

The Light company

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

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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
Additional Information Regarding Essential Chiller Procedures

Houston Lighting & Power submits herein additional information requested during a conference call with Lawrence Kokajko, Steve Jones, and Donna Skay on January 27, 1994. The specific requests were 1) a description of the purpose of the essential chiller performance test and the data collected during its performance, and 2) a description of actions to be taken when the essential cooling water supply temperature is less than 42°F.

Procedure OPEP07-CH-0001, "Essential Chiller Performance Test," is used to conduct performance monitoring of the essential chillers periodically or as a post-maintenance test of chiller performance. One chiller in a train is tested at a time, with ventilation loads aligned as needed to provide maximum loading. Various operating parameters are recorded to determine essential chiller performance, including:

- chiller evaporator chilled water flow
- chiller condenser pressure
- chiller condenser essential cooling water flow
- current in one phase feeding the chiller
- compressor suction pressure
- compressor discharge pressure
- compressor oil pressure
- essential cooling water inlet and outlet temperature
- essential chilled water inlet and outlet temperature

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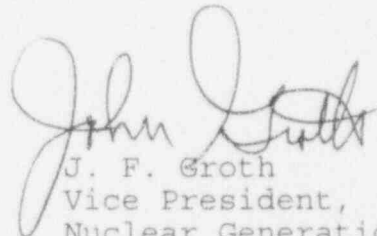
Project Manager on Behalf of the Participants in the South Texas Project

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Using the data collected, System Engineering calculates the overall heat transfer coefficient, the heat transfer margin, the chiller compressor power factor and efficiency, the chiller compressor power, and the heat balance ratio. Satisfactory test completion requires that two consecutive tests be completed where the results are within 5% and both tests yield a heat transfer margin greater than or equal to 0.

The second procedure discussed during the conference call was operating procedure OPOP02-CH-0001, "Essential Chilled Water System." For Unit 1, if essential cooling water pond temperature is less than 42°F and greater than or equal to 37°F, a dedicated individual must be stationed at each operable essential chiller train to throttle the essential cooling water discharge bypass valve on all operating chillers to maintain chiller condenser pressure between 2" Hg vacuum and 7 psig, as determined locally. If the essential cooling water pond temperature is less than 37°F, the essential chillers are declared inoperable. The procedure will be revised to include the same actions for Unit 2 after the bypass modification is completely installed and the Unit 2 essential chilled water system is ready for operation.

If there are any questions regarding this matter, please contact Mr. Tom Jordan at (512) 972-7902 or me at (512) 972-8664.


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