



Tennessee Valley Authority, Post Office Box 2000, Spring City, Tennessee 37381-2000

July 31, 2014

10 CFR 50.55(e)

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

Watts Bar Nuclear Plant, Unit 2
NRC Docket No. 50-391

**Subject: WATTS BAR NUCLEAR PLANT (WBN) UNIT 2 - WBRD-50-391/86-60 -
FINAL REPORT AND REVISED COMPLETION SCHEDULE**

- References:
1. TVA letter to NRC, "Watts Bar Nuclear Plant (WBN) Units 1 and 2 - Questionable Weld Radiographs Previously Accepted - WBRD-50-390/86-66, Final Report and WBRD-50-391/86-60, Fifth Interim Report" dated July 7, 1988
 2. TVA letter to NRC, "Corrective Action Program (CAP) for Welding" dated May 12, 1989
 3. TVA letter to NRC, "Watts Bar Nuclear Plant (WBN) Unit 2 - Regulatory Framework for the Completion of Construction and Licensing Activities for Unit 2," dated January 29, 2008

The purpose of this letter is to provide weld evaluation results to date as previously committed to in a previous 10 CFR 50.55(e) report (Reference 1) and to revise the completion date for remaining welds. This welding issue was initially reported on November 26, 1986, during Unit 1 completion. As corrective action, WBN implemented a successful Unit 1 welding program (Reference 2) to review and evaluate a number of legacy welds previously performed and accepted at WBN. When Unit 2 completion work was started, a similar welding program (Reference 3) to review the Unit 2 legacy welds was initiated.

In Reference 1, TVA committed to provide the evaluation results in a final report prior to Unit 2 Cold Hydrostatic testing. Enclosure 1 provides the Unit 2 evaluation results for most of the Unit 2 legacy welds. However, the remaining evaluations will not be completed prior to the Cold Hydrostatic testing milestone and are not needed for this

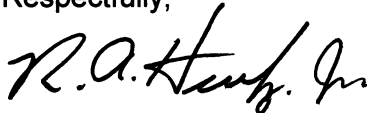
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testing evolution. Completion of the remaining welds listed in Enclosure 1 is being tied to the Secondary Hydrostatic Test and Containment Integrated Leak Rate Test (ILRT) milestones. The final closure package associated with Inspection Planning and Schedule (IP&S) Item No. 411 will contain weld evaluation results and will be available for inspector review.

Enclosure 2 provides the list of the commitments made in this letter. If you have any questions, please contact me at (423) 365-1260.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 31st day of July, 2014.

Respectfully,



Raymond A. Hruby, Jr.
General Manager, Technical Services
Watts Bar Unit 2

Enclosures:

1. Final Report and Revised Completion Schedule
2. List of Commitments

cc (Enclosures):

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ENCLOSURE 1
Tennessee Valley Authority
Watts Bar Nuclear Plant, Unit 2
Docket No. 50-391
Final Report and Revised Completion Schedule

Background

The welding deficiency was initially reported on November 26, 1986, during Unit 1 completion. The Department of Energy/EG&G weld inspection program, in response to employee concerns at Watts Bar, included the review of radiographs of ASME Section III piping which was completed during the construction period of Unit 1. Previously accepted radiographs were reevaluated. The review identified indications in welds that did not meet ASME Section III requirements. The radiograph review population was subsequently expanded to 100 percent. In a July 7, 1988 letter, TVA committed to provide a final report for Unit 2 providing the evaluation results for the subject welds. The results are provided below.

Unit 2 Evaluation Results

A total of 2352 welds were re-reviewed. The Radiography Level III evaluation resulted in 1948 weld radiographs that were deemed acceptable. The Level III evaluation resulted in 404 welds that required further review and were dispositioned in Problem Evaluation Report 170933.

Progress to date reveals that the welds needed for Primary Cold Hydrostatic Test have been completed and accepted. A small population of welds (27) remains to be completed and/or accepted. Twelve of the 27 welds are tied to the Secondary Hydrostatic Test milestone. The remaining 15 welds are tied to the Containment Integrated Leak Rate Test (ILRT) milestone. The remaining welds are listed in the tables below under the appropriate milestone:

| Legacy Welds required for Secondary Hydrostatic Test | |
|---|-----------------|
| Item No. | Weld No. |
| 1. | 2-003C-D110-01 |
| 2. | 2-003B-D002-18A |
| 3. | 2-001A-D003-03 |
| 4. | 2-015A-T001-79 |
| 5. | 2-015A-T010-46C |
| 6. | 2-015A-T001-80 |
| 7. | 2-015A-T001-55A |
| 8. | 2-001A-D006-05 |
| 9. | 2-001A-D009-03 |
| 10. | 2-015A-T019-19 |
| 11. | 2-003B-D214-16 |
| 12. | 2-001A-D009-08 |

| Legacy Welds required for Containment ILRT | |
|---|-----------------|
| Item No. | Weld No. |
| 1. | 2-015A-T016-18 |
| 2. | 2-026L-T074-10 |
| 3. | 2-CLAW-T011-01 |
| 4. | 2-077E-T010-01 |
| 5. | 2-001A-D003-05A |
| 6. | 2-003B-D003-08A |
| 7. | 2-003B-D211-08A |
| 8. | 2-003B-D213-06A |
| 9. | 2-015-AT002-12 |
| 10. | 2-087B-D020-01 |
| 11. | 2-087A-D017-17 |
| 12. | 2-087A-D017-17A |
| 13. | 2-001A-D006-05A |
| 14. | 2-001A-D009-05A |
| 15. | 2-293-T004-01 |

Final resolution for the remaining welds will be documented in a closure package to address Inspection Planning and Schedule (IP&S) Item No. 411. This package will be assembled in accordance with Nuclear Construction Procedure NC-PP-19, "Closure of Commitments/Open Items Required for Licensing." Once completed, this closure package will be available for inspector review.

ENCLOSURE 2
Tennessee Valley Authority
Watts Bar Nuclear Plant, Unit 2
Docket No. 50-391
List of Commitments

1. Completion of the remaining welds is being tied either to the Secondary Hydrostatic Test or Containment Integrated Leak Rate Test (ILRT) milestones. The final closure package associated with Inspection Planning and Schedule (IP&S) Item No. 411 will contain final weld evaluation results and will be available for inspector review.