

50.55(e)

50-498/499

**The Light
company**

Houston Lighting & Power P.O. Box 1700 Houston, Texas 77001 (713) 228-9211

July 8, 1981
ST-HL-AE-685
SFN: V-0530



Mr. Karl Seyfrit
Director, Region IV
Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76012

Dear Mr. Seyfrit:

South Texas Project
Units 1 & 2
Docket Nos. STN 50-498, 50-499
Final Report Concerning Reactor Cavity
Ventilation Design

Please find attached our final report regarding reactor cavity ventilation design which Houston Lighting & Power Company verbally reported to your office on October 17, 1980 as being potentially reportable pursuant to 10CFR50.55(e).

If there are any questions, please contact Mr. Michael E. Powell at (713) 676-8592.

Very truly yours,

G. W. Oprea, Jr.

G. W. Oprea, Jr.
Executive Vice President

MEP/flj
Attachment

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Revision Date 7-2-81

FINAL REPORT
REACTOR CAVITY VENTILATION DESIGN
July 8, 1981

DESCRIPTION OF THE INCIDENT

On October 17, 1980, pursuant to 10CFR50.55(e), Houston Lighting & Power Company notified your office of an item concerning the reactor cavity ventilation design for the South Texas Project Units 1 and 2. The design criteria requires that ventilation be provided to the reactor cavity, primary shield wall penetrations, and inspection toroid volumes sufficient to maintain primary shield wall concrete temperatures within specified limits during normal plant operation. An analysis had indicated that the temperature of the primary shield wall concrete in the penetration and along the face exposed to the reactor vessel would exceed the specified limits. Based on this analysis the concern was identified to the NRC.

CORRECTIVE ACTION

Since the issuance of our interim reports, a new analysis has been completed that demonstrates that the design as released for construction is in fact adequate. Thus, no corrective action is necessary.

SAFETY ANALYSIS

An evaluation of the reactor cavity thermal-hydraulics has been performed. As a result of this evaluation, it is concluded that the assumptions, which formed the basis for the original concern, were overly conservative. A new analysis was performed and the design as released for construction is in fact adequate. For portions of the design (i.e. seal plate) which were still preliminary and not released for construction, changes were recommended to HL&P to enhance its performance. HL&P has accepted the recommended changes for implementation.

This review identified a failure mode in addition to those discussed in the FSAR. The failure mode involves loss of HVAC in the cavity area during normal operation due to inadvertent damper operation in the subject area. Thus, additional instrumentation will be added to the plant design in order to alert the plant operator of this failure mode. The evaluation shows that upon loss of HVAC, temperature in the cavity area will not exceed specified limits within the first thirty (30) minutes of the loss. This provides ample time for operator action.