



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
101 MARIETTA STREET, N.W.  
ATLANTA, GEORGIA 30303

Report Nos.: 50-438/84-13 and 50-439/84-13

Licensee: Tennessee Valley Authority  
500A Chestnut Street  
Chattanooga, TN 37401

Docket Nos.: 50-438 and 50-439

License Nos.: CPPR-122 and CPPR-123

Facility Name: Bellefonte 1 and 2

Inspection Dates: July 9-12, 1984

Inspection at Bellefonte site near Scottsboro, Alabama

Inspector: E. H. Girard 7/20/84  
E. H. Girard Date Signed

Approved by: J. J. Blake 7/20/84  
J. J. Blake, Section Chief Date Signed  
Engineering Branch  
Division of Reactor Safety

SUMMARY

Areas Inspected

This routine, unannounced inspection involved 28 inspector-hours on site in the areas of licensee action on previous enforcement matters, safety-related components, and licensee identified items.

Results

No violations or deviations were identified.

## REPORT DETAILS

### 1. Persons Contacted

#### Licensee Employees

- \*L. S. Cox, Project Manager
- \*P. C. Mann, Nuclear Licensing Unit Supervisor
- \*K. Lawless, Welding Engineering Unit Supervisor
- \*C. A. Looney, Welding Engineer
- \*D. C. Smith, Compliance Supervisor
- R. Gipson, Mechanical Systems Engineer
- R. Millen, Mechanical Systems Engineer
- J. Campbell, Material Services Unit Supervisor
- D. Gillies, Hanger Systems Engineer

#### NRC Resident Inspector

- \*J. W. York, Senior Resident Inspector

- \*Attended exit interview

### 2. Exit Interview

The inspection scope and findings were summarized on July 12, 1984, with those persons indicated in paragraph 1 above. The licensee was informed of the inspection findings listed below. The licensee acknowledged the inspection findings with no dissenting comments.

Inspector Followup Item 438, 439/84-13-01, Missing Valve Operator Plugs, paragraph 5.

Unresolved Item 438, 439/84-13-02, Improper Drawing Revision, paragraph 5.

### 3. Licensing Action on Previous Enforcement Matters

- a. (Closed) Violation (438,439/83-20-01): Condensate Pots. TVA's letters of response dated October 7 and December 5, 1983, have been reviewed and determined to be acceptable by Region II. The inspector held discussions with the Nuclear Licensing Unit Supervisor and examined the corrective actions as stated in the letter of response. The inspector concluded that TVA had determined the full extent of the subject noncompliance, performed the necessary survey and follow-up actions to correct the present conditions, and developed the necessary corrective actions to preclude recurrence of similar circumstances. The corrective actions identified in the letter of response have been implemented.

- b. (Closed) Violation (433, 439/83-23-01): Visual Inspection of Inside Weld Surfaces. TVA's letter of response dated November 3, 1983, has been reviewed and determined to be acceptable by Region II. The inspector held discussions with the Nuclear Licensing Unit Supervisor and examined the corrective actions as stated in the letter of response. The inspector concluded that TVA had determined the full extent of the subject noncompliance, performed the necessary survey and follow-up actions to correct the present conditions, and developed the necessary corrective actions to preclude recurrence of similar circumstances. The corrective actions identified in the letter of response have been implemented.
- c. (Open) Unresolved Item (438, 439/84-06-01): PWHT and Material Notch Toughness Test Records for Reactor Coolant Pressure Boundary Components. This item was opened to identify the inspector's concern that certain records could not be readily located for review. These records pertained to the fracture toughness of steam generator and piping materials. The toughness requirements for the materials are referenced or described in Bellefonte FSAR Section 5.2.3.3.1. The inspector questioned the licensee's cognizant welding engineer on the matter and found that there had apparently been a misunderstanding as to what records the inspector required. The welding engineer had not read the listing of information required that was given in the NRC report that opened the item. It is the NRC inspector's understanding that the responsible licensee personnel now know what is required and will assure that the information is available for review in a subsequent NRC inspection.
- d. (Open) Violation (438, 439/84-12-01): Failure to Follow Procedure for Hanger Inspection. This recent violation identified deficiencies in the licensee's hanger inspections. During the current inspection, the NRC inspector noted an improperly installed hanger. This improper installation appeared related to the deficiencies noted in violation 84-12-01. It was identified to the licensee, who documented it on Nonconforming Condition Report (NCR) 3285 RO. Due to the recent identification of violation 84-12-01, the licensee had not had an opportunity to respond. The additional hanger deficiency found by the inspector in the current inspection will be considered in NRC Region II's review of the violation response when it is received.

#### 4. Unresolved Items

Unresolved items are matters about which more information is required to determine whether they are acceptable or may involve noncompliance or deviations. A new unresolved item identified during this inspection is discussed in paragraph 5.

