

ENCLOSURE

PHIPPS BEND NUCLEAR PLANT UNIT 1
MAXIMUM WEAVE WIDTH EXCEEDED ON CONTAINMENT SHELL WELDS
10 CFR PART 50.55(e) REPORT NO. 1 (FINAL)
NCR PBN-067

On March 6, 1980, TVA notified NRC-OIE Region II, Inspector R. W. Wright, of a potentially reportable condition involving containment shell welds which were made with weave widths greater than allowable. This deficiency was also discussed in TVA's March 14, 1980, response for noncompliance item 50-553/79-17-01. This is the final report on the subject reportable condition.

Description of Deficiency

TVA crafts performing gas metal arc flux core welding on vertical seams numbered T2301629, T2301630, and T2301631 on the containment shell sidewall plates (ring No. 3) deposited weld metal in excess of the 5/8-inch maximum weave width specified in the TVA General Welding Specification G-29M.

Cause of the Deficiency

This situation occurred because welders were trying to facilitate their work by making one weld pass rather than the two which would be required if they had followed procedures. Welding QC inspectors were not cognizant of the limitation and, therefore, had not specifically discerned that the weave width limitation was being exceeded.

Safety Implications

Three test plates with weave widths from 3/4 inch to 7/8 inch were sent to TVA's Singleton Materials Laboratory for evaluation. One of these plates failed to pass the Charpy's V-notch test. It is, therefore, assumed that the weave width in excess of 5/8 inch may have reduced the strength of the weld and therefore weakened the containment pressure boundary.

Corrective Actions

Weld metal deposited in excess of 5/8-inch maximum weave width will be removed by thermal air arc gouging to original joint geometry as shown in the attached sketch "A", and ground smooth.

NDE inspection will be performed on gouged areas as per applicable specifications. Rewelding will be performed per original detail weld procedure and specifications. All NDE examinations will be performed according to original requirements and specifications. This work will be completed by September 30, 1980.

Means Taken to Prevent Recurrence

Craft supervision and quality control welding inspectors were instructed on December 17, 1979, to comply with all requirements of specification and codes related to onsite fabrication and welding of nuclear power plant components.

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