

The Light company

Houston Lighting & Power

South Texas Project Electric Generating Station P. O. Box 289 Wadsworth, Texas 77483

April 30, 1993
ST-HL-AE-4416
File No.: G02.04.02
10CFR2.201

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

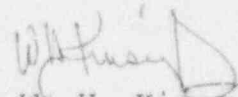
South Texas Project
Units 1 and 2
Docket Nos. STN 50-498; STN 50-499
Comments on NRC Inspection Reports
498;499/93-05 and 498;499/93-07

- Reference 1): Correspondence from A. Bill Beach (NRC) to Donald P. Hall (HL&P), dated April 8, 1993 (IR 498;499/93-05)
- Reference 2): Correspondence from James L. Milhoan (NRC) to Donald P. Hall (HL&P), dated March 24, 1993 (IR 498;499/93-07)

Houston Lighting & Power has reviewed References 1) and 2) and herein submits comments on the documents.

If there are any questions regarding these matters, please contact Mr. A. W. Harrison at (512) 972-7298 or me at (512) 972-7921.

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- Attachment 1: Comments on Inspection Report 498;499/93-05
Attachment 2: Comments on Inspection Report 498;499/93-07

IR\93-110.001

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

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South Texas Project Electric Generating Station

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COMMENTS ON INSPECTION REPORT 498;499/93-05

Letter, page 2, paragraph 4

Statement: "The seventh and eighth apparent violations involved failures to follow station procedures that resulted in the improper adjustment of the Unit 1 TDAFWP governor valve and ... contributed to the overspeed trips of the Unit 1 TDAFWP on December 27, 1992, and January 28, 1993."

Clarification: The seventh violation identified in the Inspection report (APPENDIX, page 10, first paragraph) states that the procedure did not contain sufficient acceptance criteria. It does not identify a failure to follow procedures.

APPENDIX, page 4, 3rd paragraph

Statement: "After discussions between the system engineer and the shift supervisor, the PMT requirement was voided by the system engineer..."

Clarification: The PMT was deleted by the shift supervisor, who signed the work package authorizing work start after lining out the PMT requirement, in accordance with Procedure OPGP03-ZA-0090.

Page 7, 3rd paragraph

Statement: "The unauthorized maintenance was observed by the duty plant manager..."

Clarification: The observation was by the duty operations manager.

Page 8, 3rd paragraph

Statement: "Specifically, in Unit 1 on June 11, 1990, December 27, 1992, and January 30, 1993, and in Unit 2 on December 11, 1991, following an overspeed trip, the pump was not returned to its normal standby condition prior to retest. Since these pumps are normally idle, an on-demand start would normally occur from an ambient temperature condition. If testing was conducted from other than this condition, the potential existed that degraded conditions affecting operability would be masked. It was evident, from the inspectors' review, that this masking condition was occurring because, following several start attempts, the pumps would perform their operability test satisfactorily; however, subsequent testing at a later time with the pumps in their normal standby mode resulted in a failed test."

Clarification: The TDAFWP surveillance procedure allowed the use of a slow start to clear excess condensate from the steam line. In normal operation, excess condensate would not be present in the steam line. Thus, the slow start returned the pump to it's normal standby condition.

The associated warming does not appear to have masked a degraded condition, and was consistent with industry practice. Subsequent study of the TDAFWP determined that the test failures resulted from water intrusion and misadjustment of the governor valve linkage. The procedure has been enhanced to reflect the lessons learned.

Page 11, 1st paragraph

Statement: "This incorrect system lineup remained essentially unchanged, as indicated by the temperature trend data obtained from the plant computer archives for Temperature Element T-7537, until February 3, 1993... The excessive condensate was due to MS 517 being incorrectly positioned and the steam trap degrading to a condition where it was no longer capable of passing condensate to the condenser."

Clarification: On January 24, 1993 the Head Reactor Plant Operator verified the steam trap bypass valve was closed by rotating the handwheel in the clockwise direction. This caused a further reduction in drain flow which led to the condensate accumulation which caused the overspeed trip events. He did not verify the position of the steam trap isolation valves.

Editorial correction:

Page 10, Section 2.2.2.3, 1st paragraph

Statement: "...as specified on applicable system line-up Procedure 1POP0Z-AF-0001, Revision 11..."

Clarification: The procedure number should read 1POP02-AF-0001.

COMMENTS ON INSPECTION REPORT 498;499/93-07

APPENDIX, page 1, Section 1.1, 2nd paragraph

Statement: "On February 3, 1993, STPEGS Unit 2 was operating at 100 percent power, with two steam driven steam generator feedwater pumps and one electric startup feedwater pump providing feed flow to the steam generators."

Clarification: The following would more clearly represent the conditions that existed: "On February 3, 1993, STPEGS Unit 2 was operating at 100 percent power with three steam-driven feedwater pumps providing flow to the steam generators and the electric-driven startup feedwater pump in standby. At approximately 2:48 p.m., control room operators received a high bearing temperature alarm on steam-driven feedwater pump #21. Feedwater booster pump #23 and the startup feedwater pump were started and placed into service. Feedwater pump #21 was then tripped by the operators. At approximately 3:23 p.m., the startup feedwater pump tripped due to high differential pressure across its coalescing filters. Because the two remaining..."

