assurance
J. Sheppard, General Manager, Licensing
G. Parkey, General Manager, Generation Support
F. Mangan, General Manager, Plant Services
R. Lovell, Manager, Operations, Unit 1
W. Dowdy, Manager, Operations, Unit 2
J. Fast, Manager, Maintenance, Unit 1
K. Coates, Manager, Maintenance, Unit 2
H. Bergendahl, Manager, Technical Services
T. Underwood, Manager, Maintenance Support
W. Waddell, Manager, Operations Support
D. Leazar, Director, Nuclear Fuels & Analysis Department
F. Timmons, Manager, Nuclear Security
J. Carlin, Manager, Nuclear Training
R. Rehkugler, Manager, Nuclear Quality Control and Material Testing
D. Keating, Director, Quality Assurance
R. Garris, Manager, Human Resources
W. Berg, Director, ISEG
S. Thomas, Manager, Design Engineering Department
T. Jordan, Manager, Systems Engineering Department

Workforce (9/1/94):

HL&P 1955
Contractors 379 Baseline
374 Initiative Projects
7 Outage

Total 2715

Reactor Operators:

	<u>ROs</u>	<u>SROs</u>
Plant Operations	28	39
Operations Support	1	4
Nuclear Training	3	5
Other	0	3
SRO Training Class	6	
Totals	38	51

Workshifts:

Number of Operating Shifts (Unit 1/Unit 2): 6/6

Number of Personnel on Each Shift:

Shift Supervisor (SRO)	1
Unit Supervisor (SRO)	1
Reactor Operators (RO or SRO)	3
Reactor Plant Operators (Nonlicensed)	5

South Texas Project

Operator Exams Administered by the Region:

Date of Exam	Number of Applicants	Passed/Percentage
4/94	1 SRO	1 SRO/100
	2 ROs	2 ROs/100
9/93	9 SROs	8 SROs/89
	6 ROs	4 ROs/67
9/92	9 SROs	9 SROs/100
	6 ROs	6 ROs/100
9/91	1 SRO	1 SRO/100
	11 ROs	11 ROs/100
9/90	11 SROs	11 SROs/100
	4 ROs	4 ROs/100
4/89	5 ROs	5 ROs/100
11/88	2 SROs	2 SROs/100
	12 ROs	7 ROs/58
5/88	17 ROs	16 ROs/94

Date of next scheduled exam: 10/94

Regualification Exams Administered by the Region

Date of Exam	Number of Applicants	Passed/Percentage
4/90	2 SROs	2 SROs/100
	2 ROs	2 ROs/100
3/90	14 SROs	12 SROs/86
	14 ROs	12 ROs/86
2/92	12 SROs	12 SROs/100
	16 ROs	16 ROs/100

Plant Simulator

The plant simulator is located in the training center building approximately 0.5 miles east of the power block. It is fully operational and necessary modifications to make it a plant duplicate were completed in May 1987. The plant simulator was certified on March 1, 1991. The licensee has contracted a major simulator software upgrade to be completed in 1995.

Systematic Assessment of Licensee Performance (SALP)

<u>Functional Areas</u>	<u>Rating Period</u> 6/1/91 to 8/1/92	<u>Rating Period</u> 8/2/92 to 9/24/94
Plant Operations	2	
Radiological Controls	1	
Maintenance/Surveillance	2D	

South Texas Project

Emergency Preparedness	2
Security	2
Engineering/Technical Support	2
Safety Assessment/Quality	2
Plant Support	

Escalated Enforcement Actions

There have been no recent escalated enforcement actions. However, there are two open DFIs and action associated with the termination of an alleged is under review.

Investigation/Allegation Status

There are eight allegations open for the licensee. Several of these allegations have been referred to the Office of Investigation for further investigation and resolution. The open investigations/allegations are listed below. In addition, several allegations are under review by the NRR/OI STP Allegation Review Team.

- RIV-93-A-0082, received on July 6, 1993, that concerned the Region III Allegation Coordinator being contacted by an individual that alleged that his termination from employment was related to having identified issues that the licensee did not want identified. No specific issues were provided to Region III. The Region IV Allegation Coordinator contacted the individual on August 2, 1993, for further details. The concerns were focused on the licensee's lubrication program. The individual has filed a DOL proceeding and DOL has returned a decision against the alleged. Region IV performed a regional initiative inspection of the licensee's station lubrication program during the week of December 20, 1993. Several lubrication program weaknesses were identified which are being addressed by the licensee. This allegation is open because of ongoing OI actions.
- RIV-93-A-0123, received on October 18, 1993, concerned an individual being terminated from employment because he refused to participate in a criminal conspiracy concerning the falsification of heating, ventilation, and air conditioning records during the plant's construction. Associated with this allegation was a court proceeding with the alleged bringing criminal charges against the architect/engineer. The court found in favor of the alleged. The staff reviewed the court transcripts and determined that no significant safety questions existed. In addition, the licensee has reviewed the transcripts and are sharing their independent finding with the staff. The Office of Investigation is attempting to interview individuals identified from the transcripts, in an effort to determine if further pertinent and specific information concerning this issue is available.
- RIV-93-A-0146, received on December 17, 1993, concerned an allegation that problems existed in the STP bar coding system for supplies and components. The individual believes that his subsequent reduction-in-force termination was due to his identification and voicing of these problems. The alleged was provided his DOL rights via a letter from the allegation coordinator on December 21, 1993. The individual

South Texas Project

filed a DOL complaint on January 7, 1994; the Office of Investigation interviewed the alleger in January 1994, and the investigation has not yet been completed.

- RIV-94-A-0051, received through the OIG, alleged that: (1) temporary wooden thrust blocks associated with cooling water intake pipes were not removed and are inadequate; (2) steam generators are out of plumb; and (3) fasteners were stamped with manufacturers' marks onsite. Insufficient information was received for followup and GAP has been requested to provide additional information.
- RIV-94-A-0093 involved: (1) concerns with the qualifications of the personnel working in the employee concerns program; (2) concerns with the confidentiality and credibility of the program; and (3) concerns with the qualifications of the individuals working in personnel relations. The allegation was referred to the licensee.
- RIV-94-A-0097 expressed a concern that the requirement that control room operators wear ties could present a safety hazard when working near operating equipment. The allegation was referred to the licensee.
- RIV:94-A-0091 was identified during the NRC followup of another allegation. Documentation may have been altered or falsified. The licensee investigated the matter. The Region IV staff is reviewing the licensee's report.
- RIV-94-A-0049 involves an individual who has filed a DOL complaint of harassment. Region IV will monitor the DOL process. OI review continues.

Emergency Preparedness

The licensee's implementation of the emergency preparedness program has demonstrated their ability to protect the health and safety of the public; however, several weaknesses were identified during an emergency preparedness exercise conducted in June 1993. Some of these weaknesses were repetitive.

A followup inspection was conducted in November 1993, and determined that the licensee had adequately addressed the weaknesses identified during earlier inspections. An August 1994 inspection had generally favorable findings. Successful resolution of some of the 1993 weaknesses remains to be demonstrated during the November 1994 exercise.

Significant Licensee Accomplishments

The licensee has completed the confirmatory action letter plant restart issues. Authorization to restart the reactors was granted in February 1994, for Unit 1 and May 1994 for Unit 2. Plant performance since restart has been relatively good.

South Texas Project

Plant Status

Plant Operations:

Both units at STP were shut down in early February 1993. They remained shut down in extended outages under a Confirmatory Action Letter because of numerous problems identified by the NRC and the licensee. NRC oversight of site activities to resolve the restart issues was coordinated by the STP Restart Panel under the guidance of NRC Inspection Manual Chapter 0350, "Staff Guidelines for Restart Approval."

During the outage period, Unit 2 conducted its third refueling. In addition, the licensee conducted eddy current testing on all of both unit's steam generator tubes; the results of this testing were considered by the staff to be positive, with very few indications of tube degradation. Unit 1 restarted on February 15, 1994, following the licensee's resolution of all the issues identified in the Confirmatory Action Letter during a public meeting with the staff. Unit 1 tripped on February 28, 1994, as a result of a feedwater regulating valve failing shut. A primary-to-secondary leak of approximately 160 gallons-per-day was identified in the C Steam Generator following this reactor trip. The licensee decided to cooldown and repair the leak. On March 10, 1994, a Unit 1 inadvertent safety injection actuation occurred during ESF surveillance testing, which resulted in a loss of shutdown cooling. The actuation resulted from the operator transitioning from Train S to Train R during the surveillance. Unit 1 restarted on March 21, 1994, and operated at power until September 20 when loss of a main feedwater pump resulted in a trip on low steam generator level. The unit was restarted on September 21, 1994.

Unit 2 was restarted on May 22, 1994, following the licensee's resolution of the CAL issues and a public meeting with the staff. A reactor trip on June 25 followed a main transformer lockout caused by a pilot wire relay failure. The unit was restarted on June 29, 1994, and has operated at power since then.

Recent Planned or Unplanned Nonrefueling Outages:

None

Refueling Outages:

Unit 1 entered its fourth refueling outage on September 19, 1992. The outage was planned for 62 days; however, it required 103 days to complete because of emergent emergency diesel generator maintenance problems, extensive MOV testing in response to operability concerns identified by the NRC, and a problem on restart with a leaking conoseal on a control rod drive mechanism. Activities completed during the refueling outage included:

- integrated leak rate testing,
- emergency diesel generator maintenance,
- essential cooling water system repairs,
- core offload,
- high pressure turbine gland modification,
- main condenser tube cleaning,
- sequential train outages, and
- MOV testing.

South Texas Project

The next Unit 1 refueling outage is scheduled for 45 days starting March 3, 1995.

Unit 2 entered its third refueling outage on February 27, 1993. The outage was planned for 78 days; however, the outage was extended for a significant period as CAL restart issues were resolved. Activities completed during the outage included:

- 18-month reactor coolant pump motor inspections,
- sludge lancing of all steam generators,
- steam generator eddy current testing,
- main turbine low pressure gland repair,
- MOV testing,
- Low Pressure Turbine 21 rotor replacement,
- Standby Diesel Generator (SDG) 21 5-year maintenance,
- SDG 22 and 23 18-month inspection,
- implementation of 53 major modifications,
- replacement of the main feedwater control system with solid-state equipment, and
- repair of significant SDG 22 piston and cylinder damage.

The next Unit 2 refueling outage is scheduled for fall 1995.

Recent Plant Issues:

- As a result of discussions held in the June 1993 and January 1994 NRC Senior Management Meetings, STP was placed on the list of plants that are considered poor performers.
- An ORAT inspection was conducted by the Office of Nuclear Reactor Regulation during December 1993, and January 1994. The purpose of this inspection was to independently assess the licensee's readiness to restart Unit 1. The results of this assessment concluded that although there were several challenges that the licensee would need to address prior to and after restart, the licensee had taken adequate steps to address the major issues identified by the staff and that Unit 1 could safely return to power operations.
- The licensee has experienced many problems with emergency diesel generators. These problems stemmed from former poor work practices, weak procedures, subcomponent failures, and failure to effectively use vendor information. Efforts in late 1993 by the licensee to improve maintenance practices and thereby improve the reliability of emergency diesel generators has resulted in extensive diagnostic testing that the staff considers to be indicative of good responsiveness to resolving the previously identified problems in this area. However, problems with inadvertent test mode starts have continued. The licensee plans design changes to the test start circuitry to resolve this issue.

South Texas Project

South Texas Project Significant Design Information

Reactor Integrity:

- Reactor pressure vessel: low alloy steel manufactured to ASME Section III, 1971 Ed. requirements
- Reactor Coolant Pressure boundary: bounded by the reactor vessel, pressurizer, steam generators (four), reactor coolant pumps (four), second isolation valve on safety injection, charging, and residual heat removal systems.

Reactor Shutdown:

- Reactor Protection System: solid state protection system powered by 120 VAC vital power.
- Anticipated Transient Without Scram (ATWS) Protection: The ATWS Mitigation System Actuation Circuitry (AMSAC) automatically initiates auxiliary feedwater flow, initiates a turbine trip, and isolates the steam generator blowdown and sampling lines. The AMSAC initiates when three of four steam generators experience low feedwater flow and turbine impulse pressure signals are above 40 percent reactor power.
- Remote Shutdown Facilities: An auxiliary shutdown panel is located in each unit's mechanical electrical auxiliary building. The panel is separated by a 3-hour fire rated wall.

