

APPENDIX B

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-498/88-17
50-499/88-17

Operating License: NPF-71
Construction Permit: CPPR-129

Dockets: 50-498
50-499

Licensee: Houston Lighting & Power Company (HL&P)
P.O. Box 1700
Houston, Texas 77001

Facility Name: South Texas Project (STP), Units 1 and 2

Inspection At: STP, Matagorda County, Texas

Inspection Conducted: March 2-3, 1988

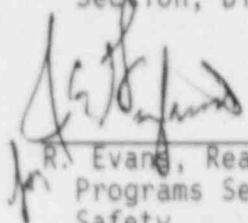
Inspectors:



J. E. Gagliardo, Chief, Operational Programs
Section, Division of Reactor Safety

4/23/88

Date

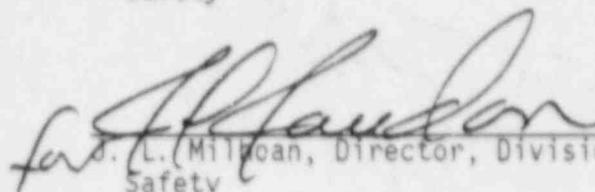


R. Evans, Reactor Inspector, Operational
Programs Section, Division of Reactor
Safety

4/21/88

Date

Approved:



J. L. Milroy, Director, Division of Reactor
Safety

4/28/88

Date

Inspection Summary

Inspection Conducted March 2-3, 1988 (Report 50-498/88-17)

Areas Inspected: Special, unannounced inspection to followup on the actions taken to correct the issues identified in the operational readiness inspections documented in NRC Inspection Reports 50-498/87-45, 50-498/87-77, and 50-498/88-01.

Results: Within the areas inspected, one violation (failure to follow procedure, paragraph 2) was identified.

Inspection Conducted March 2-3, 1988 (Report 50-499/88-17)

Areas Inspected: No inspection of Unit 2 was conducted.

Results: Not applicable.

DETAILS1. Persons ContactedHL&P

P. Appleby, Manager, Nuclear Training Department
 C. Ayala, Supervising Engineer, Event Reporting
 R. Balcom, Audits and Assessment Manager
 L. Casella, Supervising Project Engineer
 L. Clark, Supervisory Project Engineer
 J. Constantin, Supervisor, Simulator Training
 A. Harrison, Supervising Project Engineer
 H. Johnson, Unit 1 Operations Manager
 J. Loesch, Plant Operations Manager
 J. Mertink, Lead Engineer
 N. Midkiff, Director, Independent Safety Engineering Group
 B. Munter, Principle Engineer
 W. Mutz, Integrated Planning & Scheduling Manager
 M. Smith, Unit 1 Outage Manager
 R. Snow, Lead Training Instructor
 N. Tasker, Manager, Security Department
 K. Trippel, Lead Systems Engineer
 *G. Vaughn, Vice President, Nuclear Operations
 J. Walker, Manager, Operations Support Group

*Denotes those present at the exit meeting on March 3, 1988.

The NRC inspectors also contacted other licensee and contractor personnel during the course of the inspection.

2. Followup on Items Previously Identified in the July 1987 Operational Readiness Inspection (Inspection Report (IR) 50-498/87-45) and Subsequent Followup (IR 50-498/87-77)

This portion of the inspection involved the followup of the findings from the operational readiness inspection performed in July 1987 and the subsequent followup inspection (IR 50-498/87-77). The licensee responded to the deviations documented in IR 50-498/87-77 by letter dated February 26, 1988. The status of each of the deviations and open items is indicated below.

(Closed) Deviation 498/8777-01: Failure to Audit Work Control Center (WCC) Activities - In the licensee's response (Letter ST-HL-AE-2532, dated February 26, 1988) to this deviation reference was made to the original response to this issue in their letter (ST-HL-AE-2467) dated December 31, 1987. The licensee noted that quality assurance (QA) had performed an assessment of WCC activities in June and

July 1987. The licensee also noted that QA audits of maintenance activities in July 1987 and of corrective action activities in August 1987 included a review of WCC activities.

