

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

5N 157B Lookout Place

AUG 25 1988

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Gentlemen:

In the Matter of)	Docket Nos. 50-259
Tennessee Valley Authority)	50-260
		50-296

BROWNS FERRY NUCLEAR PLANT (BFN) - RESPONSE TO INQUIRY BY NRC STAFF CONCERNING THE DISPOSITION OF WELD NUMBER DSRHR-2-5A AS A RESULT OF RADIOGRAPH INDICATIONS

During a meeting between the NRC staff and TVA held on May 11, 1988, concerning Generic Letter 88-01, "NRC position on IGSCC in BWR Austenitic Stainless Steel piping," a question was raised concerning the radiograph indications found in weld number DSRHR-2-5A. The purpose of this letter is to provide information concerning the indications and resulting action taken.

TVA responded to Generic Letter 84-11, "Inspections of BWR Stainless Steel piping," by letter dated December 31, 1987. In this submittal, it was reported that weld DSRHR-2-5A had been radiographed and that the radiography had revealed two linear indications, located 0.2 and 0.6-inch below the outside surface weld. Supplemental ultrasonic examinations (UT) of the weld determined that the indications did not originate at the inside surface of the weld but were located between weld layers. It was concluded that the indications were not Intergranular Stress Corrosion Cracking (IGSCC) but instead were lack of fusion between layers, with no measurable through wall dimension. The December letter stated that the weld would be left "as is".

During the course of the meeting on May 11, 1988, NRC staff asked whether the indications, with regard to weld DSRHR-2-5A, were allowable by the ASME code, and if not, what technical basis was used to allow continued operation with this weld. In response to this question, TVA is providing the following information.

The discovery and disposition of weld DSRHR-2-5A were documented by notification of indication (NOI) U2/C5-135 (see attached copy). According to the NOI, the indications exceeded allowable ASME code limits. The weld was determined to be acceptable for continued operation by a Unreviewed Safety Question Determination (USQD), which stated the following:

8809010181 880825
PDR ADOCK 05000259
P PNU

0030
11

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"... The linear inclusion indications in NOI U2/C5-135 appear to be from lack of fusion, not IGSCC. There is no appreciable through wall dimension to the indications, and they do not originate at the inside surface of the pipe. The weld is thus acceptable, and therefore the integrity of the system is not affected."

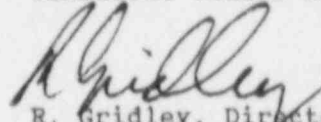
The weld was evaluated for compliance with ASME code to support the statement above. ASME code (Section XI, IWB-3514.3, 1975 Edition) allows a 10 percent through wall indication without further evaluation. Since these indications have no appreciable through wall depth, the ASME evaluation of the subject weld found the weld acceptable. A more frequent inspection frequency (1/3 interval) is required for weld with such indications. This more frequent inspection for this weld is included in the current ISI program.

In conclusion, weld DSRHR-2-5A was found to be acceptable for continued operation without repair because of the nature of the indications. The indications were determined to be caused by lack of fusion between weld layers and not IGSCC. Because the indications have no appreciable through wall depth they are not considered to be a threat to the piping integrity.

Please refer any questions regarding this matter to Patrick Carrier at (205) 729-2689.

Very truly yours,

TENNESSEE VALLEY AUTHORITY



R. Gridley, Director
Nuclear Licensing and
Regulatory Affairs

Enclosures

cc: See page 3

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cc: Ms. S. C. Black, Assistant Director
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Browns Ferry Resident Inspector
Browns Ferry Nuclear Plant
Route 12, Box 637
Athens, Alabama 35611

DEC 08 1983

NCO

APPENDIX D
DATA SHEET 1
NOTIFICATION OF INDICATION

PART I - FINDINGS

NOI No. U2/C5-135

Plant/Unit BFMP/2

Examination Report No. RC751

Component ID DSRHR 2-5A

*Drawing No. CHM-2070-C

MR-A-165091

Description of Indication: (Sketch/Photograph if needed)

Linear Inclusion Indications exceeding Allowable Code Limit 0.2 inches below the ND Surface
on spool piece side. Indications are a cumulative length of 6.25 inches in R.T. Film.

