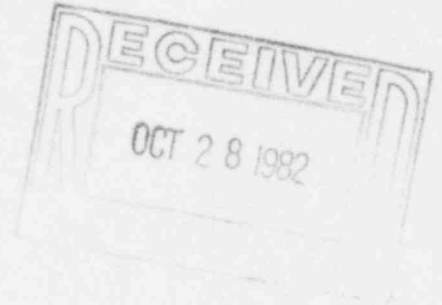


The Light company

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

October 27, 1982
ST-HL-AE-896
File Number: G12.67
SFN: V-0530

Mr. John T. Collins
Regional Administrator, Region IV
Nuclear Regulatory Commission
611 Ryan Plaza Dr., Suite 1000
Arlington, Texas 76012



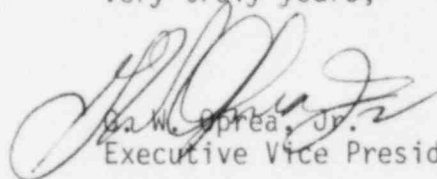
Dear Mr. Collins:

South Texas Project
Units 1 & 2
Docket Nos. STN 50-498, STN 50-499
Final Report Concerning Environmental
Qualification of Electrical Equipment Associated
with the Auxiliary Feedwater Pumps

On August 25, 1980, pursuant to 10CFR50.55(e), Houston Lighting & Power Company (HL&P) notified your office of an item concerning environmental qualification of electrical equipment associated with the auxiliary feedwater pumps. Attached is the Final Report concerning this item.

If you should have any questions concerning this matter, please contact Mr. Michael E. Powell at (713) 877-3281.

Very truly yours,


Michael E. Powell, Jr.
Executive Vice President

MEP/mg

Attachment

IF27

Houston Lighting & Power Company

October 27, 1982

cc: G. W. Oprea, Jr.

SI-HL-AE-896

J. H. Goldberg

File Number: G12.67

J. G. Dewease

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J. D. Parsons

D. G. Barker

M. R. Wisenburg

R. A. Frazar

J. W. Williams

R. J. Maroni

J. E. Geiger

H. A. Walker

S. M. Dew

J. T. Collins

(NRC)

D. E. Sells

(NRC)

W. M. Hill, Jr.

(NRC)

M. D. Schwarz

(Baker & Botts)

R. Gordon Gooch

(Baker & Botts)

J. R. Newman

(Lowenstein, Newman, Reis, & Axelrad)

STP RMS

Director, Office of Inspection & Enforcement

Nuclear Regulatory Commission

Washington, D. C. 20555

G. W. Muench/R. L. Range
Central Power & Light Company
P. O. Box 2121
Corpus Christi, Texas 78403

Charles Bechhoefer, Esquire
Chairman, Atomic Safety & Licensing Board
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

H. L. Peterson/G. Pokorny
City of Austin
P. O. Box 1088
Austin, Texas 78767

Dr. James C. Lamb, III
313 Woodhaven Road
Chapel Hill, North Carolina 27514

J. B. Poston/A. vonRosenberg
City Public Service Board
P. O. Box 1771
San Antonio, Texas 78296

Mr. Ernest E. Hill
Lawrence Livermore Laboratory
University of California
P. O. Box 808, L-46
Livermore, California 94550

Brian E. Berwick, Esquire
Assistant Attorney General
for the State of Texas
P. O. Box 12548
Capitol Station
Austin, Texas 78711

William S. Jordan, III
Harmon & Weiss
1725 I Street, N. W.
Suite 506
Washington, D. C. 20006

Lanny Sinkin
Citizens Concerned About Nuclear Power
5106 Casa Oro
San Antonio, Texas 78233

Citizens for Equitable Utilities, Inc.
c/o Ms. Peggy Buchorn
Route 1, Box 1684
Brazoria, Texas 77422

Jay Gutierrez, Esquire
Hearing Attorney
Office of the Executive Legal Director
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Revision Date 10-18-82

Final Report Concerning Environmental
Qualification of Electrical Equipment Associated
with the Auxiliary Feedwater Pumps

I. SUMMARY

As the result of an environmental qualification design review by Brown & Root, Inc. (B&R), electrical equipment (including pump motors) associated with the auxiliary feedwater (AFW) pumps was identified to be qualified to a temperature which was below expected accident conditions.

This item was later expanded to include the backdraft dampers in the Isolation Valve Cubicle (IVC) Heating Ventilation and Air Conditioning (HVAC) system. These matters are associated closely with a recently reported deficiency concerning the design loadings for the IVC walls. The IVC is currently being redesigned and the design of the AFW pump cubicles is included in this redesign effort.

II. DESCRIPTION OF THE INCIDENT

On August 25, 1980, pursuant to 10CFR50.55(e), Houston Lighting & Power Company (HL&P) notified your office of an item concerning environmental qualification of electrical equipment associated with the auxiliary feedwater pumps. As a result of an environmental qualification design review, the electrical equipment associated with AFW pumps was identified to be qualified to a temperature which is below accident conditions resulting from a High Energy Line Break (HELB) within the IVC. The affected equipment is located at elevation +10' of the IVC structure on each unit. This condition was documented by B&R on an Engineering Design Deficiency (EDD), 80-310. A detailed description of this item was provided in our First Interim Report on September 24, 1980.

On April 22, 1982, HL&P expanded the scope of this deficiency to include the backdraft dampers in the IVC-HVAC system. The subject backdraft dampers were not specified to withstand the pressure transient associated with an HELB inside the IVC. Failure of these dampers could allow the IVC-HVAC system to be disabled.

III. CORRECTIVE ACTION

The design of the AFW pump cubicles is being considered in a complete review and redesign of the IVC. In this redesign effort, sufficient isolation will be provided between AFW pump cubicles to enable the environment to be maintained at an acceptable level for the AFW trains not directly affected by the postulated HELB. Complete separation will be provided between train-oriented HVAC systems. The redesign and restart of construction, as currently scheduled, is shown on the Milestone Summary Schedules (line number 10) provided under separate cover on September 20, 1982.

IV. RECURRENCE CONTROL

The fundamental plant design philosophy at STP dictates that safety-related systems be redundant, independent and provided with adequate isolation to preclude unacceptable systems interaction. STP Systems Interaction Design Guide is being developed and will include guidance for separation and consideration of fire, flooding, seismic events, missiles, single failure and pipe break effects.

V. SAFETY ANALYSIS

Without a redesign of the IVC, an HELB in one AFW pump cubicle could have resulted in environmental conditions in adjacent cubicles which exceed the conditions for which the pumps were qualified. This could result in a loss of AFW in the unaffected trains. This is considered to represent a significant safety hazard.