The NRC inspectors reviewed the records of the above activities. The assessments were designed to determine the adequacy of the WCC process of transferring open construction issues from the Master Completion List (MCL) to the newly implemented Daily Work Activity Schedule (DWAS). This effort was primarily intended to assure the traceability of the transfer process. The assessments did not deal with WCC activities which would be performed after fuel load when the MCL to DWAS transfer would be essentially complete.

The audit of maintenance, reviewed maintenance activities, and how they were controlled after the maintenance documents had been processed through the WCC. The audit did not look at the specific WCC activities which involved the planning, scheduling, and processing of the work control documents.

The corrective action audit did review WCC activities. The report for this audit (Audit No. 87-18) documented a program deficiency for "failing to develop administrative/implementing procedures for the Work Control Center processing of MWRs and for Outage Management control of the DWAS data base." This deficiency was documented in DR No. S87-065.

In response to this DR, the licensee developed a WCC procedure (OPGP03-ZA-001) which was approved and issued on December 31, 1987. Licensee representatives noted "that Nuclear Assurance audit process will continue to include WCC and DWAS activities in its audits." In an interview with the NRC inspectors, the Manager of Independent Safety Engineering Group (ISEG) will continue to observe WCC activities. This issue is considered closed.

This effort also closes Observation No. 4 from IR 50-498/87-45.

(Closed) Deviation 498/8777-02: Entries of Entering and Exiting from Limiting Condition for Operation (LCO) Conditions in the Control Room Log - In response to the original inspection observation (IR 50-498/87-45), HL&P committed to require operator entries in the unit supervisor and control room logs of the plant's entry into and exit from Technical Specification (TS) LCO conditions. This was to be done in lieu of placing an LCO status board in the control room.

During the followup inspection (IR 50-498/87-77), the NRC inspectors noted that LCO entries and exits were not being entered into the control room (or reactor operator) log. These entries were not required by existing procedures at that time. The failure to make LCO entries into the reactor operator log was identified as a deviation from the licensee commitments. This resulted in a Notice of Deviation (498/8777-02).

During this inspection (IR 50-498/88-17), the NRC inspectors reviewed licensee commitments in their letters dated December 31, 1987, and February 26, 1988, to revise the applicable procedure. The NRC verified that Procedure OPOP01-ZQ-0030 (Revision 2), "Maintenance of Plant Operations Logbooks," added procedural requirements to record entries into and exits from TS LCOs in the reactor operator log book.

A review of the reactor operator and unit supervisor log books was performed to ensure compliance to the revised Procedure OPOP01-ZQ-0030. The dates checked include February 29 through March 3, 1988. The review of the two log books identified several discrepancies:

- a. Several LCO entries were found in either the reactor operator or unit supervisor log books, but not both. Procedure OPOP01-ZQ-0030 (Revision 2) requires entries into and exits from LCOs to be recorded in both logs;
- b. Numerous LCO required entries in the reactor operator log were noted to be "late entries;" and
- c. By comparing the two log books, the NRC inspectors identified four log entry mistakes, including wrong TS section recorded, failure to write TS sections and mixing the words "enter" and "exit."

All of the discrepancies noted were discussed with HL&P personnel.

STP-1 TS Section 6.8.1 requires written procedures to be established, implemented and maintained covering the activities recommended in Appendix A of Regulatory Guide (RG) 1.33 (Revision 2). Appendix A, Item 1.h, requires log entry procedures. Procedure OPOP01-ZQ-0030 meets, in part, the intent of item 1.h of RG 1.33, Appendix A. Procedure OPOP01-ZQ-0030 (Revision 2), Section 6.2 and 6.3, require entries into the reactor operator and unit supervisor log books to include "entry into or exit from Technical Specification Action Statements."

The failure to record TS LCO entries and exits in both reactor operator and unit supervisor log books is an apparent violation (498/8817-01) of the TS 6.8.1 requirement delineated above.

