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

April 2, 1993
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U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

South Texas Project
Unit 1 and 2
Docket Nos. STN 50-498; STN 5-499
Reply to Notice of Violation 9235-03
Regarding a Failure to Fully Test
Essential Chiller ESF Loading Timing Sequence

Houston Lighting & Power Company (HL&P) has reviewed Notice of Violation 9235-03 dated March 3, 1993, and submits the attached reply.

While preparing the response to the Notice of Violation, it became necessary to contact the responsible Inspector, for clarification. Because of the need to contact the inspector and the complexity of this issue, should you have objections to this reply, I suggest that a meeting of appropriate personnel from STP and the NRC be convened to discuss the issues and insure all parties understand them.

If you have any questions, please contact Mr. C. A. Ayala at (512) 972-8628 or me at (512) 972-7921.

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060071

RAF/pla

Attachment: Reply to Notice of Violation 9235-03

IR\93-091.001

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

IE01

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I. Statement of Violation:

Technical Specification 4.8.1.1.2.e.11 requires that "Each standby diesel generator shall be demonstrated OPERABLE ... at least once per 18 months, during shutdown, by ... verifying that the automatic load sequence timer is OPERABLE with the first sequenced load verified to be loaded within 1.0 second and 1.6 seconds, and all other load blocks within +/- 10% of its design interval ..."

Contrary to the above, Surveillance Procedures 1/2-PSP02-SF-0001A/1B/1C/2A/2B/2C, "ESF Diesel Sequencer 1A/1B/1C/2A/2B/2C Timing Test," did not verify the entire time sequence corresponding to the loading of the essential chillers. These procedures only verify the time sequence to the point at which the chiller units receive a start signal and the unit compressor oil pumps are loaded (a fraction of the chiller unit load). The time delay introduced by the timers which were internal to the chillers was not tested.

This is a Severity Level IV violation. (Supplement I) (498/499/9235-03)

II. Houston Lighting & Power Position:

For Surveillances 1/2-PSP02-SF-0001A/1B/1C/2A/2B/2C performed prior to September 1991, HL&P agrees that a violation of testing requirements stated in the UFSAR occurred. HL&P does not concur that there was a violation of Technical Specifications in 1991 or in 1992.

However, because of some confusion regarding the basis for the violation, the responsible NRC Inspector was contacted. It is our understanding, after these discussions, the issue was that the procedures are still less than adequate in that they do not have sufficient acceptance criteria to identify a failure and initiate an appropriate operability review as discussed in Section 3.3.5 of Inspection Report 50-498/92-35; 50-499/92-35, dated March 3, 1993. HL&P's position is that the procedures and the actions taken at the time were adequate.

The cited procedures have the following acceptance criteria associated with the Essential Chillers:

K-237	Start signal - Standby Essential Chiller	35 sec
K-238	Start signal - Running Essential Chiller	150 sec
K-239	Start signal - Running Essential Chiller	240 sec

Compressor Motor Start 65-70 sec

II. Houston Lighting & Power Position (Continued):

The acceptability of the internal chiller timer is verified when both the acceptance criteria for the K-237 relay and the Compressor Motor Start are satisfied. This is accomplished once in each test for all trains. The internal chiller timer is not tested in each sequence of the test because it is a mechanical timer and is not subject to significant drift. Additional testing would result in undue wear on the Essential Chillers due to unnecessary chiller starts. The combination of these acceptance criteria fully verify the proper sequencing of the Essential Chillers at the times specified as design intervals in Table 8.3-3 of the UFSAR.

Background

In November 1991, during a review of information gathered during the performance of the Standby Diesel 22 LOOP-ESF Actuation Test and the Standby Diesel 22 LOOP Test, procedures 2PSP03-DG-0014 and 2PSP03-DG-0008 respectively, it was identified that Essential Chiller 21B did not start at anticipated time intervals. Because these procedures were not written to validate the timing of load sequencing and all other aspects of the test were satisfactory, the surveillances were approved. However, this situation initiated a review of recently performed surveillance procedure 2PSP02-SF-0001B, ESF Diesel Sequencer 2B Timing Test, and discussions between the system engineers for the Standby Diesel Generator, ESF Sequencer, and Chilled Water systems.

The review of 2PSP02-SF-0001B indicated that the sequencer was operating normally with the sequencer timing relays for the Essential Chiller all functioning well within acceptance criteria. At this point, the system engineers reviewed the circumstances and determined that there were no operability questions; based in part, on the previously determined oversized load capacity of the diesel generators. This resulted in a Service Request being generated with a low priority.

Inspection Report 92-35 states that there were inadequacies in the procedure scope and acceptance criteria, and questioned the actions taken by personnel.

II. Houston Lighting & Power Position (Continued):

In retrospect, it would have been better if the system engineers had formally documented the basis for concluding that there were no operability concerns. Had this same situation occurred under current program requirements, there would have been no question regarding the need for a Station Problem Report, including a documented operability review. However, the engineering judgement used was sound and the actions taken prudent.

III. Reason for the Violation:

Surveillance Procedures Prior to September 1991

Why the surveillance procedures for the ESF Diesel Sequencers did not originally include a requirement to demonstrate proper operation of the internal chiller timer cannot be stated with certainty because of the length of time and personnel changes that have occurred since the procedures were initially developed.

It appears that the original scope of the procedures was solely the demonstration of proper operation of the sequencer. Because of this, the acceptance criteria were developed from the timing requirements to initiate action to controlled equipment instead of the design loading intervals specified in the UFSAR. It should be noted that for all equipment other than the Essential Chillers these loading intervals are the same. Either consideration did not appear to have been given to the timer internal to the Essential Chiller, or the writer believed that its operation was to be verified in other procedures.

IV. Corrective Action:

Surveillance Procedures Prior to September 1991

Upon identification that loading times for the Essential Chillers were not fully verified an operability and reportability determination was performed.

Procedures 1/2-PSP02-SF-0001A/1B/1C/2A/2B/2C, were changed to incorporate additional requirements to demonstrate proper operation of the internal chiller timer. This action was completed September 27, 1991.

Tests, incorporating the new requirements, were satisfactorily performed in Unit 2 during October and November of 1991; and in Unit 1 during October and November of 1992.

V. Date of Full Compliance:

HL&P has been in full compliance since September 27, 1991, when the surveillance procedures were modified. The chiller timer adequacy was verified by August, 1991.