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400 Chestnut Street Tower II

July 21, 1981

Mr. James P. O'Reilly, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region II - Suite 3100
101 Marietta Street
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

PHIPPS BEND NUCLEAR PLANT UNITS 1 AND 2 - REPORTABLE DEFICIENCY -
DEFICIENT WELDS ON WEIR WALL LINER PLATES (NCR PBNP-135)

Initial notification of the subject deficiency was made to NRC-OIE, Region II, Inspector R. W. Wright on August 20, 1980. The final report was submitted on December 22, 1980. In Inspection Report Nos. 50-553/81-01 and 50-554/81-01 dated February 11, 1981, Region II Inspector B. R. Crowley requested a revised report containing corrective actions to prevent future identical or similar occurrences. Enclosed is TVA's response to Inspector Crowley's request. We consider 10 CFR Part 21 applicable to this nonconformance. If you have any questions, please call Jim Domer at FTS 857-2014.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Regulation and Safety

Enclosure

cc: Mr. Victor Stello, Director (Enclosure)
Office of Inspection and Enforcement
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Washington, DC 20555

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ENCLOSURE
PHIPPS BEND NUCLEAR PLANT UNITS 1 AND 2
DEFICIENT WELDS ON WEIR WALL LINER PLATE
10CFR50.55(e)
NCR PBP-135
REPORT NO. 4 (REVISED FINAL)

On August 20, 1980 TVA informed NRC-OIE, Region II, Inspector R. W. Wright, of a potentially reportable condition under 10 CFR 50.55(e) regarding deficient welds on the weir wall liner plates. This structure was fabricated by Stellar Manufacturing Company, Collingswood, New Jersey. This is a revised final report on this condition.

Description of Deficiency

The weir wall liner plates designated for Phipps Bend Nuclear Plant have been shipped to the site. All 44 plates exhibit examples of rejectable welding per the inspection criteria established in Section III of the ASME Code. Additionally, some carbon steel angles were welded to the stainless steel liner plates using carbon steel welding electrodes. This is contrary to ASME III Code requirements and C. F. Braun Specification 300-11.

Safety Implications

The use of the incorrect electrode on some welds results in a weld of indeterminate properties which may be susceptible to cracking or inadequate adhesion to the stainless steel. Also, many welds made with the proper electrode were of unacceptable quality and required repair. The many occurrences of unacceptable welds could have degraded the structural integrity of the weir wall which could have adversely affected plant safety.

Corrective Action

All welds made with the incorrect electrode have been removed and the welds were made with the proper weld electrode. All welds which were of unacceptable quality and which were made with the proper electrode have been reworked to remove the deficiencies. All welds were inspected to all applicable criteria.

The cause of this deficiency is unacceptable workmanship on the part of Stellar and subsequent breakdown in the area of QA inspection of these plates. Because all the weir wall liner plates have been shipped for Phipps Bend, action to prevent recurrence is not directly applicable to this product. However, TVA's Quality Engineering Branch (QEB) source inspectors have been instructed to intensify the inspection of Stellar products and not to release products for shipment where there is evidence of defective material and/or unacceptable workmanship. Stellar is also supplying the fuel pool liners for Phipps Bend. Manufacture of the fuel pool liners is complete, with 95 percent of all material already on site. Any deficiencies that are found in the fuel pool liners which are already on site will be documented and reported as appropriate.