

# The Light company

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

January 23, 1986  
ST-HL-AE-1589  
File No.: G9.17

Mr. Vincent S. Noonan, Project Director  
PWR Project Directorate #5  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555

South Texas Project  
Units 1 and 2  
Docket Nos. STN 50-498, STN 50-499  
DSEI Items; Response to Question 440.80

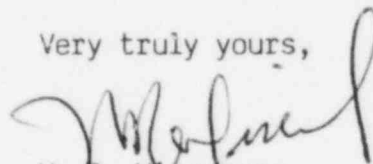
Reference: Letter ST-HL-AE-1515 dated 11/8/85: M. R. Wisenburg to  
G. W. Knighton

Dear Mr. Noonan:

Attached is our response to NRC Question 440.80 regarding Main Steam Isolation Valve (MSIV) closure on a safety injection signal. Based on this response, HL&P requests that Item #'s 64 and 105 (see reference) be considered "confirmatory".

If you should have any questions on this matter, please contact  
Mr. M. E. Powell at (713) 993-1328.

Very truly yours,



M. R. Wisenburg  
Manager, Nuclear Licensing

JSP/yd

Attachment: Response to NRC Question 440.80

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CC:

Hugh L. Thompson, Jr., Director  
Division of PWR Licensing - A  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Robert D. Martin  
Regional Administrator, Region IV  
Nuclear Regulatory Commission  
611 Ryan Plaza Drive, Suite 1000  
Arlington, TX 76011

N. Prasad Kadambi, Project Manager  
U.S. Nuclear Regulatory Commission  
7920 Norfolk Avenue  
Bethesda, MD 20814

Claude E. Johnson  
Senior Resident Inspector/STP  
c/o U.S. Nuclear Regulatory  
Commission  
P.O. Box 910  
Bay City, TX 77414

M.D. Schwarz, Jr., Esquire  
Baker & Botts  
One Shell Plaza  
Houston, TX 77002

J.R. Newman, Esquire  
Newman & Holtzinger, P.C.  
1615 L Street, N.W.  
Washington, DC 20036

Director, Office of Inspection  
and Enforcement  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

T.V. Shockley/R.L. Range  
Central Power & Light Company  
P.O. Box 2121  
Corpus Christi, TX 78403

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

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

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

Lanny A. Sinkin  
Christic Institute  
1324 North Capitol Street  
Washington, D.C. 20002

Oreste R. Pirfo, Esquire  
Hearing Attorney  
Office of the Executive Legal Director  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

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

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

Judge Frederick J. Shon  
Atomic Safety and Licensing Board  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Mr. Ray Goldstein, Esquire  
1001 Vaughn Building  
807 Brazos  
Austin, TX 78701

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

Docketing & Service Section  
Office of the Secretary  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555  
(3 Copies)

Advisory Committee on Reactor Safeguards  
U.S. Nuclear Regulatory Commission  
1717 H Street  
Washington, DC 20555

Revised 12/2/85

SOUTH TEXAS PROJECT  
REQUEST FOR ADDITIONAL INFORMATION

440.80N a. In Question 440.57N the staff requested information regarding the effect of the STP design for MSIV closure on mitigation of steam generator tube rupture (SGTR) or small break LOCA. It is our understanding that the MSIVs would automatically close on low RCS pressure SI actuation, while the Westinghouse emergency response guidelines (ERGs) are based on use of the condenser for steam dump when it is available and thus assume that the MSIVs for intact SGs remain open. Your response indicated that for this type of event the MSIVs would be reopened, and that the time required for reopening the MSIVs would be offset by the time it takes to isolate a ruptured SG in the event of SGTR. You concluded that automatic closure of the MSIVs on any SI signal would not adversely affect recovery. We do not concur with this conclusion for the reason discussed below.

In our conference call of December 3, 1985, on this subject, you stated that several operations are required prior to reopening the MSIVs, including SI reset and equalization of MSIV upstream and downstream pressures. First, it is not clear that SI Reset would be possible at the times when MSIV opening is necessary. Second, it is not clear whether the STP emergency operating procedures (EOPs) for SGTR and small break LOCA mitigation reflect these additional steps for re-establishment of steam dump to the condenser, and whether this will be part of operator training, including simulator runs. It is not clear that this mode of plant operation is consistent with our approval of the generic Westinghouse ERGs. Please address the above concerns.

- b. Please provide detailed information on the effect of STP design for MSIV closure on the frequency of challenges to the MSIVs, steam generator safety valves (SVs) and atmospheric dump valves (ADVs). Consider the possible effect of more frequent challenges on the reliability of these valves. For SVs consider previous operating incidents during which a SV was actuated and then did not reseal properly, thus causing excessive steam leakage (e.g., Ginna SGTR event). Can the number of lifetime design cycles for these components be exceeded as a result of this design? Your response should consider operating history during various modes of operation, including testing and spurious actuations.
- c. The evaluations currently conducted by the Westinghouse Owners Group (WOG) to address SGTR accident mitigation do not assume closure of the MSIVs on SI signal. The operator action times assumed in these analyses are based on typical MSIV closure actuation systems, which are not the same as for STP. Thus, it is not apparent that these analyses are representative of the STP plant. Therefore, unless it can be demonstrated that the WOG analyses clearly apply to STP, provide the results of plant specific analyses that address the spectrum of SGTR concerns being addressed by the WOG. These include but are not limited to, the required time to stop the primary-to-secondary break flow and the time margin to overfill.

Response to Question 440.80

The Main Steamline Isolation Valve (MSIV) closure logic will be modified to be consistent with that of other Westinghouse plants. The MSIV closure on manual and high steam pressure rate signals will be maintained. The MSIV closure on a safety injection signal will be modified to MSIV closure only on a Hi 2 containment pressure signal and, from the excessive cooldown protection logic, on a low steamline pressure signal and on a low-low Tcold signal.