Core Cooling:

- Feedwater System: three turbine-driven, 40 percent capacity, pumps and one motor-driven startup feedwater pump
- Turbine bypass capacity: 42 percent of rated steam flow
- Auxiliary Feedwater System:
Three motor-driven, 50 percent capacity pumps
One turbine-driven, 50 percent capacity pump
- ECCS: Three high head safety injection pumps
Three low head safety injection pumps
Three containment spray pumps
Three safety injection accumulators
- Decay Heat Removal: three loops of residual heat removal

Containment:

- Pressure control/heat removal: the containment consists of a prestressed reinforced concrete, cylindrical structure with a hemispherical dome. The structure is lined with carbon steel plates and

South Texas Project

is designed to 56.5 psig. Three containment spray pumps and six safety-related air coolers control temperature and pressure following a loss of coolant accident.

- Hydrogen Control: recombiners

Electrical Power:

- Offsite AC: eight 345 kV sources
- Onsite AC: three Cooper-Bessemer emergency diesel generators for each unit supply power to Trains A, B, and C safety-related components. Each diesel is rated for 5500 kW.
- DC Power: four sets of batteries powering four independent Class 1E 125-VDC subsystems
- Station Blackout resolution status: South Texas Project personnel recently found that the alternate AC power supply, the ESF transformers, were not protected from the effects of severe weather. This required a change in procedures to shut down prior to the approach of hurricane-force winds and resulted in the plant classification being changed from 8-hour coping to 4-hour coping. This issue is under staff review.

Safety-Related Cooling Water Systems:

- Service water: three loops of essential service water. Each loop takes suction from the common ultimate heat sink in the essential cooling pond. The essential service water cools safety-related loads during normal plant operations. An open service water system cools nonsafety-related equipment, including turbine building components. The service water system takes suction from the cooling lake and returns to the lake.
- Closed cooling water: there are three 100 percent capacity operating loops of component cooling water.

Spent Fuel Storage:

Spent fuel capacity will not be reached until 2031.

Status of Physical Plant

A. Major Aging Issues

Unit 1 began commercial operation on August 25, 1988, and Unit 2 began commercial operation on June 19, 1989; however, because of the long construction time, these plants are not considered to be plants with new equipment. Some control equipment is outdated and some spare parts are difficult or impossible to obtain.

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B. Issues of Interest

The major issues of interest are the recurring problems with the emergency diesel generators and dealloying of the essential cooling water system.

AEOD Analysis of Operational Data

Since starting up from its extended outage, Unit 1 has operated for over a quarter and had good PI performance during that period. Unit 2 recently started up and operated only a little over a month before the plant scrambled and had a safety system actuation due to equipment malfunction. There were no other PI events during this period of operation. There has been insufficient recent operating experience on either unit to establish operating phase PI trends. However, recent shutdown PI performance prior to the plant startups was better than average at Unit 1 and very good at Unit 2.

NRR Operating Reactor Assessment

A request by Mr. T. Saporito in accordance with 10 CFR 2.206 to shut down the facility has been acknowledged and denied. The final Director's Decision is still under review. Additionally, various allegations have been made at the facility by current and former plant workers, and these are under active review by the Office of Investigations.

The licensee is actively pursuing upgrading its Technical Specifications (TS) as a result of its own findings and the Diagnostic Evaluation Team's observations. The licensee is considering short- and long-term TS improvements. The primary short-term proposal will focus on reducing the number of required operable SDGs in Modes 5 and 6 (per unit) from two to one. The licensee justifies this by taking credit for an emergency transformer as being equivalent to a diesel generator. The staff's response is that it had safety concerns with the licensee's proposal, particularly when having only one SDG when in midloop early in the shutdown, with high decay heat loads. The staff requested that the licensee address the shutdown risk implications of the proposed TS and include that in any license amendment request.

The licensee's long-term proposal will focus on converting their TS to the Improved Standard Technical Specifications (ISTS). This will involve modifying the two-train ISTS to incorporate STP's site-specific three-ESF-train design. The staff suggested that the licensee submit specific license amendment requests for those areas involving high safety significance and changes to the licensing basis, before submitting the amendment request for the conversion. In this way, the hard spots will have already been addressed and the conversion will be more administrative in nature.

The following items reflect the status of significant licensing actions related to the South Texas Project. Note: This list does not represent all the licensing actions currently under review. These listed actions are provided because of the potential interest to the Region IV office.

South Texas Project

* MPA B111, Generic Letter 88-20, Individual Plant Examination (IPE)

This is a staff initiative and the licensee submitted its IPE on August 28, 1992. The results of the Individual Plant Examination show a core damage frequency of $4.4E-5$. No single accident sequence was found to dominate the core damage frequency. The top ranking sequence, a loss of electrical auxiliary building HVAC resulting in an internally induced station blackout and failure of the positive displacement pumps, contributes approximately 8.6 percent to the total core damage frequency. In considering the contribution of specific initiating events to the core damage frequency, the largest contributor is the loss of offsite power (35 percent) followed by the loss of HVAC in the electrical-auxiliary building (20 percent). The staff is reviewing the licensee's submittal. A request for additional information is currently being prepared.

* MPA B118, Generic Letter 88-20, Supplement 4, IPE-External Events (IPEEE)

This is a staff initiative and the licensee submitted its IPEEE with the STP PSA report on December 23, 1991. External events contribute about 3 percent to the core damage frequency. Since this arrived well in advance of the requested date, this item is "artificially" aged, as shown by the early application date. At the time that the South Texas IPEEE was submitted, the staff did not have the resources to perform the review and the review was delayed. The staff is reviewing the licensee's submittal.

* MPA X201 & MPA L208, Bulletin 92-01 & GL 92-08, Thermo-Lag

The licensee has substantial amounts of Thermo-Lag present and has responded to NRR's request for additional information by letters dated February 10 and July 27, 1994. The licensee took a different approach in its response than the staff anticipated. The licensee desires to utilize the PRA as a basis to show that upgrading the existing Thermo-Lag is not required in order to provide an adequate level of fire protection, since there is a high degree of separation of the three independent safety trains and fires outside of the control room contribute less than 1 percent to the overall CDF.

The staff is preparing a response to the licensee's letters. The response will state that, consistent with the Staff Requirements Memorandum of June 27, 1994, the staff will not accept a performance-based approach to resolve the Thermo-Lag issue. The response will request the licensee to revise their response accordingly, within 90 days from the date of the staff's response.

* Compliance With Station Blackout (SBO) Rule (10 CFR 50.63)

Previously, the licensee had informed the staff that they completed all actions required to meet the SBO Rule. On August 4, 1994, the licensee provided Justification for Continued Operation (JCO) 94-004, "Compliance with Station Blackout Requirements." The licensee discovered that their 8-hour SBO coping strategy, to power either the Trains A or C battery

South Texas Project

charger from Diesel Generator B (the SBO alternate AC source) by backfeeding through the Auxiliary ESF Transformers, is invalidated because the transformers are located outside and are not protected from likely weather-related events. The licensee's JCO changes the shutdown criteria for hurricanes from 120 mph to 73 mph and changes the coping duration from 8 hours to 4 hours. NRR is reviewing the JCO and has issued questions to the licensee, dated August 23, 1994. A 60-day response was requested. NRR has no immediate safety concerns.

Other NRR Activities

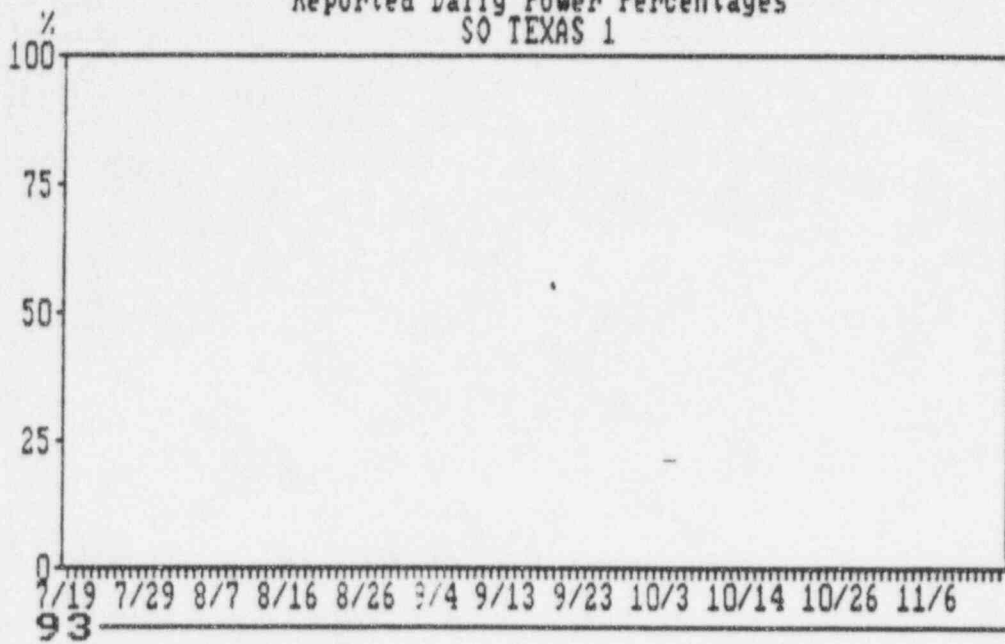
Due to recent congressional interest, two teams have been formed in regard to South Texas Project activities and oversight. The first team combines NRR and OI together to obtain allegations from past and present employees and refers them to the appropriate technical branches. The second team is exclusively NRR personnel to determine inspection program effectiveness at South Texas Project.

Public Issues

Congressman John Dingell's Subcommittee on Oversight and Investigations of the Committee on Energy and Commerce has expressed strong interest in NRC handling of whistleblowers and allegations management, using South Texas Project as one example. Hearings are expected in November 1994.

GAO is investigating NRC inspection program effectiveness using South Texas Project and other facilities as an example.

Reported Daily Power Percentages
SO TEXAS 1

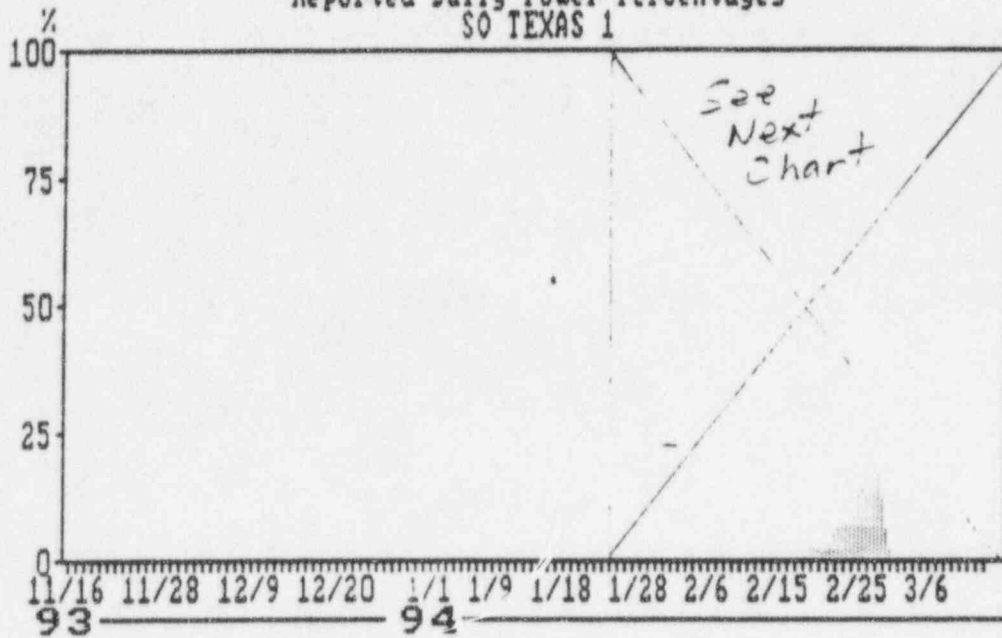


Pct Power (Reported to OPS Center)

