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

South Texas Project
Unit 2
Docket No. STN 50-499
Request for Temporary Waiver of Compliance from
Provisions Of Technical Specifications 3.7.8 and 3.3.2

Houston Lighting & Power (HL&P) requests a temporary waiver of compliance from the provisions of Technical Specification 3.7.8 (b) and Specification 3.3.2 to maintain three independent Exhaust Booster Fans and three independent Main Exhaust Fans operable. Specifically, HL&P requests the waiver so that repairs of FHB Exhaust Booster Fan 21C can be completed. Guidance concerning submittal of a temporary waiver of compliance is provided in an NRC memorandum dated February 22, 1990, from Thomas E. Murley to the Regional Administrators. Per that guidance, HL&P offers the following required information:

(1) a discussion of the requirements for which a waiver is requested;

Technical Specifications 3.7.8 and Specification 3.3.2 require three independent Exhaust Booster Fans and three independent Main Exhaust Fans to be operable. Operability of the Fuel Handling Building Exhaust Air System (FHBEAS) ensures that radioactive material leaking from the Emergency Core Cooling (ECC) equipment within the FHB following a LOCA and radioactive material release from an irradiated fuel assembly in the FHB are filtered prior to reaching the environment.

During the repair of FHB Exhaust Booster Fan 21C, it will be necessary to place the remaining FHB Exhaust Booster Fans and the three independent Main Exhaust Fans in the "pull-to-lock" position which will render all three trains of the Fuel Handling Building Exhaust Air System inoperable.

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(2) a discussion of circumstances surrounding the situation including the need for prompt action;

The waiver is necessary because of a ground fault failure of the FHB Exhaust Booster Fan 21C motor at 2105 hours August 15, 1992, which led to motor failure. FHB Exhaust Booster Fan 21C is a vane-axial fan with an internal motor. The motor winding has a ground fault which has rendered the fan incapable of operation. The Action Statement requires restoration of the failed fan by 2105 hours August 22 (7 days). This waiver is needed in support of maintaining the schedule to restore the fan. Restoring FHB Exhaust Booster Fan 21C to an operable status will require removal and replacement of the motor. Due to the difficulty in removing the fan from the existing ductwork and to ensure personnel safety, the required work necessitates that the remaining FHB Exhaust Booster Fans and the three independent Main Exhaust Fans be placed in a "pull-to-lock" status in order to allow Maintenance personnel entry into the common plenum. Also, due to the complex rigging activities and that this is the first time this activity has been performed, HL&P requests that the 7 day LCO allowed in the Technical Specification 3.7.8 be extended by an additional three (3) days.

(3) a discussion of compensatory actions (if any);

The following compensatory action will be taken:

1. Administrative controls will ensure that in the unlikely event that emergency operation is required, operators have adequate time to ensure that FHB Main and Exhaust Fan motors are manually started. The following defines the conditions where the FHBEAS can be maintained available while the Fans are in the "Pull-to-Lock" position:

   a) Prior to removing the FHB Exhuast Booster Fan common plenum manway, Maintenance personnel will inform the Control Room of their intentions. This information will be noted in the Control Room Log.

   b) Following the opening of the plenum manway, Maintenance personnel will maintain a watchstander at the manway opening who is in continuous communication with the Control Room.

c) If at any time during this process, the Maintenance personnel are made aware, either via loudspeaker or radio, that a reactor trip has occurred, then the work will be secured, personnel will exit the plenum and the manway cover reinstalled as expeditiously as possible. The Control Room will confirm via continuous communication that the manway has been reinstalled.

d) Once confirmed that plenum integrity is restored, the Operator will manually start the required FHB Main and Exhaust Booster Fans.

2. During the repair of FHB Exhaust Booster Fan 21C and the duration of the waiver, no irradiated fuel movement will occur.

The above methodology is deemed acceptable since in Modes 1 - 4 the purpose of the FHBEAS is to filter ECCS radioactive leakage that occurs during the recirculation phase. Recirculation phase will not occur prior to 16 minutes after an accident. Following an accident, the reactor will be automatically tripped. The plant notification of this fact should prove sufficient to inform the personnel to restore the plenum integrity. The 16 minutes prior to radioactive ECCS leakage occurring is more than adequate time to ensure that the plenum integrity is restored and the FHB Main and Exhaust Booster Fans started.