It was noted that Procedure OPOP01-ZQ-0030 was in the process of being updated to Revision 3, with an effective date of March 5, 1988. The revised procedure would require only one log, a control room log, and would implement an operability tracking log, to track LCOs. The NRC inspectors noted that the implementation of this procedure would be a deviation from their commitment to address Observation No. 14 as stated in their letter ST-HL-AE-2298, dated July 15, 1987.

This deviation and Observation No. 14 are considered closed; however, the above apparent violation will be tracked to closure.

(Closed) Deviation 498/8777-04: Failure to Respond to ISEG Observation Report - In the licensee's letter (ST-HL-AE-2467) dated December 31, 1987, they stated that "ISEG determined that a response to this observation was not required. A reevaluation has determined that a formal response to the observation should be provided."

The NRC inspectors could find no evidence of a written policy which would have countermanded the commitment made in the licensee's letter (ST-HL-AE-2298) dated July 15, 1987, to have responses generated for ISEG reports prior to the issuance of Interdepartmental Procedure IP-1.39. The NRC inspectors did note that the Director, ISEG had questioned, by undated memorandum to his supervisor, the practice of not requiring a formal response to ISEG observations .

The NRC inspectors reviewed the response (dated January 20, 1988) to the September 10, 1987, ISEG report. The response appeared to address the issue that had been raised by the report. As noted in the discussion for Deviation 498/8777-01, a procedure had been issued to control WCC activities.

This issue is considered closed. Observation No. 35 from NRC IR 50-498/87-45 is also closed.

(Closed) Deviation 498/8777-03: Investigation of Anonymous Tips Relating to Drug Use - In the licensee's letter of February 26, 1988, it was noted that they had reevaluated their original commitment on this issue. They had concluded that the local law enforcement officials would be notified only if enough specific information was provided to lend credibility to the referral.

The NRC inspectors discussed the licensee's position with the NRC security specialist that had originally raised the concern. The security specialist stated that the licensee's position was acceptable provided that a member of SAFETEAM or security management makes the final decision as to whether or not sufficient information has been provided to make the referral. Licensee representatives assured the NRC inspectors that such decisions would be made at the management level.

The NRC inspectors reviewed the latest revision (Revision A) to the "STP Drug and Alcohol Screening Behavioral Observation Action Guidelines for Fitness for Duty Program," which was approved on January 7, 1988. The procedure had been revised as committed by the licensee.

This deviation is considered closed. This also closes Observation No. 20 from NRC IR 50-498/87-45.

(Closed) Observation No. 3: Adequacy of Training for Those Who Prepare or Review Licensee Event Reports - The NRC inspectors reviewed the records of the Root Cause Analysis Training (Course No. 101) provided by the Director, ISEG to the members of the Plant Operations Review Committee (PORC), Nuclear Safety Review Board (NSRB), and ISEG. The

training was also provided to operations, licensing, and engineering personnel who were involved in the preparation of Licensee Event Reports (LERs). This item is considered closed.

(Closed) Observation No. 4: Audit of WCC Activities - This item was reviewed and closed with the closure of Deviation 498/8777-01.

(Closed) Observation No. 14: LCO Status Board in the Control Room - This item was reviewed and closed with the closure of Deviation 498/8777-02.

(Open) Observation No. 15: The licensee should reevaluate the practice of not logging equipment clearances by system.

The NRC inspectors reviewed STP-1 Procedure OPGP03-ZO-0001 (Revision 6), "Clearance Procedure," and the equipment clearance log, to determine if there was still a concern with clearances not being cataloged by system. In the first followup inspection (IR 50-498/87-77), the NRC asked the licensee to reevaluate their system for clearance control.

During this inspection, the NRC inspectors reviewed clearance log entries. Two clearances (1-88-555 and 592) were observed to have more equipment tagged out than was listed in the associated system designator blocks. In both cases, equipment was identified on the clearance orders with system designators different than that listed on the clearance log. Per Procedure OPGP03-ZO-0001, only the predominate or primary systems impacted have to be identified by system code on the clearance order or log (procedure steps 5.2.1.d and g). The NRC inspectors indicated that all systems should be identified by system code on the clearance orders and log entries.