Following 120 day period

Help Return

Reported Daily Power Percentages
SO TEXAS 1



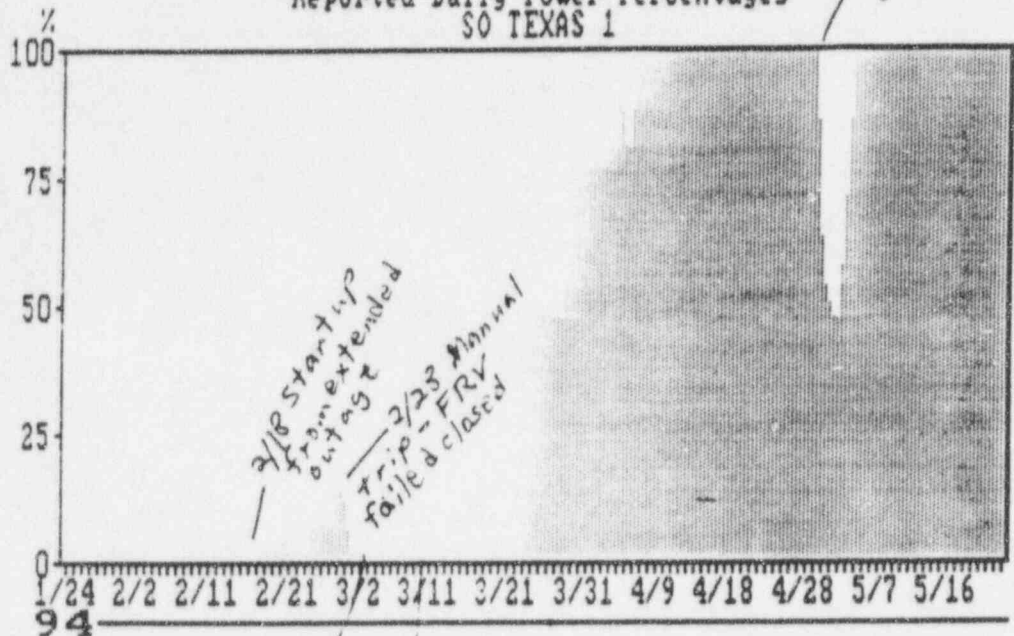
■ Pct Power (Reported to OPS Center)

▨ Prior 120 day period

Help Return

Reported Daily Power Percentages
SO TEXAS 1

MFP lube oil cooler cleaning



Pct Power (Reported to OPS Center)

Following 120 day period

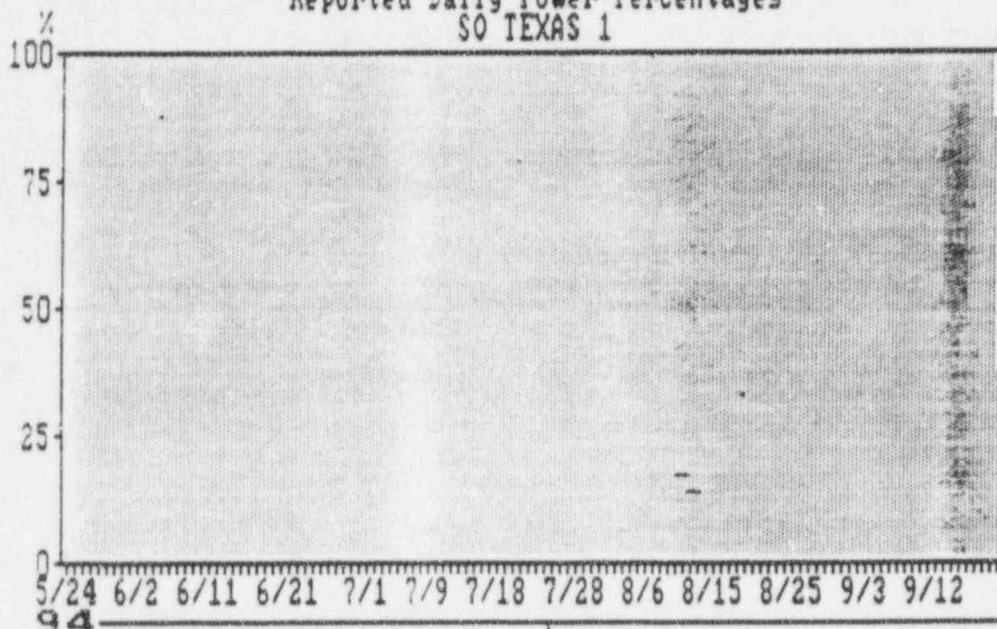
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SG leak identified

3/10 Inadvertent ESF Actuation

Reported Daily Power Percentages
SO TEXAS 1

920 Trif on
- Loss of MFP

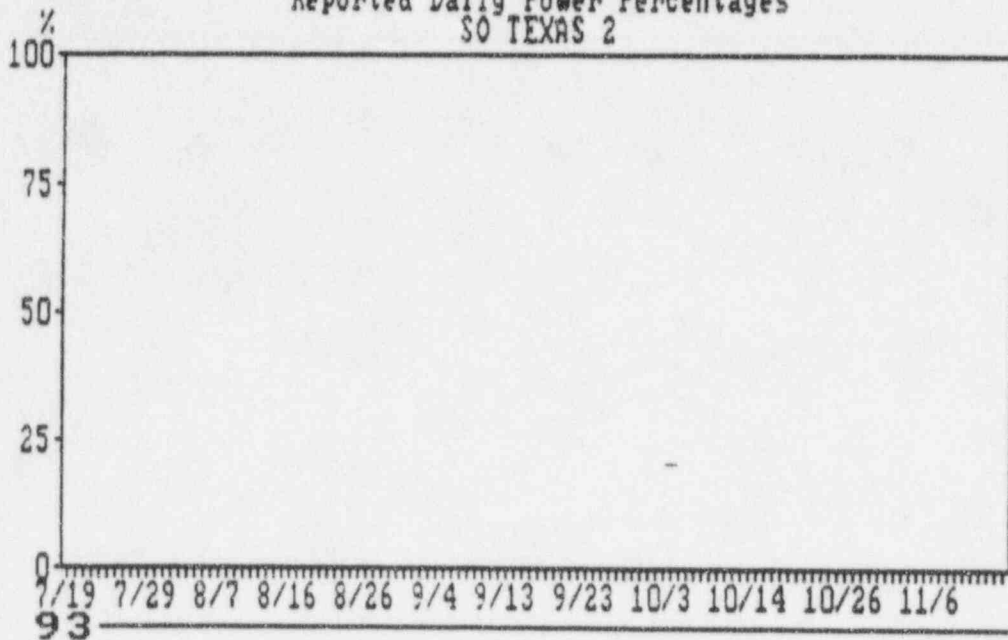


Pct Power (Reported to OPS Center)

◆ Prior 120 day period

Help Return

Reported Daily Power Percentages
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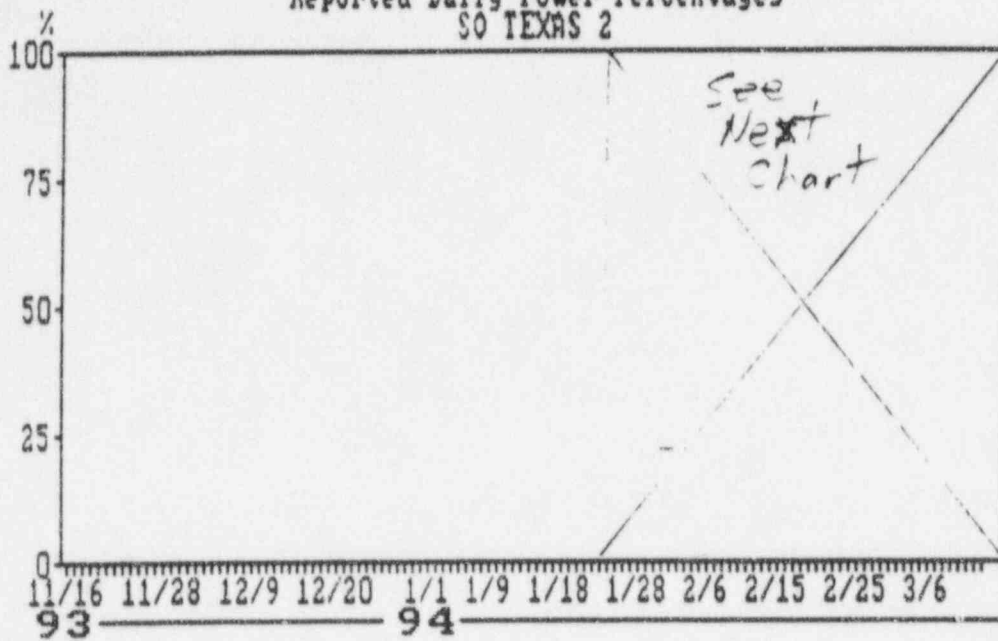


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■ Following 120 day period

■ Help ■ Return

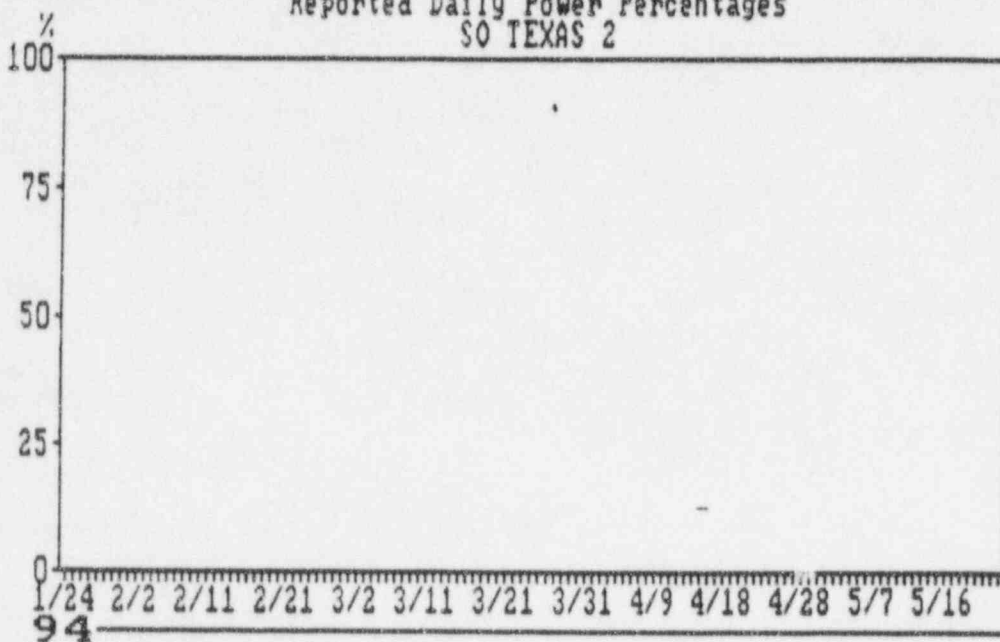
Reported Daily Power Percentages
SO TEXAS 2



Pct Power (Reported to OPS Center)

