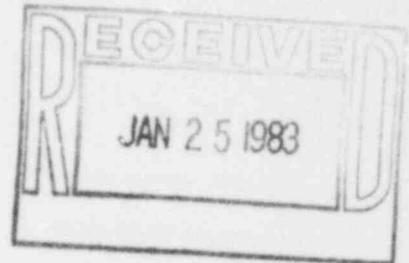


The Light company

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

January 24, 1983
ST-HL-AE-930
File Number: G12.129
SFN: V-0530

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



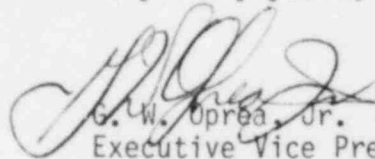
Dear Mr. Collins:

South Texas Project
Units 1 & 2
Docket Nos. STN 50-498, STN 50-499
Final Report Concerning
Undetectable Failure in the SSPS

On August 4, 1982, pursuant to 10CFR50.55(e) Houston Lighting & Power Company (HL&P) notified your office of a potentially reportable deficiency discovered by Westinghouse concerning an undetectable failure which could exist in on-line testing circuits for relays in the Solid State Protection System (SSPS). An interim report on this deficiency was transmitted to you on September 3, 1982. Attached is the Final Report which describes HL&P's proposed corrective action.

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

Very truly yours,


G. W. Oprea, Jr.
Executive Vice President

MAM/mg
Attachment

8301310301 830124
PDR ADDCK 05000498
S PDR

TE 27

Houston Lighting & Power Company

January 24, 1983

cc: G. W. Oprea, Jr.

ST-HL-AE-930

J. H. Goldberg

File Number: G12.129

J. G. Dewease

Page 2

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)

H. E. Schierling (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 12-20-82

I. Summary

A pushbutton test switch is used in the Solid State Protection System (SSPS) to remove the shunt from a proving lamp. Failure of this pushbutton test switch to reinstate the shunt following the test could result in an undetectable failure whereby associated safeguards devices would not actuate.

II. Description of the Incident

On August 4, 1982, Houston Lighting & Power Company (HL&P) notified NRC-OIE Region IV pursuant to 10CFR50.55(e) of a potentially reportable deficiency discovered by Westinghouse concerning an undetectable failure which could exist in on-line testing circuits for relays in the SSPS. Westinghouse submitted a letter to NRC-OIE Headquarters (E.P. Rahe to R. DeYoung, NS-EPR-2638) dated August 6, 1982 describing this problem. On September 3, 1982, HL&P provided a First Interim Report regarding this deficiency.

Periodic testing of the SSPS includes actuation of master relays which actuate safeguards systems. When a preselected master relay is energized, a proving lamp in series with the output (slave) relay coil confirms electrical continuity through the output relay coil. Operation of the output relay is prevented by reducing the output relay coil circuit voltage from 120VAC to 15VDC during the test. The master relay is operated by means of a pushbutton test switch, which also removes the shunt from the SSPS proving lamp and allows the 15VDC to energize the lamp to confirm the continuity of the output relay coil. Upon completion of the master relay and output relay coil continuity tests, 120VAC circuit voltage is restored. However, if the switch contacts which shunt the proving lamp should fail to reclose as expected, 120VAC would be applied to the lamp when the system was called upon to operate. Depending on the output relay coil impedance and the number of output relays being operated by the master relay contacts, the current through the lamp could cause it to burn open before the output relay(s) energized. In such an instance associated safeguards devices in the affected train would not actuate.

III. Corrective Action

Westinghouse and Bechtel have evaluated the subject deficiency and determined that modifications to the test procedure will provide adequate assurance that the SSPS can be functionally tested without creating a potential for the described undetected failure. This test procedure, which will basically follow the guidance provided by Westinghouse in the above referenced letter to R. DeYoung (NS-EPR-2638), will ensure that the shunt is reinstated after completion of the test. The South Texas Project test procedures and training will incorporate this test procedure.

IV. Recurrence Control

This deficiency occurred due to a unique circumstance resulting from the design of the SSPS. Therefore, a formal recurrence control is not applicable in this instance.

V. Safety Evaluation

No detailed safety evaluation was performed. It was assumed that failure of the SSPS to properly actuate safeguards devices is considered to be a safety hazard. The appropriate corrective action as described above will be implemented.