During the exit interview, the licensee made a commitment to change the wording of the clearance procedure to ensure all system designators of systems affected are listed in the clearance log. Observation No. 15 will remain open until the Procedure OPGP03-ZO-0001 (Revision 6) is revised. The licensee representatives said that the procedure would be revised prior to STP-1 exceeding 5 percent power. The NRC inspectors noted that this item would remain open pending the NRC inspectors' verification of the procedure change, but it would not impact on the full power licensing decision.

(Closed) Observation No. 20: Investigating Anonymous Tips or Allegations of Drug Usage - This item was reviewed and closed with the closure of Deviation 498/8777-03.

(Open) Observation No. 24: The licensee needs to provide the means to cross-reference surveillance procedures to the TS sections which would be affected by failure of the surveillance test.

In response to the original observation (IR 50-498/87-45), the licensee committed to review all surveillance procedures and revise them as necessary to ensure that all affected TS were referenced. The licensee

committed to complete this effort by the end of full power testing. During the followup inspection (IR 50-498/87-77), the NRC inspectors reviewed the progress of this effort. At that time, the surveillance procedure review was incomplete by the licensee.

During this inspection, the licensee provided the NRC inspectors with information about a computerized TS tracking system. The STP TS Management System Users Guide was reviewed by the NRC inspectors. The system was designed to provide assistance to the STP staff in assessing the state of the plant with respect to TS. The system accepts information about the status of various components and parameters around the plant, and decides whether or not the plant is still in compliance with its TS. The system also provides an on-line copy of the plant TS.

The NRC inspectors found that the TS Management System was an enhancement to the TS program. However, the system was found not to be in use, due to problems with the computer software. The licensee committed to provide the NRC with a date when the TS Management System will be operable and in use by the plant staff. The commitment date for operation will be required prior to STP-1 exceeding 5 percent power. This item will remain open pending the licensee's resolution of the software problems or their implementation of some other system. The closure of this issue will not impact on the full power license decision.

(Closed) Observation No. 25: Positive Indication of Actual Valve Position - The NRC inspectors reviewed the licensee's efforts to verify that all valves subjected to surveillance testing had positive position indication. All of the valves had been so verified and the two discrepancies found had been corrected. This item is considered closed.

(Closed) Observation No. 35: ISEG Reports Not Being Addressed by the Plant Staff - This item was reviewed and closed with the closure of Deviation 498/8777-04.

(Closed) Open Item 498/8745-01: Differences Between the Simulator Design and the Control Room - The NRC inspectors found that the simulator had been configured to the control room design as of December 1986 with some additional hardware changes. The licensee had currently frozen the design on November 15, 1987, for the next modification which is scheduled to be completed on December 1988. This update effort is consistent with the guidance of RG 1.149. This item is considered closed.

(Closed) Open Item 498/8745-02: Operations personnel stated that the simulator was not used for training operators regarding experiences at recently licensed plants.

The NRC inspectors found that the simulator training program for licensed operations did specifically address the following events:

- ° Steam Generator Tube Rupture of Ginna,

- ATWS Event at Salem,
- Pressurizer Struck Open Power Operated Relief Valve (PORV) at Three Mile Island (TMI), and
- RHR Water Hammer Event at STP.

The program also includes a segment entitled "Lessons Learned."

Each requalification cycle has scenarios scheduled which are designed to increase the operator's awareness of events and to make the operator proficient at dealing with those types of events.

This item is considered closed.

(Closed) Open Item 498/8745-03: Training of Electrical and Mechanical Maintenance Personnel to Minimize Inadvertent Scram or Engineered Safety Features (ESF) Actuation - Refer to findings discussed for Open Item 498/8745-05 below.

(Closed) Open Item 498/8745-04: Training of Maintenance Personnel to Provide Feedback for Lessons Learned from Other Plants - Refer to findings discussed for Open Item 498/8745-05 below.