Prior 120 day period

Reported Daily Power Percentages
SO TEXAS 2

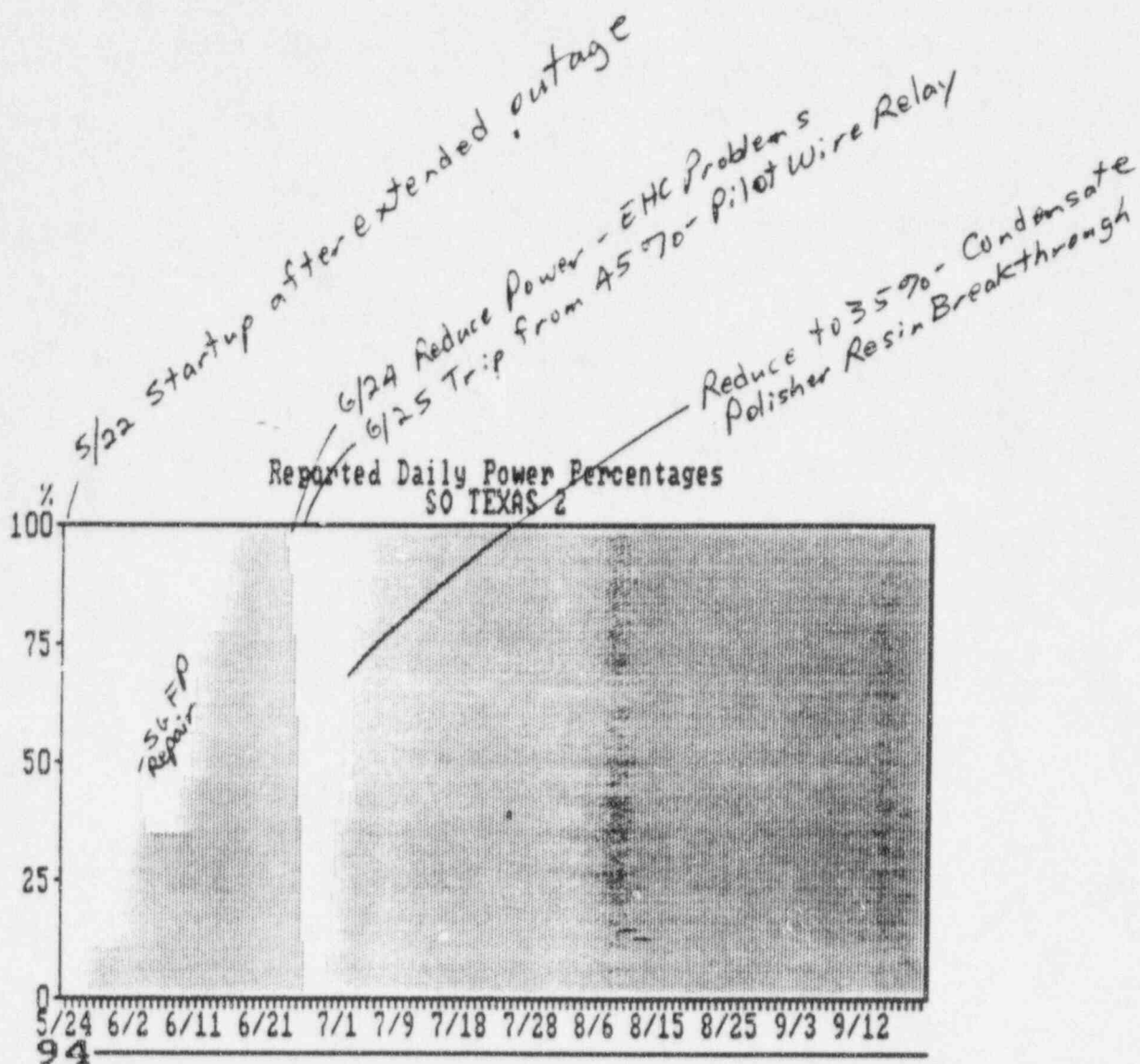


Pct Power (Reported to OPS Center)

following 120 day period

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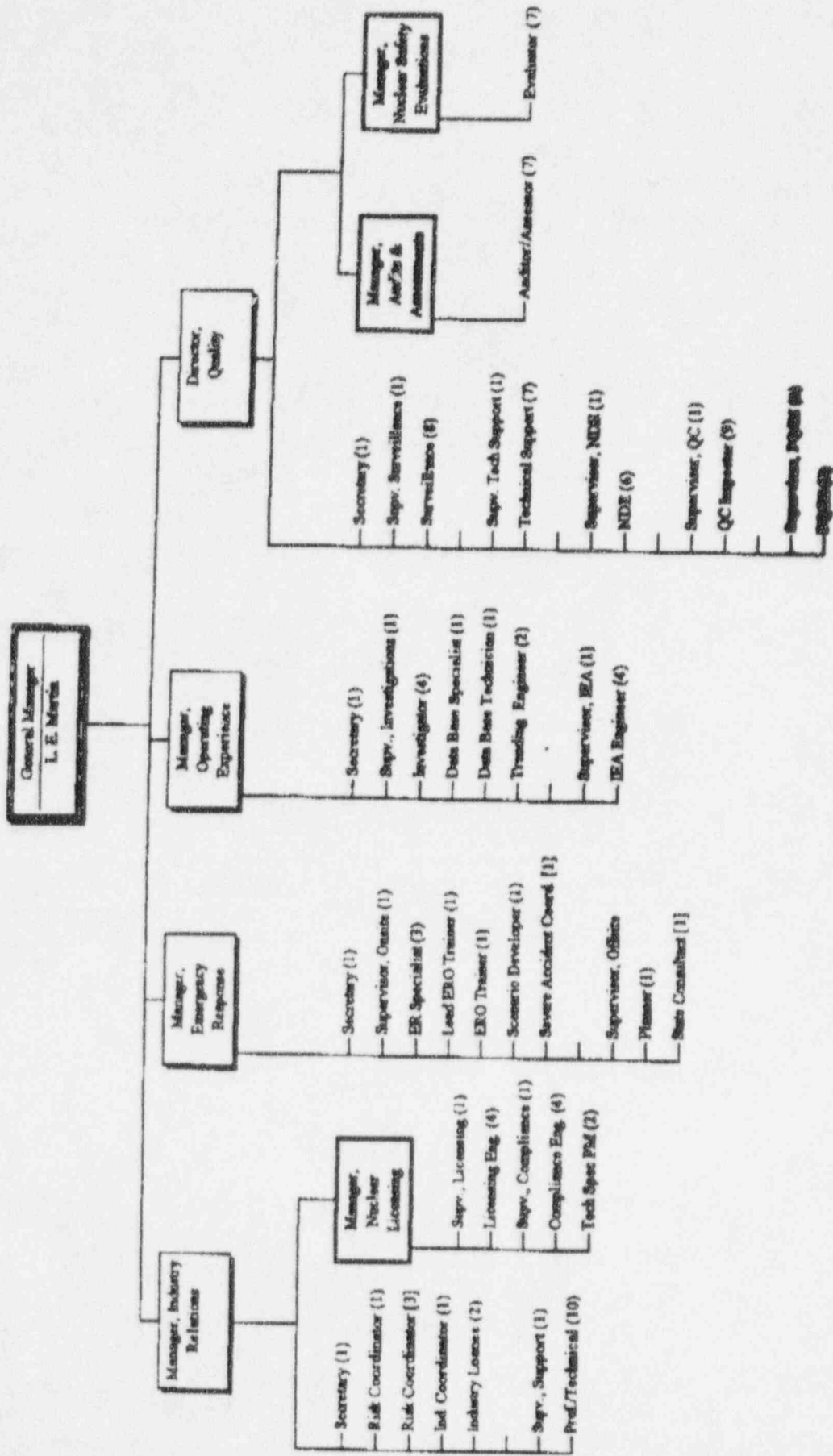
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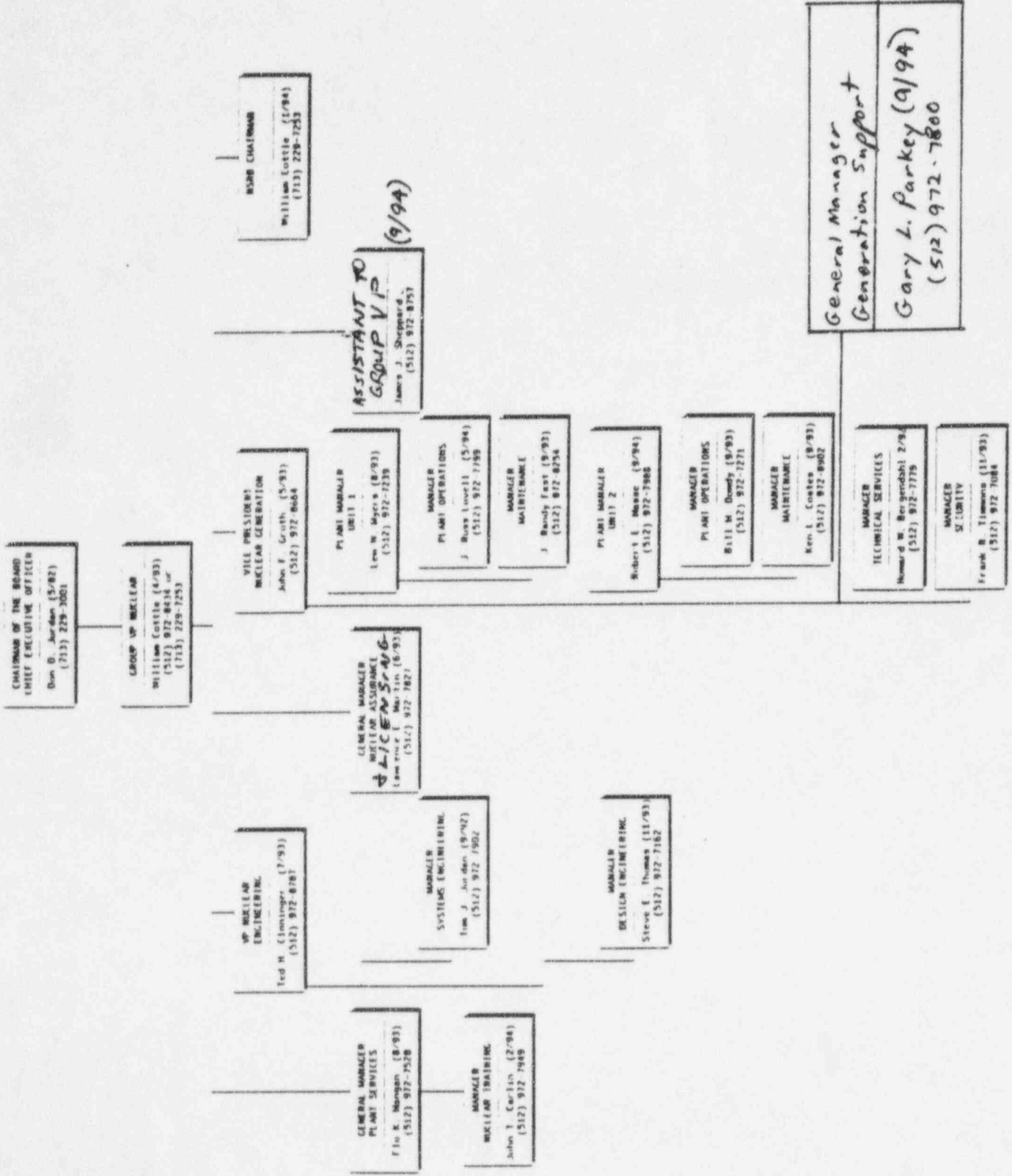
• Prior 120 day period

Help **Return**

NUCLEAR ASSURANCE / NUCLEAR LICENSING

Transitioning to this organization by 1/24/95







UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION IV

611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064

October 21, 1994

Houston Lighting & Power (HL&P) Company
ATTN: William T. Cottle, Group
Vice President, Nuclear
P.O. Box 289
Wadsworth, Texas 77483

SUBJECT: SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE

The NRC Systematic Assessment of Licensee Performance (SALP) has been completed for your South Texas Project (STP) facility. Enclosed for your review is the SALP report for the period of August 2, 1992, through September 24, 1994. The extended assessment period was a result of suspending the normal SALP process during the plant shutdown. As a result, our assessment focuses on the last six months of facility performance which includes your activities in support of restart and recent operational performance of STP Units 1 and 2.

A public meeting to discuss this report with you and your staff has been scheduled for 9 a.m. on November 9, 1994, at the STP Nuclear Support Facility, Wadsworth, Texas. During this meeting you are encouraged to candidly comment on the observations and insights of our report. This meeting is intended to be a forum between HL&P Company and the NRC and will be open to observation by members of the public and other interested parties.

Overall the level of safety performance at the South Texas Project facility has improved. During this SALP period significant changes occurred in site management and organizational structure. Management's efforts resulted in a renewed focus on safety standards, program definition, enhanced oversight and control of plant activities. The active role of management and increased corporate support resulted in significantly improved material condition of the plant and contributed to the successful restart and subsequent operating history of Units 1 and 2.

For this SALP period the NRC evaluated performance in all functional areas as good. Nevertheless, the board noted that the licensee had several continuing challenges. These include further improvement in the work control process; providing for improvements in procedure quality and procedure compliance; providing for oversight and evaluation of proposed changes in the site-wide corrective action program; providing emphasis on configuration control and design change processes; and follow through on proposed upgrades to the security program and emergency preparedness initiatives.

