

# The Light company

Houston Lighting & Power

South Texas Project Electric Generating Station P. O. Box 289 Wadsworth, Texas 77483

April 08, 1994  
ST-HL-AE-4765  
File No.: G02.04  
10CFR2.201

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

South Texas Project  
Units 1 and 2  
Docket Nos. STN 50-498; 50-499  
Replies to Notice of Violations in Inspection Report 94-07  
Regarding the Emergency Containment Sump Enclosures

Houston Lighting & Power Company (HL&P) has reviewed the Notice of Violations and submits the attached replies to Violation 94007-01 and Violation 94007-02.

The Inspection Report also noted a concern with respect to how Operating Experience Program items are evaluated for applicability to the South Texas Project. This concern is addressed by a March 19, 1994 change to the program that was undertaken as part of one of the initiatives in our Business Plan. In connection with the containment sump, the Operating Experience Program relied on the existing containment sump surveillance to determine whether the sump enclosure design deficiencies identified in the information notice existed at STP. The Operating Experience Program reviewer should have required a specific inspection of the potentially affected components. The enhancements made to the program will require ownership by the reviewer throughout the process. The continuity afforded by the new program is designed to provide more rigorous reviews and reduce missed opportunities in the future.

If there are any questions, please contact Mr. S. M. Head at (512)-972-7136 or me at (512)-972-8787.

*T. H. Cloninger* for THC

T. H. Cloninger  
Vice President,  
Nuclear Engineering

MAC/esh

- Attachments: 1. Reply to Notice of Violation 94007-01  
2. Reply to Notice of Violation 94007-02

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

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PDR ADOCK 05000498  
Q PDR

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C:

Leonard J. Callan  
Regional Administrator, Region IV  
U. S. Nuclear Regulatory Commission  
611 Ryan Plaza Drive, Suite 400  
Arlington, TX 76011

Rufus S. Scott  
Associate General Counsel  
Houston Lighting & Power Company  
P. O. Box 61067  
Houston, TX 77208

Lawrence E. Kokajko  
Project Manager  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555 13H15

Institute of Nuclear Power  
Operations - Records Center  
700 Galleria Parkway  
Atlanta, GA 30339-5957

David P. Loveless  
Sr. Resident Inspector  
c/o U. S. Nuclear Regulatory Comm.  
P. O. Box 910  
Bay City, TX 77404-910

Dr. Joseph M. Hendrie  
50 Bellport Lane  
Bellport, NY 11713

J. R. Newman, Esquire  
Newman, Bouknight & Edgar, P.C.  
STE 1000, 1615 L Street, N.W.  
Washington, DC 20036

D. K. Lacker  
Bureau of Radiation Control  
Texas Department of Health  
1100 West 49th Street  
Austin, TX 78756-3189

K. J. Fiedler/M. T. Hardt  
City Public Service  
P. O. Box 1771  
San Antonio, TX 78296

U. S. Nuclear Regulatory Comm.  
Attn: Document Control Desk  
Washington, D. C. 20555

J. C. Lanier/M. B. Lee  
City of Austin  
Electric Utility Department  
721 Barton Springs Road  
Austin, TX 78704

G. E. Vaughn/C. A. Johnson  
Central Power and Light Company  
P. O. Box 2121  
Corpus Christi, TX 78403

Reply to Notice of Violation 94007-01

I. Statement of Violation:

- A. 10 CFR Part 50, Appendix B, Criterion III, states, in part, that measures shall be established to ensure that applicable regulatory requirements and the design basis, as defined in 10 CFR 50.2 and as specified in the license application, for those structures, systems, and components to which this appendix applies, are correctly translated into specifications, drawings, procedures, and instructions.

Contrary to the above, the following five examples of the design basis of the emergency containment sump enclosures not being correctly translated into specifications, drawings, or instructions were identified.

1. The design basis of the emergency containment sump enclosures was not correctly translated into drawings and instructions in that Drawing 312, "Sump Cover Sub-Assembly," as implemented by Pittsburgh-Des Moines Work Package PDM 21258, did not provide sufficient detail to prohibit the construction of six holes that bypassed the sump enclosure screen installed on or about August 20, 1979.
2. The design basis of the emergency containment sump enclosures was not correctly translated into drawings and instructions in that Drawing E5/A, "Sump Erection," as implemented by Work Package PDM 16706, did not provide sufficient detail to prohibit the acceptance of gaps between the emergency sump enclosures and the containment floor. These gaps allowed a pathway that bypassed the trash racks, kick plate, and screens.
3. The design basis of the emergency containment sump enclosure cover was not correctly translated into specifications, drawings, and instructions in that the instructions in Engineering Change Notice Package 88-C-0037 were insufficient to provide a method for plant workers to install vortex breakers within the sumps. This resulted in the workers cutting slots to widen the manways that were not reflected in design drawings.