Page 1, Section 1.1, 2nd paragraph

Statement: "The operators subsequently initiated a manual reactor trip, prior to receiving an automatic reactor protection system trip on low steam generator water level."

Clarification: The Unit 2 reactor tripped on an automatic reactor protection system trip due to low-low steam generator water level. The manual reactor trip signal occurred within milliseconds after the automatic trip signal was received.

Page 4, top line

Statement: "After disassembly and the licensee's discovery that no repair parts were obtainable, MOV-514 was reassembled, without any corrective maintenance being completed."

Clarification: HL&P was aware that parts were not available at the time MOV-514 was disassembled during 1RE04. The decision to proceed was based on the potential that some repair could be performed on the valve seat despite the unavailability of parts. Following inspection of the valve internals, the decision was made to reassemble the valve in spite of steam cutting which could not be repaired due to lack of parts and vendor specifications.

Page 6, Section 2.2.1

Statement: "However, the AIT determined that the most probable cause of the overspeed trips was due to the misadjustment of the governor valve linkage."

Clarification: The governor valve misadjustment could have contributed to some of the overspeed trips of the turbine, however, HL&P determined that there were other factors in the Unit 1 overspeed events. This determination was based on the continued overspeed trips following restoration of the governor valve linkage adjustment to vendor specifications.

Page 7, 1st full paragraph

Statement: "This created an additional uncalculated condensate load that the single steam line drain must accommodate since the design calculations for the steam line drain capacity were based on the original design (i.e., MOV-143 closed and MOV-514 open)."

Clarification: Calculation 5S149MC6090, dated July 11, 1988, included the 97' 3" length of pipe between MOV-143 and MOV-514 in determining if steam trap 9S141MTR001A had adequate capacity during warmup. The calculation found that the steam trap was oversized and recommended no change be made to the trap.

Page 7, Section 2.2.2, 2nd paragraph

Statement: "Later in April 1992, at a time that the licensee was not able to specifically determine, Valve 2MS-517 was shut..."

Clarification: The Unit 2 above-seat drain bypass valve, 2MS-517, had been incorrectly positioned, allowing only marginal condensate flow since a maintenance period between 04/28/92 and 04/29/92.

Page 8, 1st paragraph

Statement: "At that time, the trap degraded to a point that it no longer was able to pass condensate."

Clarification: On January 24, 1993, the Head Reactor Plant Operator verified the steam trap bypass valve was closed by turning the handwheel clockwise. This caused a further reduction in drain flow which led to the condensate accumulation which caused the overspeed trip events. He did not verify the position of the steam trap isolation valves.

Page 13, 3rd paragraph

Statement: "A recent SR issued in late January 1993 addressed a problem identified when the control room turbine trip switch was actuated and caused a mechanical overspeed trip of the turbine."

Clarification: The electrical trip signal performed its function of tripping the turbine. The mechanical overspeed trip mechanism also unlatched although an actual overspeed condition did not exist.

Page 13, Section 2.4, 1st paragraph

Statement: "...the licensee plans to implement the following modifications for both Units 1 and 2 prior to startup... Installation of covers on the AFW turbine steam exhaust stacks to prevent precipitation and foreign objects from being introduced into the stack."

Clarification: Testing of the new design revealed that, during certain wind conditions, the steam discharged from the turbine exhaust stack could be directed into the ventilation system intake for the Isolation Valve Cubicle with deleterious effects. The decision was made to remove the covers since the exhaust line drain cap had been removed, thus ensuring adequate condensate removal.

Page 22, Section 2.9, 1st paragraph

Statement: "...these corrective actions included... Locking open the steam trap bypass valve (MS-517), in addition to verifying that system valve lineups for this system are correct."

Clarification: It was decided to replace the existing steam trap with a spool piece to ensure proper condensate removal.

Page 22, Section 2.9, 4th bullet

Statement: "Utilizing the vendor representatives to revise the maintenance, operating, and surveillance procedures to reflect the as designed adjustments and operating requirements."

Clarification: Maintenance training and procedures are being reviewed for the inclusion of vendor requirements and enhancements.

Page 23, 1st bullet

Statement: "Conducting site-wide training to address..."

Clarification: The commitment regarding training involved training of operators, not site-wide training.

Editorial Corrections:

Page 7, Section 2.2.2, 2nd paragraph

Statement: "This action was taken in accordance with a field change to valve lineup Procedure 2POP03-AF-0001..."

Clarification: The procedure number should read 2POP02-AF-0001.

Page 14, Section 2.5, 1st paragraph

Statement: "... Valves 1MS-148 and 1MS-218, which were determined to be partially closed rather than fully open as specified on applicable system line-up Procedure 1POP0Z-AF-0001..."

Clarification: The procedure number should read 1POP02-AF-0001.