Our review of your self-assessment efforts, management systems to trend program performance, and initiatives to define program performance expectations indicates that line management programs and your monthly independent assessment results were effective in identifying and tracking

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C/27

areas with weak performance. The self-assessment activities to assure readiness for restart of the units were noteworthy. As site-wide programs mature and operating experience continues the high level of HL&P management involvement and corporate support through the STP Business Plan must remain to ensure continued improvements in safety performance.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the SALP report will be placed in the NRC's Public Document Room.

If you have any questions about the SALP report, we would be pleased to discuss them with you. While no written response is required, you may submit written comments within 30 days of the SALP meeting.

Sincerely,

Original Signed By:

L. J. Callan
Regional Administrator

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

Enclosure: NRC SALP Report 50-498/94-99;
50-499/94-99

cc w/Enclosure:
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Matagorda County Courthouse
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Washington, D.C. 20037

Houston Lighting and Power Company -4-

Texas Public Utility Commission
ATTN: Mr. Chet Oberg
7800 Shoal Creek Blvd.
Suite 400N
Austin, Texas 78757-1024

E-Mail report to D. Sullivan (DJS)

bcc to DMB (IE40)

bcc distrib. by RIV:

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OFFICE	SALP Chairman		NRR		DRP		D:DRS	
NAME	SJCcollins		WDBeckner		KEPerkins		TPGwynn	
DATE	/ /94		/ /94		/ /94		/ /94	
OFFICE	DRA		RA					
NAME	JMMontgomery		LJCallan					
DATE	/ /94		/ /94					

SOUTH TEXAS PROJECT
SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE (SALP)
REPORT 50-498/94-99; 50-499/94-99

I. INTRODUCTION:

The NRC conducts systematic assessments of licensee performance (SALP) to reach conclusions regarding a licensee's safety performance. The SALP report documents the NRC's observations and insights on safety risk perspectives of the licensee's performance and informs the licensee and the public of the results. The NRC considers SALP results when allocating NRC inspection resources at licensee facilities.

This report documents the NRC's assessment of the safety performance at the South Texas Project from August 2, 1992, through September 24, 1994.

An NRC SALP Board, comprising the individuals listed below, met on September 28, 1994, to review and assess performance in accordance with the guidance in NRC Management Directive 8.6, "Systematic Assessment of Licensee Performance." The Board developed this assessment for the Regional Administrator's approval.

Board Chairperson

S. J. Collins, Director, Division of Radiation Safety and Safeguards,
Region IV

Board Members

W. D. Beckner, Director, Project Directorate IV-1, Office of Nuclear
Reactor Regulation
T. P. Gwynn, Director, Division of Reactor Safety, Region IV
K. E. Perkins, Director, Walnut Creek Field Office, Division of Reactor
Projects, Region IV

II. BACKGROUND:

Unit 1 entered its fourth refueling outage on September 19, 1992. The outage was extended from 62 to 103 days because of emergent work including emergency diesel generator maintenance problems, extensive motor operated valve (MOV) testing in response to operability concerns, and a problem with a leaking conoseal on a control rod drive mechanism.

Both units at STP were shutdown in early February 1993. They remained shutdown in extended outages under a Confirmatory Action Letter. NRC oversight of site activities to resolve the restart issues was coordinated by the STP Restart Panel under the guidance of NRC Inspection Manual Chapter 0350 "Staff Guidance for Restart Approval." An independent NRC Diagnostic Evaluation Team inspection was conducted in April 1993. As a result of discussions held in the June 1993 NRC Senior Management Meeting, STP was placed on the list of plants that are considered poor performers. During the

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January 1994 and June 1994 NRC Senior Management Meetings, improving overall performance was noted but the decision was made to keep STP on the list of poor performing plants pending evidence of sustained good performance during two-unit operation. An operational readiness assessment inspection was conducted by the Office of Nuclear Reactor Regulation during December 1993 and January 1994 that confirmed, with certain exceptions, that Unit 1 had made sufficient improvements to support restart. Unit 1 restarted on February 15, 1994 following the licensee's resolution of these remaining issues as well as the issues identified in the Confirmatory Action Letter (CAL). Unit 1 tripped on February 28, 1994, as a result of a feedwater regulating valve failing shut. A primary-to-secondary leak was later identified in the C Steam Generator and the licensee decided to cooldown and repair the leak. On March 10, 1994, a Unit 1 inadvertent safety injection actuation occurred, which resulted in a loss of shutdown cooling. Unit 1 restarted on March 21, 1994, and operated at power until September 20 when loss of a main feedwater pump resulted in a reactor trip on low steam generator level. The unit was restarted on September 21, 1994.

Unit 2 was restarted on May 22, 1994, following the licensee's resolution of the CAL issues and after a public meeting with the NRC staff. A reactor trip on June 25 followed a main transformer lockout caused by a pilot wire relay failure. The unit was restarted on June 29, 1994, and operated at power through the end of the assessment period.

III. PERFORMANCE RATINGS:

The NRC assessed the licensee's performance using the revised SALP process implemented on July 19, 1993, which considered four functional areas instead of the previous seven. The four areas assessed are plant operations, maintenance, engineering, and plant support. The NRC considered safety assessment and quality verification within each of the four functional areas rather than as a separate functional area. The NRC assessed radiological controls, emergency preparedness, security, housekeeping, and fire protection as part of the plant support functional area. The SALP category ratings are assigned from the assessment of licensee performance in each functional area. Improving or declining performance trends have been eliminated from the ratings.

Current Functional Areas and Ratings:

Functional Area	Rating This Period (8/2/92 - 9/24/94)
Plant Operations	2
Maintenance	2
Engineering	2
Plant Support	2

Previous Functional Areas and Ratings:

Functional Area	Rating Last Period (6/1/91 - 8/1/92)
Plant Operations	2
Maintenance/Surveillance	2 Declining
Engineering/Technical Support	2
Radiological Controls	1
Emergency Preparedness	2
Security	2
Safety Assessment/Quality Verification	2

IV. PERFORMANCE ANALYSIS

A. Plant Operations

In the 1992 SALP report, performance in the Plant Operations functional area was considered good. However, operators continued to be challenged by plant transients resulting from long-standing equipment problems and human errors. The need for greater management involvement in and support of routine operations activities was evident. The Board recommended that the licensee continue efforts to provide enhanced guidance and support to the operators and reduce the number of unnecessary challenges to plant safety systems.

During the first half of this assessment period, performance in the operations area declined. This was indicated by several escalated and several less significant enforcement items, continued plant material condition deterioration which presented increased challenges to plant operators, continued unnecessary engineered safety features actuations, and a lack of management involvement and support. The licensee implemented many management, organizational, and process changes in 1993 to address these and other problems affecting plant operations.

Notwithstanding the weak performance in operations noted during the first half of the assessment period, the overall safety performance in the plant operations functional area was good, primarily because of significant improvements noted during the second half of the period. Management increased its support to operations resulting in improved operator performance and a conservative operating philosophy. Operators responded well to transients and demonstrated improved performance in the areas of command and control, and communications. However, operator performance in conducting surveillance tests and in procedure compliance was not consistent. In addition, there continued to be some examples of weak management oversight and support to operations and inconsistent performance in the area of configuration management. Problem identification and resolution improved significantly.

The licensee demonstrated a conservative operating philosophy and improved its overall safety focus. An example of this was the decision to cool down Unit 1 and repair a primary to secondary leak which was well below the Technical Specification limit. Another example was the implementation of the work risk assessment check sheets to review the potential impact on safety of planned work before implementation. Management support to operations improved significantly and resulted in improved plant operations. Several historical problems were effectively addressed including operator staffing, excessive workload of control room operators, excessive challenges to operators by equipment failures, and excessive work-around items. Staffing enhancements in operations included adding an additional non-licensed operator to shift crews, the establishment of a six-crew rotation and a training pipeline to support future operations staffing. The operations work control group contributed to the efficiency of the work control process and significantly relieved the operating crew of administrative burdens associated with clearance order preparation, maintenance work initiation, and post-maintenance testing. Clarification and effective communication of management expectations contributed to improved operator performance. Lessons learned during the Unit 1 restart process were effectively applied to the Unit 2 restart. Operations department management demonstrated ownership of the nuclear training program and established a programmatic strength by promoting very good communications and effective working interfaces between operations and the nuclear training department.

Operators responded well to transients and demonstrated improved performance in the area of conservative plant control. Control of plant evolutions such as mode changes and startups was very good. With some exceptions, the operators properly used self-verification techniques. Improvements were noted in operator professionalism, the conduct of shift turnovers, response to annunciators, control board awareness, senior licensed operator command and control and attention to detail. Operators demonstrated an increasing attitude of ownership of plant systems and procedures and a decreasing tolerance for equipment problems.

While recognizing the above improvements, the Board noted instances of inconsistent performance by operators in testing evolutions, procedure compliance, and Technical Specification compliance. Self-verification techniques were not always properly used during testing and routine control board handswitch manipulations. The most significant example involved reactor operators conducting surveillance testing in the wrong solid state protection system cabinet, resulting in safety injection actuation and the loss of decay heat removal while the reactor coolant system was partially drained. Technical Specification violations resulted from the inappropriate use of a danger tag as an administrative lock and inadequate performance of instrument channel checks.

Although management oversight and support of operations improved as discussed above, continued emphasis is needed. In one case, despite indications that the reactor operators were having difficulty in performance of the solid state protection system test mentioned above, the shift supervisor did not adequately evaluate the situation. Additionally, during the Unit 2 restart

process at the 50% assessment plateau, management did not adequately evaluate the overall impact of main control board deficiencies and inoperable automatic functions on operations until prompted by the NRC.

Procedure quality still needs improvement and instances of inappropriate use of procedure field changes were noted. Weaknesses in abnormal operating procedures and differences between their structure and that of emergency operating procedures in one instance contributed to operator confusion and delay during recovery of electrical busses.

Performance in configuration management was mixed. Safety system alignments were very good and the system certification program was effective during the restart process, but several secondary system configuration control problems were noted. The weak implementation of the clearance order program during the earlier part of the assessment period improved somewhat in 1994, but additional corrective action is necessary to resolve continuing problems.

The Board noted significant improvement in problem identification and resolution in the second half of the assessment period. Operators no longer appear reluctant to identify performance or equipment problems as a result of enhanced management support and an improved work process. Operations department self-assessments have resulted in improved performance and quality assurance has provided useful performance insights to operations management.

The performance rating is Category 2 in the plant operations functional area.

B. Maintenance

The previous SALP for South Texas Project rated the maintenance functional area as good with a declining trend. Maintenance programs were viewed as strong but with significant implementation weaknesses, such as inadequate work instructions, instances of failure to follow procedures, poor work practices, and weak scheduling. These weaknesses had resulted in unnecessary reactor trips and engineered safety feature actuations, reduced availability of safety-related and balance-of-plant equipment, and a decline in the material condition of the plant. The need for greater management involvement in and support of maintenance activities was evident.

During this assessment period, overall safety performance in the maintenance functional area was good. Improved management involvement and increased supervisory oversight produced improved maintenance performance. The material condition of the plant was good to excellent and continuing to improve. Maintenance scheduling and craft skills had improved. The revised work control process, however, needed management attention to strengthen administrative controls, improve the quality of and adherence to maintenance work instructions, and ensure employee conformance to management expectations. The maintenance of balance-of-plant equipment was also in need of additional attention. A continuing program of maintenance department self-assessments had the potential to become an analysis asset to management.

Improved management involvement and increased supervisory oversight of maintenance activities produced improved maintenance performance. Maintenance management demonstrated a strong safety focus and a sense of ownership. Revised maintenance work processes increased the efficiency of work activities. Unitized maintenance organizations maintained uniformity within each organization and between the two units by maintaining close communications. A two supervisor per crew concept boosted direct supervisory involvement in assuring the quality of the work. One exception to the latter was the work performed on a toxic gas analyzer that lacked supervisory involvement and oversight. Management trending of maintenance performance was considered good but a weakness was noted concerning the trending of rework.

