

400 Chestnut Street Tower II

June 10, 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 UNIT 1 - REPORTABLE DEFICIENCY - FAILURE TO
RADIOGRAPH RPV PEDESTAL WELDS AND BYPASSING HOLD POINTS ON CONCRETE
POUR - PBRD-50-553/81-04

On December 23, 1980 the deficiency involving the failure to radiograph reactor pressure vessel pedestal welds was initially reported to NRC-OIE, Region II Inspector, W. B. Swan as NCR PBNP-175. On January 9, 1981 the deficiency involving the bypassing of hold points during concrete pours was initially reported to NRC-OIE, Region II Inspector, R. W. Wright as NCR PBNP-184. The first and second interim reports on the subject deficiencies were submitted on January 22 and March 31, 1981, respectively. In compliance with paragraph 50.55(e) of 10 CFR Part 50, we are enclosing the final report on the subject deficiencies. 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
U.S. Nuclear Regulatory Commission
Washington, DC 20555

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ENCLOSURE
PHIPPS BEND NUCLEAR PLANT UNIT 1
FAILURE TO RADIOGRAPH RPV PEDESTAL WELDS
BYPASSING HOLD POINTS ON CONCRETE POUR
10CFR50.55(e)
NCR'S PBNP-175 AND PBNP-184
REPORT NO. 3 (FINAL)

On December 23, 1980, TVA informed NRC-OIE, Region II Inspector, W. B. Swan, of a potentially reportable condition under 10 CFR 50.55(e) regarding the failure to radiograph reactor pressure vessel (RPV) pedestal welds for Phipps Bend Nuclear Plant unit 1. On January 9, 1981, TVA informed NRC-OI,E Region II Inspector, R. W. Wright, of a potentially reportable condition under 10 CFR 50.55(e) regarding the bypassing of hold points on a concrete pour to the same unit. This is the final report on these conditions.

Description of Deficiency

The deficiency involves the T-bar weld joints between the upper and lower segment of the RPV pedestal. These weld joints did not receive a ten percent radiographic examination as required by GE/CFBraun specification 300-05 and shown on GE/CFBraun drawing SK-016.

Also, the exterior and interior girth welds were not radiographed in accordance with GE/CFBraun specification 300-05. This is due to an inconsistency between the radiographic locations shown on GE/CFBraun drawing SK-015 and TVA's weld joint numbering system.

The omission of required radiographic examination was reported to GE/CFBraun on nonconformance report PBNP-175. The apparent cause was determined to be lack of coordination between affected personnel.

The welds are inaccessible such that the specified NDE cannot be performed because concrete has already been poured for the RPV pedestal. This pour was performed even though some hold points (including NDE) were not properly dispositioned.

The bypassing of hold points specified for this phase of construction was reported on NCR PBNP-184 and was caused by a failure to follow established QA procedures.

Safety Implications

All welds were dispositioned by the technical engineer (GE/CFBraun) to use as is. Since this condition did not result in any hardware deficiencies and the structure is adequate to perform its intended safety function, the safety of operations of the plant could not have been adversely affected.

Corrective Action

A review of all available documentation and examination records has revealed the following:

The T-bar weld seams were subjected to (1) a fitup inspection which was documented as acceptable, (2) inprocess visual examinations conducted by the Quality Control Welding inspectors throughout the weld process, and (3) magnetic particle examinations of the completed weld joints which were documented acceptable. Quality Control Welding inspectors were assigned full-time duty to welding activities on the RPV pedestal T-bars while this welding was being performed.

The entire interior and exterior girth seams were subjected to (1) a fitup inspection which was documented as acceptable, (2) visual and magnetic particle examination of the excavation cavity which was documented as acceptable, (3) a final visual and magnetic particle examination of the completed weld seam which was documented as acceptable, and (4) inprocess visual examinations throughout the welding. In addition, all available radiographic examination documentation on the interior and exterior girth seams was reviewed.

Based on this information, GE/CFBraun dispositioned NCR PBNP-175 to "use-as-is." No corrective action was required to the reactor pressure vessel pedestal itself. The probable cause of this deficiency was attributed to lack of coordination between the Quality Control-Welding engineering section, the Quality Control-Welding inspection section, and the radiographic film reviewers. To ensure that the involved parties identified above understand their responsibilities concerning weldments requiring ten percent radiographic examinations, an instruction memorandum was issued by the Quality Control-Welding Unit Supervisor to delineate these responsibilities.

Corrective action for nonconformance report PBNP-184 entails the following:

1. Previous instructions had been issued to site personnel concerning the requirements of quality control procedures and the penalties for not adhering to these procedures. An instruction memorandum to all construction employees has been issued which referenced previous instructions and specifically addressed the importance of adherence to quality control hold points.
2. A policy statement has been issued which describes implementation of

a program initiated to list Quality Control Investigation Reports (QCIR's) and Work Releases against concrete pours which contain embedded items. This program requires a daily report to be generated which indicates concrete pours that have outstanding QCIR's or work releases against them.

All corrective action has been completed.