

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

5N 1578 Bookbut Place

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WBRD-50-390/86-66  
WBRD-50-391/86-60

U.S. Nuclear Regulatory Commission  
Region II  
Attention: Dr. J. Nelson Grace, Regional Administrator  
101 Marietta Street, NW, Suite 2900  
Atlanta, Georgia 30323

Dear Dr. Grace:

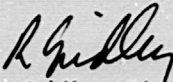
WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - UNACCEPTABLE WELD RADIOGRAPHS  
PREVIOUSLY ACCEPTED BY ONE WELD INSPECTOR

The subject deficiency was initially reported to NRC-Region II Inspector,  
Gordon Hunegs on November 26, 1986 in accordance with 10 CFR 50.55(e)  
as SCRs WBN NEB 8651 and WBN NEB 8665. Enclosed is our interim report. We  
expect to submit our final report on or about March 30, 1987.

If there are any questions, please get in touch with J. A. McDonald at  
(615) 365-8527.

Very truly yours,

TENNESSEE VALLEY AUTHORITY



R. Gridley, Director  
Nuclear Safety and Licensing

Enclosure

cc (Enclosure):

Mr. James Taylor, Director  
Office of Inspection and Enforcement  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Records Center  
Institute of Nuclear Power Operations  
1100 Circle 75 Parkway, Suite 1500  
Atlanta, Georgia 30339

Mr. G. G. Zech  
Director, TVA Projects  
U.S. Nuclear Regulatory Commission  
Region II  
101 Marietta Street, NW, Suite 2900  
Atlanta, Georgia 30323

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ENCLOSURE  
WATTS BAR NUCLEAR PLANT UNITS 1 AND 2  
UNACCEPTABLE WELD RADIOGRAPHS PREVIOUSLY ACCEPTED BY ONE WELD INSPECTOR  
WBRD-50-390/86-66, WBRD-50-391/86-60  
SCRs WBN NEB 8651 AND WBN NEB 8665  
10 CFR 50.55(e)  
INTERIM REPORT

Description of Deficiency

The DOE/EG&G Weld Reinspection Program, in response to employee concerns at Watts Bar Nuclear Plant (WBN), included the review of radiographs of ASME Section III piping which were made during the construction period. Approximately 400 previously accepted radiographs, representing 86 welds, were reevaluated. The review identified indications in two welds that did not meet ASME Section III requirements. Further investigation of these 400 radiographs by TVA, which included additional radiography, identified one additional unacceptable indication. These indications were found in radiographs originally evaluated by a single inspector. These three rejectable indications provided sufficient cause to expand the review population to 100 percent of the radiographs interpreted by this inspector. The expanded review involved approximately 8,000 radiographic exposures, which represented approximately 1,780 welds.

Approximately 170 of these welds in the expanded review have at least one radiograph having indications which may not meet ASME Section III requirements. These reviews were conducted as a result of radiograph interpretations associated with unit 1. This condition is attributed to a lack of attention to detail by the inspector when he interpreted radiographs. Also, there was insufficient management oversight and quality assurance (QA) surveillance of the work of radiographic interpreters.

Some unit 2 radiographs were interpreted by the same individual under the same program. Therefore, those radiographs are considered to be suspect and are addressed on SCR WBN NEB 8665.

Safety Implications

Failure of the welds which have unacceptable indications in the radiographs could result in a failure of safety-related systems, creating a condition which could be adverse to the safe operation of the plant.

Interim Progress

The unit 1 radiographs reviewed by one inspector and having indications which may not meet ASME Section III requirements are being reviewed. The indications which deviate from ASME Section III requirements are being evaluated, and corrective actions will be developed as required. The basis for any acceptance of deviations will be submitted for Staff review and approval. All remaining radiographs for WBN unit 1 which were interpreted by other inspectors also will be reviewed.

As an enhancement to management oversight and QA surveillance, the following actions are being taken. Inspector training is being conducted which emphasizes radiography, and applicable standards are being reviewed and will be revised as necessary. An independent peer review of all radiograph interpretations will be implemented. Radiography will be included within the scope of all future corporate nondestructive examination (NDE) audits. The QA surveillance group will include radiography as part of its surveillance schedule.

TVA will provide further information to NRC on or about March 30, 1987. A schedule for providing additional information on unit 2 also will be provided at that time.

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