

In Reply Refer To:
Dockets: 50-498/87-70
50-499/87-70

FEB 9 1988

Houston Lighting & Power Company
ATTN: J. H. Goldberg, Group Vice
President, Nuclear
P.O. Box 1700
Houston, Texas 77001

Gentlemen:

Thank you for your letter of January 15, 1988, in response to our letter and Notice of Violation dated December 17, 1987. We have reviewed your reply and find it responsive to the concerns raised in our Notice of Violation. We will review the implementation of your corrective actions during a future inspection to determine that full compliance has been achieved and will be maintained.

Sincerely,
Original Signed By
A. B. Beach

L. J. Callan, Director
Division of Reactor Projects

cc:
Houston Lighting & Power Company
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Houston Lighting & Power Company
ATTN: Gerald E. Vaughn, Vice President
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CJCJohnson:gb
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DRP/D
GLEconstable
2/8/88

DRP
LJCallan
2/8/88

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Houston Lighting and Power Company

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cc cont:

Central Power & Light Company
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P.O. Box 2121
Corpus Christi, Texas 78403

City Public Service Board
ATTN: R. J. Costello/M. T. Hardt
P.O. Box 1771
San Antonio, Texas 78296

City of Austin
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P.O. Box 1088
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Texas Radiation Control Program Director

bcc to DMB (IE01)

bcc distrib. by RIV:

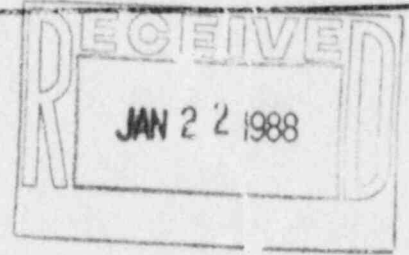
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*Section Chief (DRP/D)
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The Light company

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



January 15, 1988
ST-HL-AE-2468
File No.: G2.4
10CFR2.201

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
Response to Notice of Violation

Houston Lighting & Power Company has reviewed Notice of Violation 87-70-02 dated December 17, 1987 and submits the attached response pursuant to 10CFR2.201.

If you should have any questions on this matter, please contact Mr. J. S. Phelps at (512) 972-7071.

A handwritten signature in dark ink that reads "J. H. Goldberg".

J. H. Goldberg
Group Vice President, Nuclear

JSP/hg

Attachment: Response to Notice of Violation 87-70-02

~~8801200412 APP.~~

IC-88-021

cc:

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Revised 11/20/87

Response to Notice of Violation 87-70-02

I. Statement of Violation

An NRC inspection conducted from October 18, 1987 through November 20, 1987 (Inspection 87-70), identified a violation of NRC requirements. The violation involved the failure to translate design requirements.

"Criterion III of Appendix B to 10 CFR Part 50 requires that the design basis be correctly translated into specifications, drawings, procedures and instructions. This requirement is amplified by the approved Quality Assurance Program Description (QAPD) of South Texas Project (STP).

Contrary to the above, Westinghouse Spent Fuel Storage Rack Installation Procedure 2463A82 did not correctly incorporate a design basis requirement. Specifically, the procedural method described causes the bolt/nut combinations securing the rack to the floor to achieve a torque value of only 25-50 foot-pounds whereas the design specification requires that a value of 1100 foot-pounds be achieved.

This is a Severity Level IV violation."

II. Reason for Violation

The original design of the in-containment fuel storage racks used bolt preloading on the support pads so that the shear force at the rack base could be absorbed by all four supports in a seismic event. As a result, a high torque value (1100 ft-lbs) was calculated to achieve the desired safety margin.

In order to achieve this torque value, the installation procedure was written to require a specific amount of angular rotation which, after applying the initial bolt torque, would provide the bolt preload assumed by the design calculation. In actuality, the initial bolting torque of 25 ft-lbs specified by the procedure resulted in an inadequate starting point for the subsequent angular rotation. Westinghouse has stated that use of this "Turn of the Nut" method is inappropriate where a set pretension is required by design. For this reason, the installation procedure did not achieve the torque value of 1100 ft-lbs assumed in the calculation.

III. Corrective Action Taken and Results Achieved

As described above, the original calculation utilized assumptions which caused a high torque value to be necessary to achieve the desired safety margin. Westinghouse has performed a reanalysis assuming a bolt preload

resulting from an applied torque of 25 ft-lbs which, in a seismic event, would result in reacting the base moment with 2 bolts in tension and two pads in compression with the shear force applied to the two compression pads. This reanalysis demonstrated that an adequate margin of safety exists on the structural components.

IV. Corrective Steps Taken to Prevent Recurrence

As stated above, the torque value actually achieved utilizing the installation procedure has been shown to be acceptable. Listed below are corrective steps taken:

1. Review of other field-erected equipment installation procedures has been conducted by Westinghouse. Equipment installation procedures for the fuel handling machine, refueling machine, fuel transfer system and reactor internals were reviewed. The review identified that the torque values for bolted joints requiring preload have been specified in the installation procedures as required by design calculations. Also, the "Turn of the Nut" method is not used in these procedures.
2. HL&P engineering has reviewed the Westinghouse reanalysis and has verified that an adequate margin of safety exists for the installed fuel racks.
3. HL&P Quality Assurance is performing an independent review of selected Westinghouse installation procedures to determine that torque values for bolted joints requiring preload have been specified as required by the design of the Westinghouse supplied equipment. This review will encompass installation procedures not included in the Westinghouse sample. This action will be completed by February 26, 1988.

This problem is not applicable to the racks installed in the spent fuel storage pool. The spent fuel pool utilizes the fourteen-inch spaced (center-to-center) free-standing racks for which no anchor bolt torquing is required.

V. Date of Full Compliance

STP is presently in full compliance.