(Closed) Open Item 498/8745-05: Training of Maintenance Personnel to Reduce Violations - The licensee had expended considerable effort to modify the training for maintenance personnel to satisfy the concerns that were the basis for the above open items. The licensee had trained approximately 50 percent of the maintenance personnel under the new lesson plans. The NRC inspectors noted, however, that the experienced craftsmen who had previously been through the training had not received the new training. The NRC inspectors asked the licensee representatives what mechanism would be implemented to assure that all craftsmen receive the newly revised training. The licensee representatives assured the NRC inspectors that this would be done. These items are considered closed. Maintenance training in this area will be reviewed again during subsequent reviews of the licensee's training program.

3. Followup on the Significant Concerns in the January 1988 Operational Readiness Inspection

This portion of the inspection involves the followup of the five significant concerns documented in Appendix A of IR 50-498/88-01. The licensee had not yet responded to these concerns at the time of the inspection. Licensee representatives discussed the action that had been taken for each of the items. The licensee's response was subsequently issued on April 15, 1988 (ST-HL-AE-2539).

(Open) Significant Concern from paragraph 2.1.1 of IR 50-498/88-01: Remote Shutdown - In the licensee's response of April 15, 1988, they committed to provide additional training for each of the Unit 1 operating

crews used the revised Procedure IPOP04-ZO-001, "Control Room Evacuation." The procedure was revised in February 1988, and the NRC inspectors verified that the committed training had been completed. The licensee had also conducted drills with each operating crew to demonstrate their ability to implement the revised procedure. The NRC inspectors verified that the committed drill scenario had been performed by the operating crews. The licensee had stated, in their response, that the senior resident inspector (SRI) at STP had witnessed one of the drills. The NRC inspectors confirmed that the SRI had witnessed one of the drills and had found it to be satisfactory. The NRC inspectors noted that several minor discrepancies had been identified in the drill records. The discrepancies primarily involved communications difficulties during the drill such as unable to communicate with the radio handsets because of high noise levels and phone lines which were too short. The licensee had taken no action at the time of the inspection to correct the identified discrepancies. The NRC inspectors also noted that the revised Procedure IPOP04-ZO-001 did not address the need to establish and maintain communications with the Technical Support Center (TSC) or the Emergency Operating Facility (EOF). In all likelihood, the TSC would be unavailable with the drill scenario of a fire in the control room. Under the conditions exercised, it would be vital that communication be established between the Auxiliary Shutdown Panel and TSC/EOF.

Since the licensee had corrected the original issue, this item will not impact on the full power license decision. This issue will remain open; however, pending the licensee's correction of the drill and procedure discrepancies discussed above.

(Closed) Significant Concern from paragraph 2.1.2 of IR 50-498/88-01: Plant Status - In the licensee's response of April 15, 1988, they committed to conduct a review of General Plant Operating Procedures and revise those necessary to reduce, better control, and document out of sequence steps. The licensee had revised Procedure OPGP03-ZA-002, "Plant Procedures," to require an independent review of new procedures including the use of an attributes checklist. The NRC inspectors verified that the licensee had begun the review of Plant Operating Procedures using the new checklist. The licensee had also committed to conduct additional training for operating crews on determining plant status and the plant needs for changing modes. The NRC inspectors reviewed the training records for the Unit 1 operators and found that this training had been given to all operators for mode changes up to and including Mode 2. The training for going into Mode 1 was scheduled to be completed prior to the licensee's exceeding 5 percent power. This item is considered closed.

(Closed) Significant Concern from paragraph 2.1.3 of IR 50-498/88-01: Technical Specification Implementation - In the licensee's response (ST-HL-AE-2541), dated March 1, 1988, they committed to correct Procedure OPSP10-II-0003, to perform a review of surveillance procedures, and to revise Procedures OPGP03-ZA-0002 and IP-3.20Q to correct the NRC inspectors' concerns.

