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50-498/499

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MEMORANDUM FOR: Suzanne C. Black, Director
Project Directorate IV
Division of Reactor Projects, III/IV/V
Office of Nuclear Reactor Regulation

FROM: Eugene V. Imbro, Chief
Special Inspection Branch
Division of Reactor Inspection
and Licensee Performance
Office of Nuclear Reactor Regulation

SUBJECT: SALP INPUT FOR SOUTH TEXAS PROJECT UNITS 1 AND 2

In accordance with NRR Office Letter 907, the enclosed SALP input is being provided for the South Texas Project, Units 1 and 2 based on the results of the Service Water System Operational Performance Inspection which was performed during the period of June 22 through July 10, 1992. If you have any questions regarding this input, please contact Peter S. Koltay, Team Leader, at 504-2977.

Original signed by Eugene V. Imbro

Eugene V. Imbro, Chief
Special Inspection Branch
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Office of Nuclear Reactor Regulation

Enclosure: As stated

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SALP INPUT

SUMMARY OF INSPECTION ACTIVITIES

The Special Inspection Branch, with assistance from Plant Systems Branch and Region IV, performed a pilot service water system operational performance inspection at the South Texas Project Units 1 and 2 from June 22 through July 10, 1992. The service water system at the station encompassed the essential cooling water (ECW) and the diesel generator cooling water systems. The inspection addressed mechanical design, operations, maintenance, surveillance, quality assurance and corrective actions. The team also addressed the licensee's implementation of actions required by Generic Letter (GL) 89-13, "Service Water System Problems Affecting Safety-Related Equipment." The team assessed licensee performance in the functional areas of engineering and technical support, maintenance/surveillance, and safety assessment/quality verification.

NARRATIVE DISCUSSION OF LICENSEE PERFORMANCEEngineering and Technical Support

The licensee generally demonstrated clear understanding of issues, conservatism and technically sound approaches, such as in its corrective actions for the dealloying problems in ECW piping. However, the team found one example where test performance acceptance criteria for essential chiller condensers and component cooling water pump supplementary coolers were unacceptable and could have been met by significantly fouled heat exchangers. The team found that the licensee had developed design basis documents which enhanced design modification control and configuration management, although there were numerous minor errors in the ECW system design basis document. The licensee initiated programs to implement the action items identified in GL 89-13, but training in response to Action 5 of GL 89-13 was not provided to all required technical support personnel.

Maintenance/Surveillance

The team observed an ASME Section XI Code repair of a 10 inch ECW line, and found the work activities to be well planned and controlled. However, there were weaknesses such as the lack of trending for equipment failures and maintenance, and integration of GL 89-13 issues into the preventive maintenance program. The team identified a deficiency regarding the licensee's resolution of a self-identified problem with flow element instrument error exceeding the allowable range for inservice testing. Although the problem was identified in 1989, the licensee failed to recognize the need to request ASME Code relief until prompted by the team. Another deficiency involved the licensee's failure to include all ASME Class 1, 2 or 3 valves that are required to perform a safety function, in the inservice testing program.

Safety Assessment/Quality Verification

The licensee exhibited a general understanding of the action items identified in Generic letter (GL) 89-13. Initial implementation of the GL items was generally sound. However long term items, such as training of technical personnel and development of heat exchanger test acceptance criteria, lacked thoroughness.

The licensee's safety system functional assessment (SSFA) of the emergency cooling water system was technically sound, and represented a conservative approach to evaluating the performance of safety related systems. However, resolutions of several SSFA findings were deferred by as much as 18 months, apparently due to a process which permitted such date extensions based on approval by a fairly low level of management. In addition, as noted under Maintenance/Surveillance, the licensee failed to adequately resolve the ECW flow instrument issue identified by the SSFA.

ENCLOSURE 2

Docket Nos.: 50-498/50-499

SALP REPORT

LICENSEE: Houston Lighting & Power
REVIEWER: Patricia Campbell
FUNCTIONAL ACTIVITY: IST PROGRAM RELIEF REQUESTS
FACILITY NAME: South Texas Project Electric Generating Station,
Units 1 and 2

SUMMARY OF REVIEW/INSPECTION ACTIVITIES

The licensee's response to certain items and revised or new relief requests for inservice testing were reviewed.

NARRATIVE DISCUSSION OF LICENSEES PERFORMANCE - FUNCTIONAL AREA
SAFETY ASSESSMENT/QUALITY VERIFICATION

The licensee's actions to address the items were complete and concise. The requirements of the Code appear to be understood. In general, the quality of the information in the relief requests was adequate to describe the alternative method of testing and the basis for relief. The relief requests were in accordance with the later requirements of OM-6 and OM-10 which were incorporated into the 1989 Edition of ASME Section XI and approved for use by NRC in rulemaking effective September 8, 1992.

ENCLOSURE 2

ENCLOSURE 2

SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE

FACILITY NAME South Texas Project Units 1 & 2

SUMMARY OF REVIEW

The SER involved a review of a submittal by Houston Lighting & Power (HL&P) company proposing changes to the Technical Specifications, pertinent to changing the shutdown margin in Modes 1 and 2. The submittal consisted of Hazards and Safety analyses and numerous technically supporting attachments. The review concluded that the changes to the TS proposed by (HL&P) company were acceptable.

NARRATIVE DISCUSSION OF LICENSEE PERFORMANCE -
ENGINEERING/TECHNICAL SUPPORT

The submittal by the licensee, including both the Technical Specification changes and explanations and justifications for the changes, was clear and complete. There was one telecommunication interaction with the licensee during the review.

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ENCLOSURE 2

SOUTH TEXAS UNITS 1 AND 2
SALP INPUT

The Human Factors Assessment Branch of the Division of Reactor Controls and Human Factors has evaluated Houston Lighting and Power Company's responses regarding operator response times during a steam generator tube rupture (SGTR) at South Texas Units 1 and 2.

The licensee was responsive to the staff's request for additional information regarding operator response times for the SGTR overfill scenario representing all of the South Texas operators.

The staff has completed its review of the licensee's submittals regarding operator response times during an SGTR, concluding that Houston Lighting and Power Company has satisfactorily responded to the four required criteria for completing the staff's review.

SALP INPUT

FACILITY NAME: South Texas Units 1 & 2

SUMMARY OF REVIEW ACTIVITIES

The staff reviews the probability results of licensee's turbine missile probability calculation. The inspection intervals for each of the low pressure turbines are reviewed with respect to the turbine missile probability. The inspection and maintenance activities are reviewed to determine their scope and depth. The staff also reviews whether the licensee satisfied the turbine reliability requirement criteria as specified in the South Texas SER, NUREG-0781.

NARRATIVE DISCUSSION OF LICENSEE PERFORMANCE-FUNCTIONAL AREAENGINEERING/TECHNICAL SUPPORT

The licensee has capability in calculating turbine missile probability and is prompt in responding to the staff's request for additional information.

SAFETY ASSESSMENT/QUALITY VERIFICATION

The licensee demonstrated technical understanding of turbine missile generation probability. The analysis follows the NRC recommended procedures and is of good quality. The staff concludes that the licensee's performance is excellent.

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504-2150

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