TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

July 1, 1982

HTRD-50-518/82-11, -520/82-11

U.S. Nuclear Regulatory Commission
Region II
ATTN: James P. O'Reilly, Regional Administrator
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

HARTSVILLE NUCLEAR PLANT A - REPORTABLE DEFICIENCY - EXCESSIVE STRESS ON SPRAY POND SUPPLY AND BYPASS HEADERS - HTRD-50-518/82-11, -520/82-11

The subject deficiency was initially reported to NRC-OIE, Region II, Inspector Ross Butcher on February 18, 1982 as NCR HTAHPP8202. Our first interim report was submitted to your office on March 29, 1982. In accordance with paragraph 50.55(e) of 10 CFR Part 50, we are enclosing the final report on the subject deficiency. If you have any questions, please call Jim Domer at FTS 858-2725.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Licensing

Enclosure
cc: Mr. R. C. DeYoung, Director (Enclosure)
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

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HTRD050-518/82-11, -520/82-11

ENCLOSURE
HARTSVILLE NUCLEAR PLANT A
EXCESSIVE STRESS ON SPRAY POND SUPPLY AND BYPASS HEADERS
10 CFR 50.55(e) REPORT NO. 2 (FINAL)
NCR HTAHPP8202

Description of Deficiency

The spray pond supply and bypass header drawings were issued before the seismic analysis was completed.

Because of the long leadtime required to purchase the material for this system and to provide the field with drawings they could use for planning, scheduling, and fabrication purposes, drawings were released before the seismic analysis was completed. TVA realized some changes might be required. The drawings were squadchecked before issue to all affected parties, comments were resolved, and the drawings signed out and issued. It is common practice to issue piping drawings before the seismic analysis is completed. The designer, using his experience and judgement, provides flexibility in the layout. The seismic analysts were consulted on a regular basis during the initial layout and based on their experience felt there would be no problem qualifying the piping arrangement.

When the analysis was made, it was discovered that the piping system would be overstressed in the valve pits. To reduce the stress, additional modifications were required to the original design of the piping system.

This condition was identified during a routine review of design input information.

Safety Implication

The Essential Service Water System, of which the spray pond supply and bypass headers are a part, is a safety-related system and its integrity must be maintained to provide shutdown capability under all postulated conditions. If this condition had gone uncorrected, the piping system could have failed and as this condition existed for both trains, the shutdown capability of the reactor could have been impaired.

Corrective Action

The piping layout has been revised and the drawings were revised per ECN-586 and reissued. The seismic analysis is complete, and the isometrics have been issued. Since no piping has been installed, all installations will be done to the corrected design.