

REGION IV
DIVISION OF REACTOR PROJECTS
QUARTERLY
PLANT PERFORMANCE
MIDCYCLE REVIEW
FOR
SOUTH TEXAS PROJECT

APRIL 23, 1992

SALP CYCLE 009



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EXECUTIVE SUMMARY
SOUTH TEXAS PROJECT
SALP CYCLE 009
(JUNE 01, 1991, THRU AUGUST 01, 1992)

I. OVERVIEW

During this period, performance has declined in several functional areas. In the area of plant operations, the material condition of the plant continues to challenge the operators. In addition, there were some examples of problems that were indicative of insufficient operator knowledge and training. In the maintenance/surveillance functional areas, maintenance and personnel errors continue to result in plant trips. The licensee was unable to resolve continuing problems affecting the reliability of some safety-related components and systems. Weaknesses were found in the conduct of some non-safety related maintenance activities, and the maintenance backlog was increased by approximately 30 percent during this quarter. A continuing decline in performance was noted in the security functional area. An allegation follow-up team substantiated an allegation that pertained to escorting of plant visitors. In the safety assessment/quality verification functional area, weaknesses pertaining to ineffective corrective actions and a non-conservative disposition of safety related motor-operated valve (MOV) concerns were identified.

During this quarter, the continuation of several long-standing issues were apparent. These include: recurring reactor trips and transients which have been caused by personnel errors and balance of plant equipment problems; low worker morale in several of the major departments (i.e., engineering, maintenance, operations, and security); and several worker integrity issues, primarily in the maintenance area. The licensee's Operational Improvement Plan (which has been in place for over a year) was intended, in part, to address these issues. However, the effectiveness of this plan appears minimal.

Continued strong performance was noted in the radiological controls and emergency preparedness areas. Although performance was mixed in the engineering/technical support functional area, overall, the programs in this area are functioning well.

II. PERFORMANCE INDICATORS (PI)

Quarter 91-04

Analysis: There were two Unit 1 reactor trips which resulted from personnel error. A Unit 2 reactor trip resulted from inadequate maintenance on a pressurizer spray valve. A potential negative trend is indicated. Close scrutiny of the self verification process is needed. On the basis of PI data, an additional assessment of the implementation effectiveness of the Operational Improvement Plan appears warranted.

III. SUMMARY OF SIGNIFICANT REGULATORY ISSUES

A summary of significant regulatory issues include the following:

- o NRC is currently in the process of responding to a 10 CFR 2.206 petition and following up on the allegations regarding weaknesses in the security and maintenance program and a claim on wrongful termination.
- o A management meeting is scheduled for May 14, 1992, to discuss the licensee's Operational Improvement Plan and their Trip Reduction Plan. These programs do not appear to be effective.
- o A management meeting was conducted on March 13, 1992, to discuss the licensee's completed and planned actions to resolve long-standing equipment problems. The licensee has made progress in resolving issues pertaining emergency diesel generator (EDG) reliability, and essential cooling water (ECW) system dealloying and water hammer events. NRC will continue to monitor the licensee's activities in these areas.
- o A technical meeting, at the licensee's request, was conducted on February 20, 1992. The licensee presented their interpretation of several security requirements. NRC is currently evaluating some of these interpretations.
- o There are a relatively high number of SPEAKOUT investigations pertaining to worker integrity. The resident inspector staff continues to review the adequacy of investigations on a periodic basis.

Note: All MIP recommendations (i.e., additions, deletions, and changes) apply to both units with the hours distributed equally between the units, unless otherwise noted.

IV. PLANT OPERATIONS

PREVIOUS RATINGS

SALP 90: 1 91: 2 QPPR 12-91: (NC) 04-92: (-)

STRENGTHS: The operators continued to respond well to plant events, although the plant response to the failed open pressurizer spray valve was not as expected. The labeling program has been responsive in addressing labeling deficiencies. The Unit 2 refueling outage was well managed.

