

The Light company

Houston Lighting & Power

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August 9, 1988
ST-HL-AE-2739
File No.: G9.10
10CFR50 App. A, GDC 4

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

South Texas Project Electric Generating Station
Units 1 and 2
Docket Nos. STN 50-498, STN 50-499
Leak Before Break on Residual Heat Removal
(RHR) Suction Line

- Reference: (1) HL&P Letter to NRC, J. H. Goldberg to H.R. Denton,
March 12, 1986, ST-HL-AE-1617.
- (2) HL&P Letter to NRC, M. R. Wisenburg to V. S. Noonan,
November 14, 1986, ST-HL-AE-1784.
- (3) HL&P Letter to NRC, M. R. Wisenburg to Document Control Desk,
May 26, 1987, ST-HL-AE-2190.
- (4) HL&P Letter to NRC, M. R. Wisenburg to Document Control Desk,
May 29, 1987, ST-HL-AE-2213.

Houston Lighting & Power Company (HL&P) requests Nuclear Regulatory Commission review and approval of analyses demonstrating that there is an extremely low probability of pipe rupture in the Residual Heat Removal (RHR) suction line of the South Texas Project, Units 1 and 2. Based on these analyses, HL&P proposes to eliminate consideration of the dynamic effects of postulated ruptures in the RHR suction line. The analyses utilize state of the art leak-before-break (LBB) technology and advanced engineering methods, as described in Attachment 1. Attachment 1 provides the results of the detailed fracture mechanics analysis together with a full discussion of material properties and an evaluation to NUREG 1061, Volume 3 criteria. The piping schematic layouts covered by this evaluation are shown on Figures 5-1, 5-2 and 5-3. Attachment 1 demonstrates that the high energy sections of the South Texas Project RHR suction lines for both Units 1 and 2 meet all the specified criteria for break elimination as described in NUREG 1061, Volume 3.

L4/NRC/bm

A Subsidiary of Houston Industries Incorporated

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By References (1) and (2), HL&P requested an exemption from the requirements of GDC 4 for dynamic effects associated with postulated pipe ruptures of pressurizer surge line and accumulator line piping. HL&P had numerous meetings with the NRC staff to discuss the LBB program and submitted reports and additional information by a number of letters. Reference (3) provided a chronology of meetings and letters between HL&P and NRC. Reference (4) submitted additional information on the accumulator lines. Based on the review of the submitted information and NRC's independent computations, the staff concluded, in Supplement 4 to NUREG-0781, dated July, 1987 that HL&P has provided technical justification, consistent with criteria in NUREG-1061, Volume 3, for not providing protective devices against the dynamic effects of postulated pipe breaks in the pressurizer surge piping and the accumulator piping of South Texas Project Units 1 and 2. The analytical methods and evaluation criteria used in the LBB work presented in Attachment 1 are the same as those used in the evaluation of the pressurizer surge line and the accumulator line.

Attachment 1 uses material properties and as-built loads from the RHR suction lines which envelope both Unit 1 and Unit 2; therefore, the conclusions are equally applicable to both STP units. Since the GDC 4 was revised effective November 27, 1987, no exemptions are required. Accordingly, HL&P plans to apply the results of Attachment 1 to eliminate postulated pipe ruptures and not to install the associated pipe whip restraints on the Unit 2 RHR suction lines. HL&P may also delete the corresponding devices from Unit 1 at a future date in accordance with the provisions of 10CFR50.59. Consequently, HL&P requests the NRC staffs' expeditious review and approval of attachment 1 as required by the revised GDC 4.

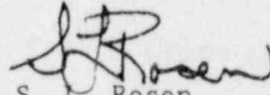
As Attachment 1 contains information proprietary to Westinghouse Electric Corporation, it is supported by an affidavit signed by Westinghouse, the owner of the information. The affidavit sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b) (4) of Section 2.790 of the Commission's regulations.

Accordingly, it is respectfully requested that the information which is proprietary to Westinghouse be withheld from public disclosure in accordance 10CFR Section 2.790 of the Commission's regulations.

Correspondence with respect to the proprietary aspects of the application for withholding or the supporting Westinghouse affidavit should reference CAW-88-065 and should be addressed to R. A. Wiesemann, Manager of Regulatory & Legislative Affairs, Westinghouse Electric Corporation, P.O. Box 355, Pittsburgh, Pennsylvania 15230-0355.

Also attached is a check for \$150 in accordance with 10CFR 170.21.

If you should have any questions on this matter, please contact Mr. A. W. Harrison at (512) 972-7298.



S. L. Rosen
General Manager,
Operations Support

KC/hg

Attachments: 1. WCAP-11773, "Technical Bases for Eliminating Residual Heat Removal (RHR) Line Rupture From the Structural Design Basis for South Texas Project Units 1 & 2" Westinghouse Proprietary Class 2, June, 1988.

Also enclosed is a Westinghouse authorization letter, CAW-88-065, Proprietary Information Notice, and accompanying Affidavit.

2. WCAP-11774, "Technical Bases for Eliminating Residual Heat Removal (RHR) Line Rupture From the Structural Design Basis for South Texas Project Units 1 & 2" Westinghouse Class 3, June 1988.

cc:

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* Includes 3 copies of Attachments 1&2. All others without
attachments except where noted.

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