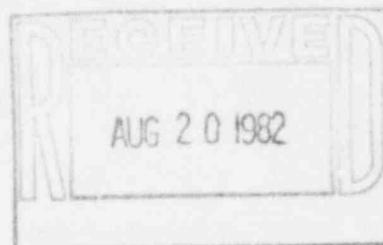


# The Light company

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

August 19, 1982  
ST-HL-AE-872  
File Number: G12.126  
SFN: V-0530

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



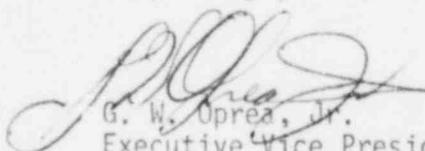
Dear Mr. Collins:

South Texas Project  
Units 1 & 2  
Docket Nos. STN 50-498, STN 50-499  
First Interim Report Concerning the Essential Cooling  
Water Strainer Backwash Discharge Line

On July 23, 1982, pursuant to 10CFR50.55(e), Houston Lighting & Power Company (HL&P) notified your office of an item concerning the Essential Cooling Water (ECW) self-cleaning strainer backwash discharge lines. Attached is the First Interim Report which provides several alternatives for corrective actions which are currently under review. The final report will provide the corrective action which will be implemented and will be submitted to your office by January 28, 1983.

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

Very truly yours,

  
G. W. Oprea, Jr.  
Executive Vice President

MEP/mg

Attachment

IE 27

Houston Lighting & Power Company

cc: G. W. Oprea, Jr.  
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J. D. Parsons  
D. G. Barker  
C. G. Robertson  
R. A. Frazar  
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R. J. Maroni  
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D. E. Sells  
W. M. Hill, Jr.  
M. D. Schwarz  
R. Gordon Gooch  
J. R. Newman  
STP RMS

(NRC)  
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(NRC)  
(Baker & Botts)  
(Baker & Botts)  
(Lowenstein, Newman, Reis, & Axelrad)

August 19, 1982  
ST-HL-AE-872  
File Number: G12.126  
Page 2

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Washington, D. C. 20555

Revision Date 08-09-82

FIRST INTERIM REPORT CONCERNING THE  
ESSENTIAL COOLING WATER STRAINER  
BACKWASH DISCHARGE LINES

I. SUMMARY

Six (6) non-nuclear safety (NNS) lines were identified as important for the proper functioning of the safety-related Essential Cooling Water System (ECWS). As presently designed, these lines have the potential to drain significant amounts of water from the Essential Cooling Pond (ECP) and inhibit the ability of the ECWS to cool the safety-related components serviced by the ECWS. Several alternatives for resolution of this problem are outlined in Section III of this report.

II. DESCRIPTION OF THE INCIDENT

On July 23, 1982, pursuant to 10CFR50.55(e), Houston Lighting & Power Company (HL&P) notified your office of an item concerning the ECW self-cleaning strainer backwash discharge lines.

A portion of each ECW self-cleaning strainer backwash discharge line is NNS and non-seismic category I. These lines run from the ECP intake structure to the ECP discharge structure, and are currently routed underground outside of the ECP embankment. During a seismic event the portion of the lines that is NNS must be assumed to fail, which may either restrict the backwash flow or discharge the flow outside of the embankment.

Failure of a backwash discharge line may result in a loss of water from the ECP in excess of the maximum 30-day losses assumed in the ECP analysis. Restriction of flow through a backwash line may result in blockage in the ECW self-cleaning strainer; which may ultimately result in the sustained (but temporary) loss of that ECW train.

III. CORRECTIVE ACTION

The following alternatives are under consideration as resolutions to the problems identified herein.

- A. The lines may be upgraded to safety class 3 and seismic category I with the routing left as presently designed. This would involve the replacement of the piping and the temporary removal of a section of the ECP embankment.
- B. The line may be upgraded to safety class 3 and seismic category I with the routing changed so that the lines pass over top of the ECP embankment. This would involve the replacement of the pipe and the use of seismic supports on the embankment.

- C. The lines may be rerouted so that they stay within the perimeter of the ECP embankment. In this case, the lines could remain NNS; however, seismic supports might be required to preclude the possibility that a broken pipe could damage any safety-related equipment or structure.

#### IV. RECURRENCE CONTROL

A recurrence control program is not considered necessary because the situation is unique.

#### V. SAFETY ANALYSIS

Of the two scenarios defined in Section II, the "worst-case" scenario is the failure of the backwash line which results in a loss of water from the ECP in excess of the maximum 30-day losses assumed in the ECP analysis.

The subject lines are non-nuclear safety and non-seismic category I; therefore, for the purpose of this safety analysis, all six lines are assumed to fail during a single seismic incident.

This failure could cause the discharge of backwash flow outside of the ECP embankment. This continuous loss, coupled with the 30-day fluid losses assumed in the ECP analysis and the lack of a safety-related makeup source, could significantly affect the volume of water in the ECP. Study of this postulated occurrence has indicated the following consequences.

- A. Inability to keep ECW temperatures low enough during the 30-day post-accident period to adequately cool the safety-related components serviced by the ECWS.
- B. Inability to maintain the ECP level high enough during the 30-day post-accident period for the ECW pumps to function.

A change in indicated ECP level could be the first indication of a failure of these lines. The loss in level could be as much as six to twelve inches before positive indication is determined. This loss is too high to maintain adequate margin, given lowest usable initial level, maximum evaporation and seepage rates, and no makeup to the ECP for 30-days.

The design described herein was released for construction on piping composites and has the potential to unacceptably impair the operation of the safety-related ECWS.