



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
101 MARIETTA ST., N.W., SUITE 3100  
ATLANTA, GEORGIA 30303

Report Nos. 50-438/81-23 and 50-439/81-23

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

Facility Name: Bellefonte

Docket Nos. 50-438 and 50-439

License Nos. CPPR-122 and CPPR-123

Inspection at Bellefonte site near Scottsboro, Alabama

Inspector: *[Signature]*  
for E. H. Girard

*9/30/81*  
Date Signed

Approved by:

*[Signature]*  
for A. R. Herdt, Section Chief  
Engineering Inspection Branch  
Engineering and Technical Inspection Division

*9/30/81*  
Date Signed

#### SUMMARY

Inspection on September 15-18, 1981

#### Areas Inspected

This routine, unannounced inspection involved 29 inspector-hours on site in the areas of licensee actions on previous inspection findings (Units 1 and 2), licensee identified items (50.55(e)) (Units 1 and 2), IE Bulletins (Units 1 and 2), reactor coolant pressure boundary piping (Unit 1), and safety related piping (Units 1 and 2).

#### Results

No items of noncompliance or deviation were identified in the five areas inspected.

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## REPORT DETAILS

### 1. Persons Contacted

#### Licensee Employees

- \*W. R. Dahnke, Project Manager
- \*F. E. Gilbert, Construction Engineer
- \*D. Smith, Supervisor, Welding Engineering Unit (WEU)
- \*H. C. Johnson, Welding Engineer, WEU
- \*T. B. McGregor, Administrative Assistant
- \*D. C. Terrill, Nuclear Engineer
- G. Adkins, Engineer, WEU
- R. M. Norton, Engineering Associate, WEU

#### NRC Resident Inspector

- \*J. D. Wilcox

\*Attended exit interview

### 2. Exit Interview

The inspection scope and findings were summarized on September 18, 1981 with those persons indicated in paragraph 1 above. The inspector described his concern that the licensee needed a more efficient system for providing NRC inspectors with information for review and closeout of 10 CFR 50.55(e) items. The licensee agreed to review their system for handling these items and to take such actions as might be necessary to make it more efficient.

### 3. Licensee Action on Previous Inspection Findings

- a. (Open) Violation (438/80-27-01; 439/80-26-01): Failure to Provide Pressurizer Surge Line Grinding Procedure.

The licensee stated that their engineering requirements relative to grinding the pressurizer surge line welds were being reconsidered. This item will be examined further by Region II in subsequent inspection.

- b. (Closed) Violation (438/81-16-06): Reactor Coolant Pipe Weld Contains Unacceptable Defects.

This item involved acceptance radiographs which had appeared to show unacceptable lengths of slag indications in two sections, A-B and G-H, for weld 1NC00008. The slag length in section G-H had been interpreted by the NRC inspector to be 7/8-inch long, only marginally exceeding the

specified maximum of 3/4-inch. In TVA's letter of response to Region II dated August 13, 1981, the licensee concurred with the finding reported for Section A-B and described corrective actions relative to that portion of the item. However, the licensee stated that they considered the section G-H indication to be of acceptable length. The inspector discussed this item with the licensee's welding engineer and radiographic interpreter and examined the section A-B and G-H film. The inspector agrees with the licensee's findings for film section G-H. Moreover, from the discussion and film review, the inspector is satisfied that the corrective actions stated in the letter of response have been implemented.

#### 4. Unresolved Items

Unresolved items were not identified during this inspection.

#### 5. Licensee Identified Items (50.55(e))

- a. (Closed) Item 438, 439/81-01-04: Socket Weld Misalignment in Essential Air System Welds (NCR 1267)

The licensee submitted their final report on this item to Region II in their letter of August 31, 1981. In the letter the licensee informed Region II that they had determined that this deficiency had no safety implications. The NRC inspector discussed the basis for this determination with the licensee's welding engineer and reviewed the licensee's Nonconforming Condition Report (NCR) for the item. The inspector has no further questions on the item and it is being closed.