5. Safety-Related Components - Observation of Work and Work Activities, Units 1 and 2 (50073B, 50074B, and 92706B)

The inspector selectively observed work, reviewed records, and interviewed responsible installation and maintenance personnel to ascertain whether activities relative to safety-related components were being accomplished in accordance with NRC requirements and FSAR commitments. The specific components and the activities examined relative to each were as follows:

- Components: Units 1 and 2 Decay Heat Removal (DHR) Coolers
  - Activities:
    - a. Installation
      - (1) Work and inspection activities
      - (2) Location
      - (3) Placement and mounting/supporting
      - (4) Generation and maintenance of inspection records
    - b. Protection After Installation
      - (1) Inspection activities - scope and frequency
      - (2) Protection provided as required, including protection against adverse temperature, humidity and foreign material
    - c. Nonconforming Components or Activities
      - (1) Records
      - (2) Identification
      - (3) Segregation
      - (4) Corrective Action
    - d. Utilization of QA and Inspection (QC) Personnel
      - (1) Number and qualification of those at the construction site - commensurate with the work in progress
      - (2) Performance of their assigned duties and responsibilities
- Components: Units 1 and 2 DHR Pumps and Unit 1 Reactor Building Spray System Valves INS-IFCV-089B and -105A.
  - Activities:
    - a. Protection After Installation
      - (1) Inspection activities - scope and frequency
      - (2) Protection provided as required, including protection against adverse temperature, humidity and foreign material

In examining the valves 1-NS-IFCV-089B and -105A, the inspector noted that screw plug holes in the tops of the valve operators were open, which would allow airborne dust and contaminants to enter the operator. The Material Services Unit Supervisor was contacted by the inspector and questioned on missing plugs. He stated that they should have been replaced or at least the openings should have been covered and he stated that he would see that the situation was corrected. The inspector toured other areas of the auxiliary and reactor buildings and found no other areas with open valve operators. The inspector also verified that the openings originally identified were subsequently covered. From his observations, the inspector determined that the open valve operators appeared as an isolated incident and appeared to have very limited safety significance. The inspector informed the licensee that the condition would be identified as inspector followup item 438, 439/84-13-01, Missing Valve Operator Plugs. The inspector indicated that the matter of adequate valve operator protection would be examined further in a subsequent NRC inspection.

In examining records and installation drawings for the DHR coolers, the inspector noted that certain records for connecting the Unit 1 coolers to the piping appeared to reference an incorrect drawing revision. The exposed piping closure inspection record-cards and bolted flange inspection record cards (completed in November 1982) referenced Revision 11 to drawing 3AW0412-ND-02, whereas it was the inspector's understanding that the revision of the drawing should have been 7. The inspector informed the licensee that the circumstances surrounding and the safety significance of the apparent error in revision would be identified as unresolved item 438, 439/84-13-02, Improper Drawing Revision. It is the inspector's understanding that the licensee will determine the reason for the apparent revision error and make any corrections necessary. The item will remain unresolved pending Region II's review of the licensee's findings, regarding the improper revision. This will be identified as Unresolved Item 438, 439/84-13-02, Improper Drawing Revision.

Within the areas examined, no violations or deviations were identified.

6. Licensee Identified Items (LIIs) [10 CFR 50.55(e) Items] (92700B)
- a. (Closed) LII (438 CDR 82-59, 439 CDR 82-53): Use of Fillet Welds on Piping Lugs.

TVA's final report for this item dated May 18, 1983, has been reviewed and determined acceptable by Region II. This item involved the use of fillet welds for attachment of piping lugs whereas fillet welds were not qualified in accordance with TVA's design requirements. The inspector reviewed TVA's corrective action and record of its completion in Division of Engineering Design Nonconformance Report No. GEN CEB 8209 to verify that the corrective action identified in report submitted to Region II was adequate and complete.

NOTE: This item was reported by TVA for their Watts Bar site and the licensee's actions were reviewed and closed in NRC Report Nos. 390/83-05 and 391/83-04.

- b. (Closed) LII (438, 439 CDR 82-10): Chiller Unit Piping Components Improperly Welded.

The final report for this item was submitted May 18, 1983. The report has been reviewed and determined acceptable by Region II. The inspector discussed the item with the Nuclear Licensing Unit Supervisor and verified completion of the reported corrective actions through a review of its documentation in NCR 1707.

- c. (Closed) LII (438 CDR 83-77): Offset Dutchman in the Incore Monitoring System.

The final report for this item was submitted October 24, 1983. The report has been reviewed and determined acceptable by Region II. The inspector discussed the item with the Nuclear Licensing Unit Supervisor and verified completion of the reported corrective action through a review of its documentation on NCR 2352.

- d. (Closed) LII (438 CDR 82-40): Overpressurization of Makeup and Purification Piping and Valves.

The final report for this item was submitted October 12, 1982, and was followed by a revised final report dated February 3, 1983; a supplemental final report dated July 8, 1983; and a second revised final report dated October 17, 1983. The reports have been reviewed and determined acceptable by Region II. The inspector discussed the item with the Nuclear Licensing Unit Supervisor and verified the completion and adequacy of the corrective action through a review of the following:

- NCR 1808
- Valve stroke time test results (motor operated valves in the overpressurized piping)
- Leak test results for valves in the affected piping
- Stress calculations