

The Light company

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

March 4, 1992

ST-HL-AE-4024

File No.: G21.01

10CFR50.36

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

South Texas Project
Unit 2

Docket Nos. STN 50-499

Request for a Temporary Waiver of Compliance
from the Provisions of Technical Specifications 3.7.4 and 3.7.14

Reference: Correspondence from G. E. Vaughn to Document Control
Desk dated February 1, 1990 (ST-HL-AE-3283)

Houston Lighting & Power Company (HL&P) requests a temporary waiver of compliance from the provisions of Technical Specification 3.7.4. Specifically, HL&P requests the waiver so that the allowed outage time (AOT) for one train of Essential Cooling Water (ECW) System and Essential Chilled Water System can be extended by an additional 24 hours to 96 hours. HL&P expects to enter the limiting condition for operation on March 9, 1992. HL&P will apply adequate time and resources so that the necessary repairs are completed expeditiously. Current estimates indicate the work will take less than the 72 hours presently allowed; however, little tolerance is left for unforeseen delays. Extending the AOT by 24 hours is expected to provide an adequate cushion.

Cracks have been found in the 6-inch ECW inlet line to Essential Chiller 21B and dealloying has been found in the outlet line. The inlet line crack is located in a flange weld; the dealloyed section is located in a cast weld-neck flange.

ECW Train B and Essential Chilled Water Train B are to be taken out of service so that repairs can be made. Flow control in the ECW line is provided by butterfly valves which due to their inherent design will not be able to maintain isolation of the section under repair if ECW Train B is kept in operation. Per Technical Specification 3.7.4, with only two of the three ECW trains operable, three trains are to be in operable status within 72 hours or the affected unit should be in at least hot standby within the next 6 hours and in cold shutdown within the following 30 hours. Technical Specification 3.7.14 has the same requirements for the Essential Chilled Water System.

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A Subsidiary of Houston Industries Incorporated

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Repair of the subject dealloyed section is required by April 16, 1992, per the 100-day limit imposed by the Justification for Continued Operation developed for the concern. The March 9 schedule represents an aggressive approach to repairing the affected piping.

Expeditious review and approval of this temporary waiver of compliance is requested to enable the repairs to proceed without adversely impacting the continued operation of South Texas Project (STP) Unit 2.

The ECW system consists of three 50-percent capacity trains and provides cooling required for safety-related components during and after any design-basis accident such as a loss of coolant accident, loss of offsite power, or a safe shutdown earthquake. Additionally, the ECW system functions during normal operation and other non-emergency operating modes to transfer heat loads from service equipment to the essential cooling pond. The ECW system provides cooling water to the following components during all emergency and non-emergency modes of operation:

- Standby Diesel Generator Inter-cooler
- Standby Diesel Generator Auxiliary Equipment Skid Coolers
- Essential HVAC Chillers
- Component Cooling Water Heat Exchanger
- Component Cooling Water Pump Supplementary Cooler

There is no significant safety impact relative to extending the outage time of the affected ECW train. The other two trains of ECW will be operable and can mitigate the design basis accident (DBA). Since only one train of ECW is necessary for safe shutdown of the plant and mitigation of all accidents except the very unlikely DBA, there is adequate redundancy with the availability of the remaining two ECW trains.

There is no significant safety impact relative to extending the outage time of one Essential Chilled Water train. The Essential Chilled Water System, which is served by the Essential Chillers, provides chilled water for air-handling units to provide a suitable environment for personnel and equipment located in the Mechanical Auxiliary Building, Electrical Auxiliary Building, and the Fuel Handling Building. The key function for accident mitigation is to provide chilled water for the EAB HVAC air-handling units for heat removal from electrical switchgear and distribution rooms. The system consists of three identical and separate trains, each including a 150-ton chiller and a 300-ton chiller. The STP Probabilistic Safety Assessment (PSA) has

determined that chilled water cooling capacity of 450 tons is sufficient for mitigating all accident scenarios; therefore, only one train is needed for accident mitigation. Thus, there is adequate redundancy with availability of the remaining two Essential Chiller trains.

Review of the STP PSA shows that a one-time increase in the allowed outage time for 72 hours to 96 hours will not significantly affect the calculated core damage frequency (CDF) at STP. The percent increase in CDF has been conservatively estimated at 0.1%, which is very small compared to the margin of error for the CDF and is considered insignificant.

The request for a temporary waiver of compliance is consistent with protecting the health and safety of the public. HL&P believes that continued operation is a safer course of action than shutting down the plant and imposing the accompanying stress cycles on equipment.

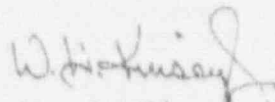
Granting the waiver will not involve a consideration of significant hazards because:

- 1) Availability of two trains of ECW and two trains of Essential Chillers is adequate for accident mitigation, since unavailability of one train is already considered in STP accident analyses. Consequently, there is no significant increase in the probability or consequences of an accident previously evaluated.
- 2) There are no alterations to equipment other than those associated with the repair process, nor are different configurations being proposed. No change to the system as evaluated in the STP safety analysis is proposed. Consequently, the request does not create the possibility of a new or different kind of accident.
- 3) Review of the STP PSA shows the increased outage time for this waiver of compliance is an insignificant contribution to risk at STP. Consequently, the request does not result in a significant reduction in the margin of safety.

There is no potential for significant environmental consequences from extending the ECW train and chilled water train outage time. There is no accident analysis impact, and the nature of the work does not involve release of radiological or non-radiological effluents, or adversely affect systems associated with control of effluents.

HL&P's Plant Operations Review Committee has reviewed the proposed extension and found it to be acceptable.

If there are any questions, please contact either Mr. P. L. Walker at (512) 972-8392 or me at (512) 972-7921.


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