WEAKNESSES: Continuing problems were noted with balance of plant equipment that caused plant challenges and reactor trips. The main feedwater system was

one system that resulted in several challenges to the operators and the plant. Although the operators generally complied with the TS, the failure to maintain containment integrity with the plant in Mode 4 indicated that they were not fully cognizant of containment integrity requirements as they applied to authorized changes in the plant configuration. Reducing reactor coolant system temperature below the minimum temperature for criticality was indicative of less than adequate training associated with plant shutdowns. In one instance, the resident inspectors observed a training instructor reading a newspaper while a crew was practicing plant startups and shutdowns on the simulator. Senior Reactor Operator overtime rates during extended outages continues to be high and exceeds the licensee's goals.

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: Performance has declined during this period primarily on the basis of continuing transients and trips due to equipment problems and because of examples of problems that indicated training weaknesses and a lack of management oversight. No substantive changes to the MIP are recommended at this time. However, following the May 14, 1992, management meeting, consideration should be given to assessing the adequacy of the overall operational safety performance of the station.

RECOMMENDED MIP REVISIONS:

42700	Plant Procedures	RI	Increase from 36 to 70 hours
*60705	Prep for Refueling	RI	Decrease from 35 to 8 hours
*60710	Refueling Activities	RI	Decrease from 35 to 12 hours
*86700	Spent Fuel Pool	RI	Decrease from 35 to 20 hours
93702	Onsite Event Followup	RR	84 hours expended this quarter

* Unit 2 only. Changed to reflect actual hours expended. These modules have been completed.

V. RADIOLOGICAL CONTROLS

PREVIOUS RATINGS

SALP 90: 2 91: 1 QPPR 12-91: (NC) 04-92: (NC)

STRENGTHS: Overall, a strong program has been maintained.

WEAKNESSES: There were no significant weaknesses identified this period.

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: No change in performance was noted. No changes, additions, or deletions to the MIP are recommended.

RECOMMENDED MIP REVISIONS: None

83723	Training and Qual.	RR	54.3 hours expended this quarter
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VI. MAINTENANCE AND SURVEILLANCE

PREVIOUS RATINGS

SALP 90: 1 91: 2 QPPR 12-91: (NC) 04-92: (-)

STRENGTHS: The material condition of the turbine building has improved because of the service request backlog reduction efforts (i.e., fewer steam leaks), and the number of main control board deficiencies has been significantly reduced.

WEAKNESSES: One reactor trip was caused by a maintenance error and an additional reactor trip was caused by an instrumentation and controls (I&C) technician error. This represents the continuation of a long-standing negative performance trend. Two reactor trips were caused by balance of plant equipment failures. During this quarter, the licensee has been unable to resolve continuing problems with main feedwater system reliability, essential chiller reliability, and recurring EDG trips from the non-emergency mode. The maintenance backlog has increased by approximately 1000 service requests during this quarter. The allegation follow-up team identified weaknesses in the conduct of some non-safety related work activities. There are several SPEAKOUT investigations pertaining to I&C technician integrity issues. The morale of the maintenance department continues to be low. The overtime rates for some maintenance work groups during extended outages continues to be excessive and exceeds licensee goals.

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: There has been a decline in maintenance performance during this period. It is recommended that additional inspection hours be allotted to further assess maintenance implementation effectiveness and observe maintenance activities.

RECOMMENDED MIP REVISIONS:

62700	Maintenance Practices	RR	66.5 hours expended this quarter
62700-02	Maintenance Practices	RI	Increase by 100 hours
62702-01	Maintenance Program	RI	Delete
62703-11	Maintenance Observation	RI	Increase by 100 hours
62704	Instrument Maintenance	RR	89.5 hours expended this quarter

VII. EMERGENCY PREPAREDNESS

PREVIOUS RATINGS

SALP 90: 2 91: 2 QPPR 12-91: (+) 04-92: (NC)

STRENGTHS: There were no significant strengths that were noted during this period.

WEAKNESSES: There were no significant weaknesses that were noted during this quarter.

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: No appreciable change in performance was noted. No changes, additions, or deletions to the MIP are recommended.

RECOMMENDED MIP REVISIONS: None.

VIII. SECURITY

PREVIOUS RATINGS

SALP 90: 1 91: 1 QPPR 12-91: (-) 04-92: (-)

STRENGTHS: The Security Facilities were well maintained. There are good working relations between plant employees and the security force.