2-4. Verified by RT. Angle shot and Ultrasonics. RT. was accomplished ^{TO FORM} _{NEW}
BASE LINE OF WELDS DSRHR 2-5 and 2-5A.

Signature of Examiner/Certif. Level

Chris R. Butler part III 5-31-85
Date

Signature of Field Supervisor (Contractor)

HR _____
Date

NDE Section Representative

Charles J. Anderson _____
Date

PART II - DISPOSITION

NCO Applications Eng. Group evaluate for continued
operations. Provide letter stating acceptability or course
of corrective action.

Disposition Prepared By

[Signature] 6/2/85
Date

Disposition Approved By

[Signature] 6/4/85
Date

PART III - VERIFICATION

Verification of Completed Corrective Action and/or Examination By NDE Section Representative

Not Required Accept As Is Per USAD

Reexamination Report No.

Work Plan/DCR No.

Signature

Charles J. Anderson

Date

6/29/87

2752

7/31/85

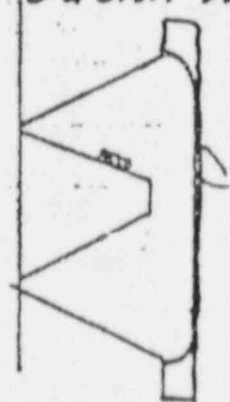
Attachment to N.O.I. # U2/C5-135
NR A-165091

Upon reexamining Weldment No. DSRHR-2-5A with the more sensitive "M-Film", an additional linear indication was discovered. Examination of sector 2-3 netted small indications while sectors 3-4 and 4-5 revealed defects of a larger nature. These indications appear to be a singular anomaly running intermittently for 45 inches in the circumferential direction on the upstream fusion wall.

7-31-85

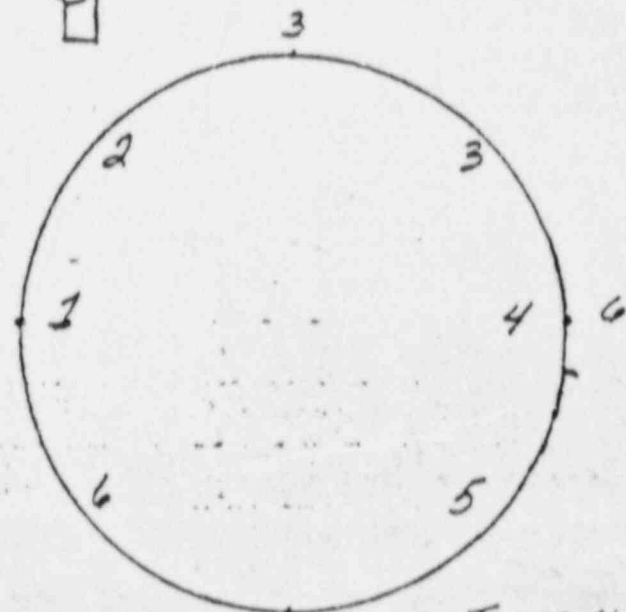
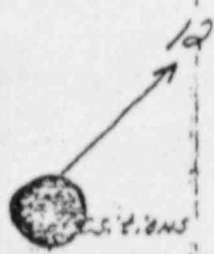
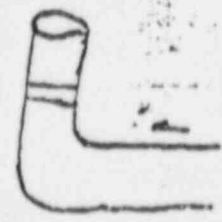
Attachment to NCI # DA/CS-35
YMR A-165091

Upon reexamining weldment No. DSRHR-2-5A with the more sensitive "M-FILM", AN ADDITIONAL linear indication was discovered. EXAMINATION OF sector 2-3 netted small indications while sectors 3-4 AND 4-5 revealed defects of A larger nature. These indications appear to be A singular anomaly running intermittently for 45 inches in the circumferential direction ON the UPPER FUSION WALL.



← DSRHR-2-5A

← DSRHR-2-5



INNER Numbers denote sectors