

The Light company

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

August 31, 1995
ST-HL-AE-5153
File No.: G25
10CFR50

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
Review of Preliminary Accident Sequence Precursor
Analysis of Condition at South Texas Project, Unit 2

Reference: Letter from Mr. T. W. Alexion, Nuclear Regulatory Commission to
Mr. W. T. Cottle, Houston Lighting & Power dated July 17, 1995
(ST-AE-HL-94253)

The Preliminary Accident Sequence Precursor Analysis as described in enclosure 1 of the referenced correspondence was reviewed in accordance with the guidance for licensee review. Houston Lighting & Power does not regard this event as a precursor, as the modeling of the event is not consistent with the events that occurred or that had the potential to occur. The analysis was overly conservative in that a probability of "one" was assigned to events that did not happen or which were assumed without adequate basis. These included:

NRC Modeling Assumption: "It was assumed that the piston failure of EDG 22 occurred sometime during the last successful surveillance of the diesel"

HL&P Response: Although the 4R piston was damaged, all indications are that it was still functioning at the time of the 18 month inspection. It is not known how long the piston skirt had been broken, but the damage had not progressed to the point of disabling the cylinder. Since the damage did not cause failure, there is nothing to indicate when it had occurred.

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

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NRC Modeling Assumption: "EDG 22 would have subsequently failed during any attempt to run the diesel"

HL&P Response: The broken piston would not necessarily have caused engine failure, as it did not cause failure during the latest test. It would be accurate to say that the diesel was in a degraded condition, and to postulate that the probability of failure was higher than average while this condition existed. But the failure probability was demonstrably not equal to one, as the damage was found only by inspection of the piston, not by failure of the engine.

NRC Modeling Assumption: "It was also assumed that the piston failure would not be detected unless EDG 22 was run"


HL&P Response: HL&P disagrees with this statement. The failure was detected by a teardown inspection, and not by running the engine. In fact, in previous tests with the engine running, the cylinder gave normal test indications.

NRC Modeling Assumption: "Although this event occurred during an extended shutdown, it was assumed that the 4R piston failure associated with EDG 22 could have occurred while Unit 2 was at power. Therefore, this event was modeled as a long term (720 h) unavailability of a single EDG while at power."

HL&P Response: HL&P disagrees with the logic applied here. The unit was not at power, but was in a shutdown that had lasted for almost one year. No fuel was in the vessel during the time the event occurred and considering the low level decay heat in the spent fuel pool, a loss of AC power would have had to last a long time to have any consequence.

In summary, the referenced letter describes an analysis which is inappropriate to the events that actually occurred. The event analyzed did not happen, i.e. a 30 day unavailability of an EDG at power. The unit was shut down, and HL&P's surveillance program was successful in that it detected an adverse situation before it led to equipment failure. The status of EDG 22 will continue to be closely monitored to assure that any uncorrected problem with this machine will be diagnosed and eliminated.

If you should have any questions, please contact Mr. A. W. Harrison at (512) 972-7298 or me at (512) 972-8686.



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KJT/lf

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South Texas Project Electric Generating Station

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