

November 22, 1995

Mr. William T. Cottle
Group Vice-President, Nuclear
Houston Lighting & Power Company
South Texas Project Electric
Generating Station
P. O. Box 289
Wadsworth, TX 77483

SUBJECT: DISCUSSION ITEMS FOR NRC SITE VISIT REGARDING PROPOSED TECHNICAL SPECIFICATION 3/4.10.8, "DIESEL OPERABILITY EXCEPTION - MODES 1, 2, 3 AND 4," SOUTH TEXAS PROJECT, UNITS 1 AND 2 (TAC NOS. M92169 AND M92170)

Dear Mr. Cottle:

The NRC staff is reviewing Houston Lighting & Power Company's (HL&P's) application dated May 1, 1995, as supplemented by letter dated August 28, 1995, on the above subject. The proposal would extend the allowed outage times on each standby diesel generator and on each essential cooling water loop, once per fuel cycle, to permit required inspections and maintenance on these systems during power operation.

Based on its review, the staff has determined that it needs additional information to complete its review, as discussed in the enclosure. It is requested that HL&P be prepared to discuss these items with the staff during a site visit, to be scheduled in the near future on a mutually acceptable date. During the site visit (or shortly thereafter), the staff will determine the necessary additional information, including the level of detail, it needs for submittal on the docket to complete its review. This requirement affects nine or fewer respondents and, therefore, is not subject to the Office of Management and Budget review under P.L. 96-511.

Sincerely,
ORIGINAL SIGNED BY:
Thomas W. Alexion, Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

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Docket Nos. 50-498 and 50-499

Enclosure: Discussion Items

cc w/encl: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20565-0001

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Sincerely,

A handwritten signature in cursive script that reads "Thomas W. Alexion".

Thomas W. Alexion, Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket Nos. 50-498 and 50-499

Enclosure: Discussion Items

cc w/encl: See next page

Mr. William T. Cottle
Houston Lighting & Power Company

South Texas, Units 1 & 2

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SOUTH TEXAS PROJECT (STP) SPECIAL TEST EXCEPTION (STE)
FOR THE STANDBY DIESEL GENERATOR (SDG)/ESSENTIAL COOLING WATER (ECW) SYSTEMS

DISCUSSION ITEMS FOR DECEMBER 1995 SITE VISIT

Background: STP Licensing Basis for SDG/Electric Power Operation

According to the STP Safety Evaluation Report (SER) Section 8.3.1 two out of three Engineered Safety Features (ESF) electrical power divisions are necessary to mitigate the consequences of a design basis accident. This is further supported by the following examples from the Updated Final Safety Analysis Report (UFSAR):

Examples: Section 15.1.5.2 - 2 high head safety injection (HHSI) trains needed for main steam line break (MSLB).

Section 9.2.2.2.1 - 2 component cooling water (CCW) trains are capable of performing the heat removal function during a design basis accident (DBA).

Section 9.2.1.2.2.3 - A minimum of 2 essential cooling water (ECW) trains is required to operate following a DBA.

The response to NRC Question 6 (August 28, 1995 supplement) indicates that in certain cases, an update of the analysis of record was not performed to demonstrate that one safety train can mitigate accidents. One of the critical issues which must be resolved is whether the licensee's evaluation outlined in the May 1, 1995, application assumes that only one ESF electrical power division is needed to mitigate certain accidents. If this assumption is made, the staff needs to understand the basis for this assumption.

Questions/Comments:

1. What is the minimum ESF electrical power division assumption(s) used in the evaluation as outlined in the May 1, 1995 application? In the cases where the number of ESF power divisions cited in the May 1, 1995, application is not consistent with the licensing basis, please identify and justify the methods and assumptions used to discount the consequences of certain postulated accidents. Also, when an SDG is taken out-of-service, did the licensee assume that the whole ESF electrical power division will be inoperable given a Loss of Offsite Power Event for the purpose of calculating the decrease in plant safety? If not, why not? The NRC staff expects to selectively examine, during the site visit, how the electrical power system was modeled in the STP evaluation outlined in the May 1, 1995 application.
2. What are the threshold trigger levels which will be used in the STP Planned Maintenance Program in order to decide whether or not to implement the proposed SDG/ECW STE? How will any potential decrease in safety due to the extended allowed outage times (AOTs) be controlled during future plant operation?

ENCLOSURE

3. The NRC staff expects to selectively examine, during the site visit, how the "rolling" maintenance risk assessment process acts to prevent entry into potentially higher risk configurations involving the electrical system and its supporting systems.
4. What value is the licensee assuming for the component failure rate for the ESF load sequencer? Is it different from the value listed in the South Texas SER (p. 8-8)? What is the source of the change (i.e., technical report or analysis)? Also, the NRC staff expects to selectively examine, during the site visit, the technical documentation and/or analysis that supports the basis for the equipment component failure rates in Table 2.5-1 (Attachment 4 of the May 1, 1995 submittal).
5. The staff is of the opinion that the situation where the licensee would most likely need the majority of the 21-day AOT is for the 10-year SDG surveillance/inspection (as opposed to the 18-month or 5-year inspection). Would a more appropriate proposal for South Texas be a 21-day AOT for the 10-year SDG inspection, and a 14-day AOT once per train per cycle for other inspections? If not, why not?
6. A 24-hour AOT with no onsite power (no operable SDGs) is a significant departure from what is allowed in any U.S. plant. This issue appears to be independent of whether or not one is considering a 2-train or a 3-train plant. Please identify the special circumstances of the South Texas design that justifies this exception.
7. The proposed technical specifications (TSs) allows for Mode changes during the STE. Please discuss why this flexibility is needed and the potential benefit. Given that Mode 1 represents one of the most stable plant operating modes other than Mode 6, what is the justification for extended preventative maintenance activities of the SDG and ECW systems while changing modes?
8. The staff notes that the wording for TS 3.10.8.g, "Maintenance in the switchyard is controlled," is not specific enough in that it does not provide a narrow scope and direction, given the intent in Section 3.2.2 of the licensee's evaluation (Attachment 4 of the May 1, 1995 submittal), that "maintenance activities or other events that could cause a loss of offsite power initiating event are minimized" during the STE period. Please discuss what is meant by controlled.
9. The NRC staff expects to examine the physical switchyard arrangement and any administrative control procedures for the switchyard during the site visit.
10. During the staff review of the licensee's previous TS amendment request (Reference: Amendment Nos. 59 and 47), Brookhaven National Laboratories (BNL) observed that the improvement in the safety assessment was due to changes in planned maintenance practices at the plant. BNL stated that STP changed maintenance for the standby diesel generators, auxiliary feedwater and essential chilled water systems from a quarterly to a

semiannual schedule. Discuss how this impacts the balance between reliability and unavailability, and the effect on plant safety. Also, on page 4 of 4 of Attachment 2 to the May 1, 1995 application, a statement is made regarding the credit due to the compensatory actions. Please quantify the contribution to safety based on actual changes in plant procedures, equipment and other compensatory actions as discussed in the May 1, 1995 application.

11. In the licensee's evaluation (Attachment 4 of the May 1, 1995 submittal) one of the compensatory actions described on page 3.1-8 is the following set of conditions:

Prior to commencement of maintenance under the proposed STE, containment integrity will be verified to ensure containment isolation penetrations are in their proper alignments. The reactor containment building supplemental purge valves will be verified to be OPERABLE and in their proper alignment. Additionally, containment purges that may be required during the STE will be strictly controlled.

Why was the above not included in proposed TS 3.10.8?