The material condition of the plant was good to excellent with few fluid leaks and a well managed corrective maintenance work backlog. Many longstanding equipment problems had been resolved and work was progressing toward the resolution of others. For example, the material condition of the Technical Support Center standby diesel generator had been significantly enhanced, and additional work was in progress to protect it and associated equipment from the elements. The number of control room deficiencies had been significantly reduced. There were few illuminated annunciators in the control rooms during full power operation, and the licensee was proactive in servicing annunciators that developed problems. The plant equipment response to two reactor trips (one for each unit) since restart from the extended outage, was excellent. This response reflected the significant improvement in the maintenance of equipment important to the safe operation of the plants.

Maintenance scheduling and schedule adherence was improved and contributed to the improved material condition and safety system availability. Appropriate priorities had been assigned to maintenance work tasks, resulting in no known safety impact from the remaining work backlog.

Management was supportive of the training and certification of maintenance workers. Craft skills were improved, with maintenance training strengthened by the standardization of formal training procedures. The application of craft skills was further enhanced by increased supervisory oversight and use of specialized craft teams for certain equipment, such as the standby diesel generators and the essential chillers. Nevertheless, there was a need for further improvement in maintenance training and certification. This need was indicated by differences observed between training and in-plant activities, such as by the soldering techniques training that was inconsistent with procedure guidelines; by performance weaknesses, such as an incomplete pre-job briefing for replacing a waste gas flowmeter and by an instance of manually passing leads through an energized cabinet; and by the prolonged time between the end of formal training and certification, which was as long as two years.

Notwithstanding the improvements discussed above, the revised work control process needed strengthening to ensure the high quality of maintenance work, the integrity of the plant design, and the fulfillment of management expectations. For example, the rover maintenance program and the work risk assessment process had been initiated without administrative control procedures. Also, maintenance feedback forms were in use although the

administrative controls guiding their use had been deleted. Additionally, there were examples of extensive use of pen and ink changes to maintenance work instructions in order to accomplish the work. In one instance, a pen and ink change resulted in not repacking a valve that later leaked. In another instance, a job was started although the supervisor recognized that the work instructions required revision. In some instances, the work performed relied heavily on the skill-of-the-craft with little guidance provided. In addition, there were some instances noted where the crafts did not document the work they performed. This was particularly evident in the work on the toxic gas analyzer. In this instance, a technician performed troubleshooting on this complex component without procedures or the aid of the vendor technical manual and without documenting either the as-found conditions or the adjustments made.

Although the maintenance of some balance-of-plant equipment had been significantly improved at the end of the assessment period there were numerous examples of deficiencies in plant emergency lighting that indicated a lack of appropriate programmatic controls. In addition, improper maintenance on a resin outlet valve on the Unit 2 mixed bed demineralizer resulted in the discharge of about 45,000 gallons of water and resin into the turbine building. The work on the toxic gas analyzer, the plant emergency lighting, and the resin outlet valve are all recent examples of the need for additional attention to the maintenance of balance-of-plant equipment.

The maintenance department had initiated a continuing program of self-assessments. The assessment performed in June 1994 identified both strengths and areas that had the potential to further improve maintenance performance. Although the assessment program was in its early stages, it has the potential to become a significant analysis asset for management.

The performance rating is Category 2 in the maintenance functional area.

C. Engineering

The previous SALP report for South Texas Project concluded that overall performance in engineering was good; however, some weaknesses were identified in motor-operated valve calculations, self assessment followup actions, and in the areas of design change and temporary modification programs.

During the early part of this SALP period, performance declined and the number and significance of the weaknesses noted increased as discussed in the Diagnostic Evaluation Team (DET) Report.

During this assessment period engineering management and organizational changes occurred. Performance has improved since that time and, late in the SALP period, several engineering programs appeared strong and effectively implemented. Management attention to improving performance was evident during the assessment period. In some areas assessment and program improvement initiatives are continuing to be defined and implemented. There were examples noted of lapses in system knowledge, a large backlog of proposed modifications

and indications of weaknesses in the process of maintaining plant design and configuration consistent with the plant's design basis.

Engineering's response to the failure of the standby diesel generator (SDG) fuel injection pump was good and the licensee responded aggressively to other problems identified with the SDGs. The licensee performed a thorough, objective self-assessment of the MOV program and many of the previously identified inspection findings were closed. In response to Bulletin 88-08, "Thermal Stresses in Piping Connected to the Reactor Coolant System," the licensee was well prepared for the November 1993 meeting with the NRC where an acceptable resolution was agreed upon.

While weaknesses were still evident in the licensee's corrective action program, improvements were made. Licensee management established an atmosphere that encourages the identification and resolution of problems. Establishing the problem review group and the increased focus on ownership of problems were positive improvements. At the close of the assessment period the licensee was planning to further revise the corrective action program and integrate the site-wide program with engineering functions.

Overall, the system engineering program appeared to be effective and improving. Throughout the restart process, the system engineers' involvement and knowledge showed improvement although additional engineering support was needed to reduce repetitive secondary system equipment problems. The system certification program was a notable strength, was properly implemented and improved system status to support restart.

Significant progress was made in reducing the engineering backlog. While it continued to be large, the backlog was effectively managed and prioritized. The licensee also concentrated on management of engineering activities including the completion of staffing initiatives, a reduction in the reliance on contractors, and diversification of engineering support sources.

The licensee's probabilistic safety assessment (PSA) capabilities were demonstrated in the proposed PSA-based technical specification changes. The licensee is encouraged to continue this and other PSA-based activities to maximize the benefit of the unique design of this plant.

Although several engineering activities were strong and the corrective action program showed improvement, there were examples of programs that had weaknesses and corrective actions that could have been more effective or timely. Inservice Testing (IST) program discrepancies identified by the NRC were indicative of a weakness. For example, IST data and applicable test procedures were not readily retrievable, and inadequate corrective action was identified regarding the failure to include reactor makeup water pumps in the IST program after it was identified in 1990 that they required inservice testing. The licensee is currently in the process of a broad-based evaluation of this program. During the test of steam generator feedwater pump 22, the system engineers did not fully understand the functioning of the pump. Also, the licensee's preliminary assessment of the safety significance of the deficiencies identified in the emergency containment sump enclosures was

inadequate. The licensee did not effectively review industry communications on this subject. In other examples, root cause analysis was good; however, the problems continued because the corrective actions had not effectively been implemented. This included the station diesel generator spurious starts and the over temperature/differential temperature nuisance annunciators. Other problems existed that the licensee was pursuing but did not yet have root causes or corrective actions. These included residual heat removal heat exchanger level problems and toxic gas monitor problems.

The safety focus and knowledge of engineering management and engineers was generally good. However, there were indications of weaknesses in the process for maintenance of plant design and configuration. Examples include the justification for continued operation for the emergency cooling water weld cracking, in which the evaluation identified an unresolved safety question, yet the licensee did not correct the condition, submit a license amendment, or revise their evaluation. A change to the reactor coolant pump seal leak off annunciator setpoint was classified as rework and, consequently, no 10 CFR 50.59 safety evaluation or screening had been performed (a review of plant change forms identified additional examples, although none were found that needed an unreviewed safety question evaluation). While many of these examples are old, there is evidence that occasional failures to understand and maintain the plant design basis continue. In a recent JCO that evaluated the change to the plant's station blackout (SBO) response, licensee engineers failed to determine that the change to the SBO response constituted a change to the UFSAR.

The performance rating is Category 2 in the engineering functional area.

D. Plant Support

This functional area covers all activities related to plant support functions, including radiological controls, chemistry, security, emergency preparedness, fire protection and housekeeping. The previous SALP noted an excellent level of performance in the radiological controls program area. A general decline was observed in the level of performance of the security program. Reduced management attention, a lack of maintenance support, and staffing changes were noted as contributing factors. Emergency preparedness was previously rated Category 2 with weakness noted in corrective measures for past exercise findings.

Overall, during this assessment period, superior performance was noted in the radiological controls area supported by excellent quality assurance audit and surveillance programs. External and internal exposures were effectively controlled. The person-rem total exposure for 1993 was considered appropriate given the extensive outage work, and the 1994 person-rem/unit trend is well below the PWR national average. Excellent As Low As Reasonably Achievable (ALARA) program initiatives were utilized including robotics, job in-process reviews, daily dose reports to each department, job pre-planning and the use of mock-ups.

A strong contamination control program exists at STP which has contributed to a decreasing trend in contamination events with an aggressive 1994 goal. Total contaminated area in the plants has been reduced and continued to trend downward. Increased management support contributed to material condition and housekeeping improvements during this period resulting in improved radiological work practices.

Radiological effluents were controlled well within applicable limits. The solid radwaste program including transportation, volume reduction and storage were effectively implemented.

A well motivated and highly trained staff was maintained throughout the assessment period, individual certifications and professional committee participation was encouraged by management.

Performance in the area of physical security was good with improvements noted this period. At the beginning of the assessment period numerous problems continued to exist in the security area regarding management effectiveness, timely repair of equipment, degraded assessment aids, excessive overtime, and weaknesses in compensatory measures.

During this assessment period a change in security management and security contractor occurred. This has resulted in a renewed emphasis on support for the security program including an improved equipment maintenance program, dedicated equipment technicians, security equipment upgrades in progress or planned and a stabilized workforce which has reduced chronic overtime demands. Licensee program initiatives include security plan and commitment upgrades, and initiatives to track and trend security performance indicators. The comprehensive audit program was a strength. Training and qualification of staff for contingency response was good, showing continued improvement. Management initiatives to integrate security functions with overall site wide activities, including improved support for the security role in plant safety was a positive initiative.

Performance in the emergency preparedness area was good and showed improvement later in the assessment period. A change in management, increased upper management involvement and effective management of the emergency response organization contributed to the improvements. Emergency response facilities and equipment were maintained in a proper state of operational readiness. The technical support center was evaluated and upgrades to equipment and support arrangements were underway at the end of the assessment period. The emergency response organization had been reorganized to provide triple depth to the organization and assure training and availability of personnel in all positions. Excellent performance was noted during the 1994 Operational Status Inspection conducted late in the assessment period. The licensee provided excellent support and training for local and state emergency responders.

Several problems were identified during the early part of the assessment period. One violation was cited for failure to follow the requalification training requirements in the emergency plan. Two noncited violations were identified involving the failure to submit certain emergency plan and

implementing procedures to the NRC as required and the failure to issue a tone alert radio to a member of the public as required. Six exercise weaknesses were identified during the 1993 annual emergency exercise and two weaknesses during 1993 simulator scenario walkthroughs. Licensee initiatives to address these shortcomings have been aggressive. The emergency preparedness staff was expanded, comprehensive quality assurance audits were performed, improvements in scenario development capability were in progress and a defined emergency preparedness training interface agreement was initiated to define responsibilities and provide ownership of training activities. The demonstration of the effectiveness of these initiatives will be evaluated during the scheduled exercise in November 1994.

The licensee continued to implement an adequate fire protection program at the beginning of the assessment period. Improvements have resulted from the repair of longstanding deficiencies in the fire detection equipment cabinets and improvement in the material condition of fire protection equipment. At the end of the assessment period, the backlog of open fire protection system maintenance items had been reduced to a reasonable level.

During this assessment period, licensee management placed emphasis on improving the material condition and housekeeping practices throughout the facility. Significant improvements to site grounds, external and in-plant equipment spaces, and material storage have occurred. Challenges remain in this area to sustain these improvements during routine two unit operations.

Overall, the performance rating is Category 2 in the plant support functional area.

SOUTH TEXAS PROJECT

EXECUTIVE SUMMARY
QUARTERLY PLANT PERFORMANCE REVIEW 95-01
JANUARY 31, 1995

SALP CYCLE 011
(SEPTEMBER 25, 1994, THROUGH MARCH 23, 1996)

I. OVERVIEW

The level of safety performance at the South Texas Project facility has improved. Management's efforts have been focused on safety standards, program definition, enhanced oversight and control of plant activities. This has been evident in improved ownership by operations, maintenance, and engineering personnel and has been directly reflected in material condition of the plant, including having attained a black board status at times. However, several challenges remain, including the operations and surveillance procedure upgrade programs and a need for plant personnel to maintain a questioning attitude in the conduct of routine activities.

