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MURRAY R. EDELMAN

VICE PRESIDENT
NUCLEAR

PY-CEI/NRR-0031 L

March 30, 1983

Mr. B. J. Youngblood, Chief
Licensing Branch No. 1
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Perry Nuclear Power Plant
Docket Nos. 50-440; 50-441
Confirmatory Issue No. 10 -
"Fast Scram" Hydrodynamic Loads
on Control Rod Drive Systems

Dear Mr. Youngblood:

This letter is provided as a supplement to our latest report dated January 14, 1983, to the Perry SER Confirmatory Issue No. 10, regarding the design modifications being implemented on the Control Rod Drive (CRD) system to address "fast scram" hydrodynamic loads. Our original letter dated April 15, 1982, was written in response to your request for information dated March 29, 1982. That response has since been supplemented by letters dated June 22, 1982, August 18, 1982, and January 14, 1983.

As stated in our January 14, 1983, letter our Architect Engineer, Gilbert Associates, Inc. enlisted the assistance of ECHO Energy Consultants of Oakland, California to perform a comprehensive review of all CRD system transients. As a direct result of that review, GAI was able to limit the modifications necessary to address the "fast scram" transient to those indicated by items 2a and 2b of that letter. However during the course of their review, ECHO also identified other hydrodynamic loads associated with end stroke effects of the control rod drive mechanism not directly related to the "fast scram" loads. These loads were postulated based on the failure of the CRD "buffer" in a limited number of CRD mechanisms. When applied to the affected individual CRD insert lines, piping stresses were found to exceed ASME Section III, Code Class 2 allowable limits. Although we feel that our January 14, 1983, letter on this subject adequately addressed your request for information dated March 29, 1982, that letter stated that it is our intent to meet allowable stress limits of ASME Section III.

Boo!

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March 30, 1983

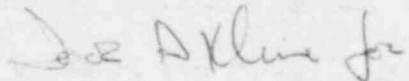
Therefore design modifications will be implemented on the CRD insert piping in addition to those indicated by that letter. These changes are being reported to you because they are an indirect result of the original concern and for the sake of completeness. These additional modifications are:

1. An existing restraint will be modified to provide axial restraint to insert piping in the vicinity of the reactor vessel pedestal. This will be accomplished by the addition of pipe clamps.
2. Approximately thirty new supports will be designed to restrain insert piping in the vicinity of the hydraulic control units.

Final design details for the above are available for NRC staff review upon request.

We believe that the supplementary information provided in this letter should resolve this confirmatory issue in the next Supplementary Safety Evaluation Report.

Very truly yours,



Murray R. Edelman
Vice President
Nuclear Group

MRE:mb

cc: Jay Silberg, Esq.
John Stefano
Max Gildner