The NRC inspectors found that Procedures OPSP10-II-0003, OPGP03-ZA-0002, and IP-3.20Q had been revised as committed. They had also completed the committed review of surveillance procedures. The licensee noted in their response that the Procedure 1PSP10-RC-0001 identified as having an acceptance criteria which references a figure no longer in the TS, was the incorrect procedure. They indicated that the current procedure for measuring Reactor Coolant System (RCS) flow was 1PEP04-ZG-0007. The NRC inspectors reviewed this procedure and verified that it was the appropriate procedure for measuring RCS flow, it had been revised on January 20, 1988, and it did contain the appropriate acceptance criteria from TS 3.2.5. The NRC inspectors found, however, that Section 6.0 of Procedure 1PSP10-RC-0001 still referenced Figure 3.2-3 of TS 3/4.2.3 as the acceptance criteria for RCS flow determination. As noted in IR 50-498/88-01, Figure 3.2-3 was no longer in the TS. It is noted that the revision to this procedure, which would eliminate the reference to Figure 3.2-3, was in final review and nearing issuance. The NRC inspectors were concerned that this corrective action had not been implemented on a more timely basis. This item is considered closed.

(Closed) Significant Concern from paragraph 2.1.4 of IR 50-498/88-01: Station Problem Reports - The NRC had found, in IR 50-498/88-01, that the resolution of 68 of the 204 outstanding station problem reports (SPRs) were overdue by an average length of time of 40 days. In response to this issue, the licensee committed to: (1) review the open SPRs to assure that plant safety was not impacted, (2) revise Procedure 1.45Q to increase management's involvement for prioritizing and resolving outstanding SPRs, and (3) to assign additional engineers to the organization tasked with resolving the open SPRs. The NRC inspectors found that all of the previously overdue SPRs had been resolved. There was only one SPR that was overdue and it was overdue by only 1 day. This issue is considered closed.

(Closed) Significant Concern from paragraph 2.1.5 of IR 50-498/88-01: Agastat Relay - In the licensee's response to this issue, they indicated that the Non-class 1E agastat relays which perform safety-related function had been replaced. The NRC inspectors reviewed the licensee's efforts in this area. Of the 39 agastat relays installed in the plant, 7 of them perform safety-related functions and had been replaced by suitably qualified relays. The remaining relays, which perform nonsafety-related functions, are scheduled to be replaced with qualified relays by the end of 1988. This item is considered closed.

4. Isolation Valves for Air System to the Personnel Air Lock Seal

On February 11, 1988, HL&P engineers determined that four solenoid valves in the air supply lines to the containment personnel air lock seals should have been identified as containment isolation valves. The licensee informed the NRC staff of this determination by telephone on February 12, 1988, followed by a letter dated February 18, 1988. The licensee corrective actions, as committed to the NRC, included:

- a. Initiation of a design change to the affected circuitry,
- b. Revising procedures (until design changes were completed) to ensure the valves remain closed when the air lock was not in use,
- c. Provide instructions on how to control the valves when using the air lock, and
- d. Limit the use of the air lock by using administrative controls.

On March 3, 1988, the NRC inspectors reviewed the modifications and commitments made by HL&P. The NRC inspectors attempted to determine if the licensee commitments had been implemented. Procedure 1TOP02-XC-0001 (Revision 0), "Personnel Airlock Operation," was reviewed by the NRC inspectors. The procedure provides temporary instructions on the control of the four solenoid valves. The procedure describes how to use the airlock while ensuring containment isolation capability is maintained. The procedure meets the intent of the interim commitments made by the licensee, until the modifications have been installed and tested.

The modifications to the circuitry were to include installation of a control switch in the control room that controls all four valves, individual valve status lights, Emergency Response Facility (ERF) computer inputs, Containment Isolation Signal-Phase A auto close circuitry, and installation of local test valves.

A field walkdown of the modifications made did not identify any additional NRC concerns. No violations or deviations were identified in this area; however, the modifications are currently incomplete. Therefore, this area is considered an open item (498/8817-02) which requires further NRC review.

5. Exit Meeting

An exit meeting was held on March 3, 1988, with the individuals identified in paragraph 1 of this report. The NRC inspectors briefed the attendees on the scope of the inspection and the findings as documented in this report. The NRC inspectors noted that those items from the operational readiness inspections, which had not yet been closed, will not impact on the Region IV recommendation regarding the issuance of the full power license.