II. PLANT OPERATIONS

PREVIOUS RATINGS: SALP 1994: 2

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS:

The operators have performed very well during routine and transient conditions. A weakness in an off-normal response procedure contributed to a plant trip during a feedwater transient. A 100 percent pass rate was achieved for RO and SRO licenses.

A MIP change has been approved to use 180 hours on 42700, Plant Procedures. This will include the 32 hours per unit previously scheduled for 42700 and the 32 hours per unit previously scheduled for 42001, EOPs.

III. MAINTENANCE

PREVIOUS RATINGS: SALP 1994: 2

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS:

Maintenance personnel demonstrated very good work practices and knowledge of work activities, including appropriate use of skill-of-the-craft. A significant challenge remains with the surveillance procedure upgrade program.

MIP hours were added since the MIP was developed for the NDE van visit. These hours will now be deleted because the NDE van visit has been rescheduled to the next SALP period. A MIP change will add 16 hours per unit for 61700,

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Surveillance Procedures. The Boraflex degradation issue will be reviewed by adding an additional occurrence of 32 hours for 92700 for Unit 1.

IV. ENGINEERING

PREVIOUS RATINGS: SALP 1994: 2

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS:

System engineering provided good support to plant operations. The Generic Letter 89-10 concerns were properly addressed. Extensive involvement with the surveillance procedure upgrade program is still required. Recent breaker surveillance problems and ventilation damper issues were indicative of the surveillance procedure problems that existed. No revision to the MIP is recommended.

V. PLANT SUPPORT

PREVIOUS RATINGS: SALP 1994: 2

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS:

Health physics and security personnel effectively implemented their responsibilities. An emergency drill was well performed. Communications between the control room TSC and EOF were very good. No revision to the MIP is recommended.

VI. TIA STATUS

There are currently no open TIAs.

VII. MAJOR SITE ACTIVITIES SCHEDULED

- NRR Maintenance Rule Visit, 2/95
- Maintenance Reliability Inspection, 10/95
- NRR Employee Concerns Program Inspection (Tentative)
- SALP Closeout Inspection, 1/96

SOUTH TEXAS PROJECT UNIT 1

QUARTERLY PLANT PERFORMANCE REVIEW 95-01
JANUARY 31, 1995

SUMMARY OF MIP CHANGES

MODULE	TITLE	AREA	IPE CODE	FM	TO	DELTA
42700	Plant Procedures	OPS	RI	32	90	58
42001	Emergency Operating Procedures	OPS	RI	32	0	-32
61700	Surveillance Procedures	MAINT	RI	0	16	16
92700-02	LER Review - Boraflex	ENG	RI	0	32	32
57050	NDE-VISUAL	MAINT	RI	0	20	20
57060	NDE LIQUID	MAINT	RI	0	20	20
57070	NDE-MAG	MAINT	RI	0	15	15
57080	NDE-ULTRASONIC	MAINT	RI	0	60	60
57090	NDE-RADIOGRAPH	MAINT	RI	0	10	10
49001	EROSION/CORROSION	MAINT	RI	0	30	30
73051	ISI-PROGRAM	MAINT	RI	0	20	20
73052	ISI-PROCEDURES	MAINT	RI	0	20	20
73753-03	ISI	MAINT	RI	0	35	35
73755	ISI-DATA	MAINT	RI	0	10	10
57050	NDE-VISUAL	MAINT	RI	20	0	-20
57060	NDE LIQUID	MAINT	RI	20	0	-20
57070	NDE-MAG	MAINT	RI	15	0	-15
57080	NDE-ULTRASONIC	MAINT	RI	60	0	-60
57090	NDE-RADIOGRAPH	MAINT	RI	10	0	-10
49001	EROSION/CORROSION	MAINT	RI	30	0	-30
73051	ISI-PROGRAM	MAINT	RI	20	0	-20
73052	ISI-PROCEDURES	MAINT	RI	20	0	-20

73753-03	ISI	MAINT	RI	35	0	-35
73755	ISI-DATA	MAINT	RI	10	0	-10
NET CHANGE						+74

JUSTIFICATIONS

- 42700 This module will better focus on plant procedures, including abnormal operating procedures, rather than just the EOPs. This is supported by the September plant trip that was contributed to by procedural weakness.
- 61700 Added to monitor progress and effectiveness of surveillance procedure enhancement program.
- 92700-02 Added to permit detailed review of Boraflex degradation LER.
- 57050 NDE van visit has been rescheduled for next SALP period.
- 57060 NDE van visit has been rescheduled for next SALP period.
- 57070 NDE van visit has been rescheduled for next SALP period.
- 57080 NDE van visit has been rescheduled for next SALP period.
- 57090 NDE van visit has been rescheduled for next SALP period.
- 49001 NDE van visit has been rescheduled for next SALP period.
- 73051 NDE van visit has been rescheduled for next SALP period.
- 73052 NDE van visit has been rescheduled for next SALP period.
- 73753-03 NDE van visit has been rescheduled for next SALP period.
- 73755 NDE van visit has been rescheduled for next SALP period.

SOUTH TEXAS PROJECT UNIT 2

QUARTERLY PLANT PERFORMANCE REVIEW 95-01
JANUARY 31, 1995

SUMMARY OF MIP CHANGES

MODULE	TITLE	AREA	IPE CODE	FM	TO	DELTA
61700	Surveillance Procedures	MAINT	RI	0	16	+16
42700	Plant Procedures	OPS	RI	32	90	+58
42001	Emergency Operating Procedures	OPS	RI	32	0	-32
NET CHANGE						+42

JUSTIFICATIONS

- 61700 Added to monitor progress and effectiveness of surveillance procedure enhancement program.
- 42700 This module will better focus on plant procedures, including abnormal operating procedures, rather than just the EOPs. This is supported by the September plant trip that was contributed to by procedural weakness.

SOUTH TEXAS PROJECT

SEMIANNUAL PLANT PERFORMANCE REVIEW 95-02

MARCH 20, 1995

SALP CYCLE 011

(SEPTEMBER 25, 1994, THROUGH MARCH 23, 1996)

I. OVERVIEW OF PERFORMANCE

- OVERALL PERFORMANCE WAS VERY GOOD
 - PLANT OPERATIONS IS A STRENGTH. OPERATING PHILOSOPHIES, LICENSED OPERATOR ACTIONS, AND MANAGEMENT OVERSIGHT ARE ALL CONSERVATIVE. PLANT MATERIAL CONDITION AND AVAILABILITY OF STANDBY EQUIPMENT WAS VERY GOOD
 - OVERALL PERFORMANCE OF MAINTENANCE WAS GOOD. TECHNICIANS' WORK HABITS, KNOWLEDGE, AND COMMUNICATION TECHNIQUES WERE EXCELLENT. THE QUALITY OF SURVEILLANCE PROCEDURES CONTINUED TO HAVE A NEGATIVE IMPACT
 - MIXED PERFORMANCE IN ENGINEERING.
 - SURVEILLANCE PROCEDURE ACCEPTANCE CRITERIA INADEQUACIES
 - SOME ENGINEERING REVIEWS NOT PERFORMED OR OF POOR QUALITY
 - TECHNICAL PROGRAM ACTIVITIES WERE GOOD
 - MIXED PERFORMANCE IN PLANT SUPPORT AREA. STRONG PERFORMANCES IN SECURITY AND EMERGENCY PREPAREDNESS; ADMINISTRATIVE WEAKNESSES IN THE FIRE PROTECTION PROGRAM; AND MIXED OBSERVATIONS OF DAY TO DAY HEALTH PHYSICS PRACTICES

II. SALP FUNCTIONAL AREAS

PLANT OPERATIONS

PERFORMANCE WAS EXCELLENT

- ROUTINE CONTROL ROOM ACTIVITIES WERE EXCELLENT
 - ALARM RESPONSE PROCEDURES WERE PROPERLY UTILIZED IN A PROMPT AND PROFESSIONAL MANNER
 - SHIFT TURNOVERS PROVIDED THE MAXIMUM EXCHANGE OF INFORMATION
 - EXCELLENT OPERATOR IMPLEMENTATION OF "SEVERE WEATHER GUIDELINES" WHILE UNDER TORNADO WARNING
 - SHIFT STAFFING, TURNOVERS, AND COMMUNICATION TECHNIQUES CONTINUED TO SUPPORT THE SAFE OPERATION OF BOTH UNITS
- HIGH QUALITY COMPONENT AND SYSTEM RELABELING PROGRAM
- MANAGEMENT'S RESPONSE TO EVENTS WAS EXCELLENT
 - TIMELY RESPONSE TO SAFETY-RELATED EQUIPMENT FAILURES
 - THE OPERATIONS PERSONNEL TOOK CONSERVATIVE COMPENSATORY ACTIONS ONCE A PROBLEM WITH THE TOXIC GAS ANALYZERS WAS IDENTIFIED

C/29

- RESPONSE TO TESTING ABNORMALITY IN CONTROL ROOM HVAC SYSTEM WAS EXCELLENT
- OPERATOR RESPONSE TO A REACTOR TRIP WAS EXCELLENT
- SAFETY SYSTEM VALVE ALIGNMENTS WERE ACCURATE

MAINTENANCE

OVERALL PERFORMANCE WAS GOOD

- ROUTINE MAINTENANCE AND SURVEILLANCE ACTIVITIES PERFORMED WERE GOOD
- MANAGEMENT AND SUPERVISORY OVERSIGHT WERE MIXED
 - GOOD MANAGEMENT GUIDANCE AND OVERSIGHT WAS PROVIDED DURING RESPONSE TO EMERGENT EVENTS
 - NO CONTROLS WERE IN EFFECT TO GOVERN THE LENGTH OF TIME THAT THE POST ACCIDENT SAMPLING SYSTEM COULD REMAIN OUT OF SERVICE
 - RISK EVALUATIONS OF ON-LINE MAINTENANCE WERE BEING PERFORMED; HOWEVER, THE PROGRAM WAS INFORMAL AND HAD NO PROCEDURAL GUIDANCE
- TECHNICIANS WORK HABITS AND SYSTEM KNOWLEDGE WAS EXCELLENT
 - MAINTENANCE TECHNICIANS DEMONSTRATED AN APPROPRIATE SYSTEMS KNOWLEDGE
 - TECHNICIANS OBSERVED UTILIZING GOOD DUAL VERIFICATION TECHNIQUES
 - MAINTENANCE TECHNICIANS FOLLOWED APPROVED WORK INSTRUCTIONS, DEMONSTRATED SAFE WORKING PRACTICES, AND WERE KNOWLEDGEABLE OF THE SYSTEMS
- IN GENERAL, COORDINATION AND COMMUNICATIONS WITHIN THE MAINTENANCE ORGANIZATION WAS VERY GOOD
 - COORDINATION AMONG MAINTENANCE DISCIPLINES CONTINUED TO BE VERY GOOD
 - ALL MAINTENANCE GROUPS WERE VERY RESPONSIVE TO EMERGENT WORK
 - ON ONE OCCASION WORK ACTIVITIES WERE NOT WELL COORDINATED BETWEEN PLANT ORGANIZATIONS
 - COORDINATION AMONG PLANT ORGANIZATIONS DURING MAINTENANCE ACTIVITIES WAS GOOD
- MAINTENANCE BACKLOG CONTINUED TO DECREASE WELL BELOW LICENSEE GOALS
 - PLANT MATERIAL CONDITION WAS VERY GOOD
- POST MAINTENANCE TESTING WAS OBSERVED TO BE EXCELLENT
- POOR QUALITY SURVEILLANCE PROCEDURES CONTINUED TO HAVE A NEGATIVE EFFECT ON THE PLANT
 - A LICENSED OPERATOR FAILED TO QUESTION THE VALIDITY OF A CONTROL ROOM INDICATION DURING SURVEILLANCE TESTING

- AN INADEQUATE SURVEILLANCE PROCEDURE RESULTED IN IMPROPER CONTROL ROOM COMMUNICATIONS
- ON ONE OCCASION THE LACK OF SELF-VERIFICATION WAS EVIDENT
- LICENSEE PERSONNEL DETERMINED THAT AN INADEQUATE SURVEILLANCE PROCEDURE HAD CAUSED MISCALIBRATIONS OF PLANT INSTRUMENTATION