WEAKNESSES: Two security officers were terminated for improper work activities, and weaknesses were noted with security log taking practices. An allegation follow-up team substantiated an allegation pertaining to escort control of plant visitors.

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: There appeared to be a general decline in security. The planned inspection program has been completed; however, additional inspections are recommended in order to fully assess this performance trend, prior to the end of the SALP cycle.

RECOMMENDED MIP REVISIONS:

81018	Sec. Plan & Procedures	RR	12 hours expended this quarter
81020	Mgmt. Effectiveness	RR	14.5 hours expended this quarter
81038	Records and Reports	RR	30 hours expended this quarter
81070	Access Control-People	RR	33.5 hours expended this quarter
81401	Plans, Procecs, Review	RR	16 hours expended this quarter
81501	Training and Qual.	RR	13 hours expended this quarter
81020	Mgmt Effectiveness	RI	4 additional hours
81038	Records and Reports	RI	8 additional hours
81042	Testing and Maint.	RI	16 additional hours
81070	Access Control-People	RI	8 additional hours
81078	Detection Aids	RI	Add 8 hours
81401	Plans, Procecs, Review	RI	8 additional hours

81700	Physical Security Prgm	RI	20 additional hours
85102	Fissile MC&A	RI	Delete

IX. ENGINEERING AND TECHNICAL SUPPORT

PREVIOUS RATINGS

SALP 90: 2 91: 2I QPPR 12-91: (NC) 04-92: (NC)

STRENGTHS: The quality of installed modifications was good. Significant progress has been made in implementing the design basis capture program, and the quality of the completed documents was good. The system engineering program has been enhanced, and systems engineers are more involved with maintenance activities affecting their systems. The engineering department has been involved in resolving some long-standing equipment problems. All licensed operators passed the NRC administered requalification exams and some other improvements were noted with the requalification program.

WEAKNESSES: Several potential weaknesses identified included a heavy reliance on contractors, low morale in the engineering department, the resolutions of some requests for additional actions (RFAs), and a large backlog of unimplemented modifications.

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: No appreciable change in performance was noted. No changes, additions, or deletions to the MIP are recommended.

RECOMMENDED MIP REVISIONS: None.

41500 Special Followup Insp RR 41.3 hours expended this quarter

X. SAFETY ASSESSMENT AND QUALITY VERIFICATION

PREVIOUS RATINGS

SALP 90: 1 91: 1D QPPR 12-91: (NC) 04-92: (-)

STRENGTHS: The licensee is continuing its efforts to consolidate the various corrective action processes, and is using incident investigation teams and task forces to investigate events and resolve long-standing problems. The licensee is continuing to make progress in resolving EDG fuel subsystem and ECW system problems, and the dedication of line managers to the respective task forces is a positive initiative.

WEAKNESSES: The Operational Improvement Plan has been in place for more than a year; however, its implementation effectiveness appears marginal. Morale is

low in several of the major departments, and unnecessary trips and challenges are continuing. Several other weaknesses were also noted during this quarter. Examples include weaknesses in the resolution of RFAs, a lack of sufficient basis for resolving an overthrusting condition that affected many safety-related MOVs, a lack of implementing identified corrective actions to prevent turbine building rain water intrusion (a Unit 2 manual reactor trip was initiated because of turbine building rain water intrusion), and a lack of management awareness of containment integrity requirements.

PERFORMANCE ASSESSMENT WITH RECOMMENDATIONS: There appears to have been a general decline in this functional area. Following the May 14, 1992, management meeting, consideration should be given to performing a regional assessment team inspection. The focus of this effort should be to assess the level of management involvement in plant activities, assess licensee initiatives to resolve several long-standing problems, and assess the organizational climate at STP.

RECOMMENDED MIP REVISIONS:

35702	Design Change Program	RI	Delete
90712	In-office LER Review	RI	Decrease from 70 to 40 hours
92700	Onsite LER Review	RI	100 additional hours
92701	Open Item Followup	RI	Decrease from 120 to 70 hours
92702	Violation Followup	RI	Decrease from 100 to 70 hours
92703	Confirmatory Action Ltr	RR	16 hours expended this quarter

XI. OFFICE OF NUCLEAR REACTOR REGULATION (NRR) ACTIVITIES

Refer to material provided by NRR.