

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

84 JAN 16 9:35 January 13, 1984

BLRD-50-438/83-20
BLRD-50-439/83-16

U.S. Nuclear Regulatory Commission
Region II
Attn: Mr. James P. O'Reilly, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

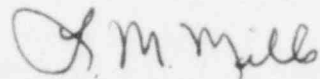
BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2 - DEFICIENT JOHNSON MACHINE WORKS
WELDS ON AFW PUMP ROOM DOORS - BLRD-50-438/83-20, BLRD-50-439/83-16 - FINAL
REPORT

The subject deficiency was initially reported to NRC-OIE Inspector
Linda Watson on February 10, 1983 in accordance with 10 CFR 50.55(e) as
NCR 2221. This was followed by our interim reports dated March 9 and
July 12, 1983. Enclosed is our final report. We consider 10 CFR Part 21
applicable to this deficiency.

If you have any questions concerning this matter, please get in touch with
R. H. Shell at FTS 858-2688.

Very truly yours,

TENNESSEE VALLEY AUTHORITY



L. M. Mills, Manager
Nuclear Licensing

Enclosure

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

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

OFFICIAL COPY

EL 27

1/1

8401240342 840113
PDR ADOCK 05000438
S PDR

1983-TVA 50TH ANNIVERSARY

An Equal Opportunity Employer

ENCLOSURE

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2
DEFICIENT JOHNSON MACHINE WORKS WELDS ON AFW PUMP ROOM DOORS
NCR 2221
BLRD-50-438/83-20, BLRD-50-439/83-16
10 CFR 50.55(e)
FINAL REPORT

Description of Deficiency

The auxiliary feedwater (AFW) pump room personnel access doors exhibit weld quality not in conformance with American Welding Society (AWS) D1.1 acceptance criteria. This is contrary to the requirements stipulated in TVA's Procurement Specification 3294, Section 23. The documented weld deficiencies include undersized, overlapped, and undercut welds, craters and slag. Undersize welds are present in a high proportion of the assemblies. The doors were fabricated by Johnson Machine Works, Chariton, Iowa.

Nonreportable nonconformance report (NCR) 1463 and reportable NCRs 1638 (BLRD-50-438/81-72, BLRD-50-439/81-70) and 1929 (BLRD-50-438/82-58, BLRD-50-439/82-52) were previously initiated to document similar deficiencies with Johnson Machine Works supplied items. This NCR and NCR 1929 were issued as a result of significant conditions adverse to quality documented on the earlier NCRs and a subsequent investigation to determine if a generic condition adverse to quality with respect to Johnson Machine Works products exists.

The cause of TVA's failure to identify generic implications was addressed in TVA's response to Violation 50-438, 50-439/82-23-04.

Safety Implications

The subject doors are pressure-retaining components whose intended purpose includes the protection of essential equipment in the event of an AFW line break. The cited deficiencies could degrade the ability of the subject doors to perform this secondary safety function. Therefore, primary safety-related components could be degraded, thus adversely affecting the safety of operations of the plant.

Corrective Action

The auxiliary feedwater pump room personnel access doors were returned to Johnson Machine Works for rework. The subject doors were reanalyzed and reinspected after rework and found to be acceptable.

To prevent future welding deficiencies from going undetected (as per our final report on NCR 1638), TVA has initiated a training program for Quality Engineering Branch (QEB) employees per Administrative Instruction QEB-AI 313.1, "Training and Certification of QEB Personnel," to certify QEB source inspectors with the American Welding Society (AWS). In addition, source inspectors will be allotted more time for inspection which should allow a more comprehensive inspection and detection of similar deficiencies.