(4) a preliminary evaluation of the safety significance and potential consequences of the proposed request;

The following evaluation is based on the assumptions listed below:

1) The repair of the FHB Exhaust Booster Fan 21C is a necessary plant evolution and is required to be performed during power operations.

2) It is not reasonable that the routine repair of the FHB Exhaust Booster Fan 21C should place the plant in a 3.0.3 condition. Placing the Fans in the "Pull-to Lock" position while the plant is operating will render all three trains of FHBEAS inoperable and result in entering Specification 3.0.3 since the requirements of Specification 3.3.2 are violated.

3) It is reasonable that the operability of a system or component can be maintained assuming the use of local operator action as long as any required actions are not complex, are of a limited duration, and there is sufficient time for an operator to respond. This position is consistent with the guidance provided by the NRC to the Clinton Power Station in a letter dated August 21, 1989.

During plant operations in modes 1 through 4, a DBA, such as a Loss of Coolant Accident (LOCA), can have an impact on the FHB. In a LOCA, as described in UFSAR 15.6.5, after the water level in the RWST reaches a minimum allowable level, coolant for long term cooling is obtained by automatically switching to cold leg recirculation phase of operation by which spilled borated water is drawn from the Containment Emergency Sumps. The Containment Spray Pumps continue to draw water from the emergency sumps to reduce containment pressure. Based on all trains of the Emergency Core Cooling System (ECCS) pumps running and 359,000 gallons of available water in the RWST, a minimum of 16 minutes are required to drain the RWST and initiate the recirculation mode. As described in the UFSAR, system leakage outside of Containment occurs which releases radioactive products to the FHB. As a result, it is possible to have a radioactive atmosphere in the FHB in 16 minutes.

(5) a discussion which justifies the duration of the request;

The duration of the waiver is to extend the 7 day LCO allowed in Specification 3.7.8 by an additional three (3) days for removal and repair of FHB Exhaust Booster Fan 21C. Once the repairs are completed, the FHBEAS will be in conformance with the requirements of the Technical Specifications. The waiver also covers those periods of time which require the fans to be in the "pull-to-lock" condition for installation and removal of the blind flange for repair of the FHB Exhaust Booster Fan 21C.

(6) the basis for the licensee's conclusion that the request does not involve a significant hazards consideration;

Based on information in this submittal, and as follows, HL&P has determined that the requested temporary waiver of compliance does not involve a significant hazards consideration:

The requested temporary waiver would not **involve a significant increase in the probability or consequences of an accident previously evaluated.** In the event that mitigation of an event is necessary, the FHBEAS with two FHB Exhaust Booster Fans operable ensures that radioactive material leaking from within the FHB following a LOCA or a radioactive material release from an irradiated fuel assembly are filtered prior to reaching the environment. Therefore, accidents which have been previously evaluated would be mitigated as designed.

The requested temporary waiver would not **create the possibility of a new or different kind of accident from any accident previously evaluated.** Testing has demonstrated, assuming a single failure coincident with the repair of 21C, that the FHBEAS is operable with one FHB Exhaust Booster Fan.

The requested temporary waiver would not **involve a significant reduction in a margin of safety.** In the event that mitigation of an event is necessary, the Fuel Handling Building Exhaust System with two FHB Exhaust Booster Fans operable ensures that radioactive material leaking from within the FHB following a LOCA or a radioactive material release from an irradiated fuel assembly are filtered prior to reaching the environment. Therefore, accidents which have been previously evaluated would be mitigated as designed.

(7) the basis for the licensee's conclusion that the request does not involve irreversible environmental consequences;

Pursuant to 10CFR51 and based on information contained in this submittal and in the Final Environmental Statement Related to the Operation of South Texas Project Units 1 and 2, HL&P has concluded that the requested temporary waiver of compliance poses no significant radiological or non-radiological impacts, and will not have a significant effect on environmental quality.

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The Plant Operations Review Committee has reviewed and concurred with the requested waiver.

If there are any questions concerning this matter, please contact me at (512) 972-7205.

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