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4. The design basis of the emergency containment sump enclosures was not correctly translated into specifications and instructions in that the enclosure manway covers were free to move within the manway. This allowed the outside edge of the manway covers to expose gaps in the manway slots greater than the 1/4 inch allowed by the containment spray system design criteria.
5. The design basis of the emergency containment sump enclosures was not correctly translated into drawings in that Design Drawing 3C26-9-S-1525, "Structural Reactor Containment Building S. ST. Liner - Section and Details," indicated a conflict between Section F-F and Detail 9 of the drawing. This resulted in the failure to install a 1/8-inch gasket in the Unit 2 sump enclosures.

II. HL&P Position:

HL&P concurs that the violation occurred in examples 1, 2, and 4.

HL&P also concurs with example 5 in that there was a conflict between section F-F and detail 9 of drawing 3C26-9-S-1525 but does not agree that the Unit 2 gasket should have been installed. The conflict between section F-F and detail 9 was considered a drafting error since both views should have been changed to delete the requirement for a gasket. The Design Change Document, DC-1999, was written in November of 1986 to delete the gasket requirement. The design change document failed to identify both locations where the drawing required a gasket, thus when the change was incorporated, the gasket requirement shown in section F-F was not removed. The incorporation of the change into the non-unitized drawing indicated that the gasket deletion was intended for both units. Even though HL&P agrees that a drafting error did exist in the drawing, this error did not result in a failure to install a gasket in the Unit 2 sumps enclosure since the design documents intended for the gasket to be deleted.

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HL&P does not concur with example 3 in that the slots were reflected in the design drawings. The installation and design of the slots, discussed in example 3, were controlled by a design change document, BC-02344. This design change is identified in a table on the drawing 3C26-9-S-1516 which specifies applicable design changes. The slots were installed prior to the initiation of the Engineering Change Notice Package, 88-C-0037. The initiator of the Engineering Change Notice Package originally identified that slots may be required to provide access for the vortex breaker. However, it was later determined that the access provided by the slots already installed by BC-02344 would be sufficient. Thus, HL&P does not concur with example 3 violation as written, since the slots were installed in conformance with an approved design document.

III. Reason for Violation:

The failure to translate the design basis information for the emergency containment sump enclosures into the design documents was caused by less than adequate attention to detail during the design, fabrication, and installation. The design drawing should have included an additional note or guidance limiting the size of fit-up gaps to less than normal installation tolerance.

IV. Correction Actions:

1. An analysis was performed and determined that the gaps found in the Unit 1 and Unit 2 emergency sumps have no adverse effect on the operation of the plant. The analysis demonstrated that in the highly unlikely event of a 75% loss of the two-train containment spray system design flow due to blockage, there would be no negative consequences to containment pressure/temperature mitigation or core-cooling and only minimal impact on the available design margin for Control Room, Technical Support Center and Offsite doses.
2. Emergency core cooling system sump hardware deficiencies have been repaired in both units.
3. The design drawings have been corrected to reflect the installed design.



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4. The emergency sump inspection surveillance procedure has been revised to require sump entry and has been enhanced to include quantitative inspection criteria for gaps and holes in the screen structure.

V. Date of Full Compliance:

HL&P is in full compliance.

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I. Statement of Violation:

- B. Technical Specification 4.5.2.d requires that "Each ECCS subsystem shall be demonstrated OPERABLE: ...At least once per 18 months by a visual inspection of the containment sump and verifying that the subsystem suction inlets are not restricted by debris and that sump components (trash racks, screens, etc.) show no evidence of structural distress or abnormal corrosion." This requirement is applicable to Mode 3.

Contrary to the above, on August 12, 1993, licensee personnel had failed to verify within the surveillance interval that the subsystem suction inlets were not restricted by debris and that certain sump components showed no evidence of structural distress or abnormal corrosion prior to taking the Unit 1 reactor into Mode 3.

II. HL&P Position:

HL&P concurs that the violation occurred.

III. Reason for Violation:

The failure to perform adequate surveillances on the emergency core cooling system sumps was due to the lack of detailed inspection instruction.

IV. Corrective Actions:

The emergency sump inspection surveillance procedure has been revised to require sump entry and has been enhanced to include quantitative inspection criteria for gaps and holes in the screen structures.

V. Date of Full Compliance:

HL&P is in full compliance.