ENGINEERING

OVERALL PERFORMANCE GOOD BUT MIXED

- THE QUALITY OF ENGINEERING REVIEWS WERE MIXED
 - A QUALITY, DETAILED AND EXHAUSTIVE REVIEW OF THE FAILURE OF AN AUXILIARY FEEDWATER PUMP WAS CONDUCTED
 - THE EVALUATION AND RESOLUTION OF AN AUXILIARY FEEDWATER PUMP TRIP WAS VERY GOOD
 - THE ENGINEERING REVIEW FOR A PLANT MODIFICATION WAS NOT WELL PERFORMED RESULTING IN INSTALLATION DIFFICULTIES
 - SYSTEM ENGINEERS WERE NOT REVIEWING OUT OF TOLERANCE INSTRUMENTS TO DETERMINE THEIR EFFECT ON SAFETY-RELATED EQUIPMENT
- ENGINEERING PROGRAMS REVIEWED WERE GOOD
 - THE LICENSEE SATISFACTORILY ESTABLISHED THE DESIGN BASIS CAPABILITY OF MOV'S
 - THE LICENSEE'S MOV PROGRAM INCLUDED CONSIDERATION OF VALVE MISPOSITIONING
 - A COMPREHENSIVE PROGRAM FOR FOREIGN MATERIAL CONTROL HAS BEEN ESTABLISHED
- ENGINEERING INVOLVEMENT IN SURVEILLANCE ACTIVITIES WAS MIXED
 - THE INADEQUACY OF SURVEILLANCE PROCEDURE ACCEPTANCE CRITERIA CONTINUED TO BE EVIDENT
 - THE RESPONSE TO AN INADEQUATE SURVEILLANCE CALIBRATION PROCEDURE WAS PROMPT AND THOROUGH
 - ON TWO OCCASIONS, WORK COORDINATION PROBLEMS OCCURRED BECAUSE THE AS-BUILT CONFIGURATION DID NOT MATCH THE DESIGN DRAWINGS

PLANT SUPPORT

PERFORMANCE WAS GOOD BUT MIXED

- PLANT HOUSEKEEPING WAS A STRENGTH
- DAILY SECURITY ACTIVITIES WERE EXCELLENT
 - COMMUNICATIONS BETWEEN HL&P SECURITY STAFF AND THE SECURITY FORCE WAS VERY GOOD
 - TURNOVER RATE FOR SECURITY OFFICERS WAS LESS THAN 1 PERCENT OVER THE LAST 6 MONTHS
 - OVERTIME WAS CONTROLLED

- ROUTINE DAILY ACTIVITIES OF THE PHYSICAL SECURITY ORGANIZATION WERE PERFORMED IN AN EXCELLENT MANNER
- SECURITY SYSTEM MATERIAL CONDITION VERY GOOD AND IMPROVING
 - THE SECURITY PROGRAM WAS RECEIVING EXCELLENT SUPPORT FROM SENIOR MANAGEMENT
 - I&C TECHNICIANS PROVIDED EXCELLENT SUPPORT TO SECURITY
 - A NEW SECURITY CAMERA SYSTEM HAS BEEN INSTALLED. THIS FACILITATED GREATLY IMPROVED PICTURES AND ASSESSMENT PROCEDURES
 - SECURITY SUPERVISORS WERE RESPONSIVE TO DISCOVERY OF DEFICIENCIES IN THE PHYSICAL SECURITY SYSTEM
- ROUTINE HEALTH PHYSICS ACTIVITIES WERE GOOD BUT MIXED
 - IN GENERAL, RADIATION WORKERS WERE OBSERVED FOLLOWING RADIATION WORK PERMITS WHILE PERFORMING TASKS WITHIN CONTROLLED AREAS
 - ON ONE OCCASION A HIGH RADIATION AREA BARRIER ROPE WAS NOT PROPERLY ATTACHED
 - ON ONE OCCASION WORKERS WERE OBSERVED USING IMPROPER CONTAMINATION CONTROL TECHNIQUES
- THE FIRE PROTECTION PROGRAM HAD ADMINISTRATIVE WEAKNESSES
 - FOUR FIRE WATCH PERSONNEL COULD NOT DESCRIBE A CLASS C FIRE INDICATING A TRAINING WEAKNESS
 - THE CRITERIA FOR FREQUENCY OF QUALITY ASSURANCE AUDITS FOR FIRE PROTECTION WERE NOT DEVELOPED
 - THREE FIRE DETECTION SYSTEM SURVEILLANCE TESTS WERE NOT PERFORMED WITHIN THE REQUIRED TIME PERIOD
- OPERATORS DISPLAYED A GOOD UNDERSTANDING AND KNOWLEDGE OF THE FIRE PROTECTION PROGRAM
- EMERGENCY PREPAREDNESS WAS A STRENGTH, AS EVIDENCED BY DRILL PERFORMANCE
 - CONTROL ROOM STAFF'S PERFORMANCE DURING THE EXERCISE WAS STRONG
 - THE TECHNICAL SUPPORT CENTER PERSONNEL PERFORMED WELL DURING THE EXERCISE
 - ADMINISTRATIVE AND ENGINEERING SUPPORT IN THE TECHNICAL SUPPORT CENTER WAS STRONG DURING THE EXERCISE
 - THE OPERATIONAL SUPPORT CENTER COORDINATOR DISPLAYED EXCELLENT COMMAND AND CONTROL
 - THE OPERATIONAL SUPPORT CENTER WAS STAFFED AND ACTIVATED IN A TIMELY MANNER
 - THE DRILL SCENARIO PROVIDED SUFFICIENT CHALLENGES TO DEMONSTRATE THE EXERCISE OBJECTIVES

III. TIA STATUS

NONE

IV. MAJOR SITE ACTIVITIES

COMPLETED:

ON JANUARY 9-27, 1995, THE SPECIAL INSPECTION BRANCH OF NRR INSPECTED ENGINEERING ACTIVITIES AT SOUTH TEXAS PROJECT. THE PURPOSE OF THIS INSPECTION WAS TO EVALUATE THE EFFECTIVENESS OF ENGINEERING ORGANIZATION TO PERFORM ROUTINE REACTIVE ACTIVITIES TO SUPPORT PLANT OPERATIONS. THE TEAM FOUND THAT THE PERFORMANCE OF THE ENGINEERING STAFF DEMONSTRATED GOOD TECHNICAL COMPETENCE AND FAMILIARITY WITH PLANT OPERATIONS, AND THE CAPABILITY TO PROVIDE NECESSARY TECHNICAL SUPPORT TO PLANT OPERATION. HOWEVER, SOME DEFICIENCIES WERE NOTED.

DURING THE WEEK OF FEBRUARY 27, 1995, AN NRR LED TEAM VISITED THE SITE TO AUDIT THE LICENSEE'S IMPLEMENTATION OF THE MAINTENANCE RULE. THE PURPOSE OF THE VISIT WAS TO VERIFY AND VALIDATE THE NRC DRAFT MAINTENANCE RULE INSPECTION PROCEDURE AND TO PROVIDE FEEDBACK TO THE LICENSEE ON THE IMPLEMENTATION PROCESS FOR THE MAINTENANCE RULE. THE TEAM CONCLUDED THAT THE LICENSEE HAD MADE PROGRESS IN IMPLEMENTING MOST ASPECTS OF THE RULE AND, IN GENERAL, WAS FOLLOWING THE GUIDANCE CONTAINED IN NUMARC 93-01.

PLANNED: MAINTENANCE RELIABILITY INSPECTION (10/95)
NRR EMPLOYEE CONCERNS PROGRAM INSPECTION (TENTATIVE- PROBABLY NOT AN MSA)
SALP CLOSEOUT INSPECTION (1/96)

SOUTH TEXAS PROJECT

SEMIANNUAL PLANT PERFORMANCE REVIEW 95-02
MARCH 20, 1995

SUMMARY OF MIP CHANGES UNIT 1

MODULE	TITLE	AREA	IPE Code	FM	TO	DELTA
TI 2515/129	Pressure Locking	ENG	SI	0	8	+8
62700-01	Maintenance Practices	MAINT	RI	150	50	-100
TI 2517	ACCESS AUTHORIZATION	PLTSUP	SI	0	40	+40
NET CHANGE						-52

JUSTIFICATIONS

TI 2515/129 Performed at selected sites
62700 Concentrate on Unit 2
TI 2515/127 Added by the Program Office

SUMMARY OF MIP CHANGES UNIT 2

MODULE	TITLE	AREA	IPE Code	FM	TO	DELTA
TI 2515/129	Pressure Locking	ENG	SI	0	8	+8
62700-01	Maintenance Practices	MAINT	RI	150	250	+100
TI 2515/127	ACCESS AUTHORIZATION	PLTSUP	SI	0	40	+40
NET CHANGE						+148

JUSTIFICATIONS

TI 2515/129 Performed at selected sites
62700 Concentrate on Unit 2
TI 2515/127 Added by the Program Office



OFFICE OF THE
GENERAL COUNSEL

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

December 19, 1994

Joseph R. Egan, Esq.
Egan & Associates
2300 N. Street, N.W.
Washington, D.C. 20037

RE: City of Austin v. Houston Lighting and Power Co., No. 94-007964,
Harris Co. (Tx.); NRC File No. TR-94-28

Dear Mr. Egan:

I have reviewed your request, dated November 8, 1994, as supplemented on November 18, 1994, and December 8, 1994, for the depositions of eleven (11) current NRC senior officials and employees. This request has been designated "TR-94-28." These depositions are all related to events at the South Texas Project ("STP") and the official NRC reports issued in conjunction with NRC regulatory activities at that facility. For the reasons stated below, I am denying the request.

Initially, your request for the depositions of eleven NRC officials, including some of the most senior officials in the agency, is unreasonably burdensome. Granting the request would not only require these individuals to be absent from their important nuclear-safety duties for the actual depositions, but would also require an additional time away from their duties to review documents to prepare for the depositions. Taken as a whole, the loss of this time to the agency would constitute a significant drain on scarce agency resources.

Indeed, your request seeks the depositions of many high level agency officials who traditionally are made available for discovery in civil litigation only in extreme cases. These individuals constitute the entire top hierarchy of the agency. For example, your request seeks the deposition of (1) Commission Chairman Ivan Selin; (2) Mr. James Taylor, the Executive Director of Operations ("EDO") and head of the NRC Staff; (3) Mr. James Milhoan, who is currently one of the two Deputy EDO's; and (4) Mr. Joe Callan, who is currently the Regional Administrator for the NRC's Region IV Office. The functioning of these positions is crucial to the day-to-day operation of this agency and you have not submitted a strong reason justifying these individuals' absence from their duties. Thus, I find that their absence would be an unnecessary burden on the agency.

Finally, your request, by its own terms, seeks simply "to substantiate and better understand" NRC inspection reports and other NRC documents relating to the STP. But these documents are publicly available and presumably may be introduced into evidence for the truth of the matters asserted in them. Cf. Fed. R. Evid. 803 (8). The NRC's official documents speak for the agency in

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Release
entirety

C/30

Joseph R. Egan, Esq.

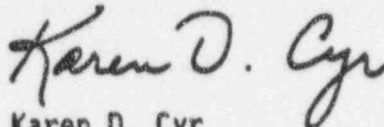
-2-

this matter. Your request for depositions shows no special need that the documents themselves cannot satisfy.

I am not persuaded that there is good reason to permit depositions of either those employees who actually conducted the inspection effort or those high-level officials involved in the decision-making process. Individual employees' recollections or opinions may not accurately reflect the agency's views. Thus, I see no reason to provide testimony to supplement official documents or to explain agency officials' state of mind or state of knowledge. An agency official's involvement in an NRC inspection or in agency decision-making is not enough to warrant his or her deposition. If it were, NRC officials would face constant demands to testify in private lawsuits -- to the great detriment of the agency's everyday work.

In sum, granting your request for the depositions of these eleven (11) NRC officials and employees is not in the NRC's interest and, accordingly, is hereby denied. If you have any questions regarding this matter, please feel free to call Mr. Charles E. Mullins, Senior Attorney, at (301) 415-1606 or Mr. John F. Cordes, Jr., Solicitor, at (301) 415-1600. This letter completes NRC action on TR-94-28.

Sincerely,



Karen D. Cyr
General Counsel