- b. (Closed) Item 439/81-01-07: NAVCO Spool Piece Radiographic Deficiency (NCR 1291).

The licensee submitted their final report on this item to Region II in their letter of June 11, 1981. The NRC inspector reviewed the deficiency and corrective action as described in the final report and documented in TVA NCR 1291, and discussed the item with the licensee's welding engineer. The inspector concluded that the licensee had performed the necessary corrective actions. The item is closed.

- c. (Closed) Item 438, 439/80-08-14: Certified Welders Not Completing Annual QA Training Program (BN-G-80-14).

The licensee submitted their final report on this item to Region II in their letter dated October 23, 1980. The NRC inspector reviewed documentation of the corrective action for the item as described and verified in TVA Quality Assurance Audit No. BN-G-80-04. The inspector concluded that the licensee had performed the necessary corrective actions. The item is closed.

- d. (Closed) Item 438, 439/81-16-14: Welder Qualification (NCR 1366).

The licensee submitted their final report on this item to Region II in their letter dated June 24, 1981. This deficiency involved the licensee's use of improperly qualified welders in performance of safety related AWS code welding of seismic pipe supports. The welders were reportedly qualified to ASME code rather than the specified AWS code requirements. The licensee stated that they had incorrectly presumed that only fillet welding was required for the work, with the ASME code qualifications being adequate for fillet welds.

The NRC inspector reviewed the final report and the TVA NCR 1366 and discussed the item with the licensee's welding engineer. In their corrective action, the licensee established limits of equivalence between the welders' ASME qualifications and work experience and the AWS requirements. This was then specified as a basis for determining the acceptability of the AWS welding. The inspector examined the relationship developed and concluded that the corrective action was adequate. The item is closed.

- e. (Closed) Item CDR 438/81-36: Faulty Welds on Mirror Insulation Support Steel (NCR 1449).

The licensee submitted their revised final report on this item to Region II in their letter of September 16, 1981. The NRC inspector reviewed the deficiency and corrective actions as described in the final report and documented in TVA NCR 1449, and discussed the item with the licensee's welding QC personnel. The inspector examined the mirror insulation support structure, which had been repaired by the licensee as part of their corrective action. He inspected the quality of the welding and checked the sizes of three welds selected at random to verify compliance with drawing requirements. The inspector concluded that the licensee had completed the necessary corrective action for this item. The item is closed.

- f. (Closed) Item 438, 439/81-16-12: Reactor Vent. Cooling Fans (NCR 1315)

This item is identical with item 438, 439/81-06-09. It was opened in error and is being closed. Item 438, 439/81-06-09 was not addressed in this inspection and will remain open.

#### 6. Status of IE Bulletins (IEBs)

(Closed) IEB 395/80-BU-21: Valve Yokes Supplied by Malcolm Foundry Company, Inc. The licensee's response letter for this bulletin, dated May 6, 1981, has been received and reviewed by NRC Region II. The letter response indicates that the licensee has determined that they do not have any valve parts cast by Malcolm Foundry in any of the valves they plan to use. The bulletin is considered closed based on this response.

7. Reactor Coolant Pressure Boundary Piping (Welding) - Observation of Work Activities (Unit 1)

The inspector observed welding work activities for reactor coolant pressure boundary pipe to determine if applicable code and procedural requirements were being met. The applicable code is ASME Section III (74S74). The following welds were observed at the status indicated:

WELD	PIPE SIZE	SYSTEM	STATUS
INV00825S2	2.5" X .276"	Makeup and Purification	Repair in progress
IND00301T1	14" X 1.406"	Decay Heat Removal	Final grinding
IND00685T1	2.5" X .276"	Decay Heat Removal	Final penetrant exam

Weld INV00825S2 was observed for proper identification, welding procedure, welder qualification, interpass temperature, welding material, repair procedure, and appearance. Weld IND00301T1 was observed for proper identification and appearance. The penetrant examination of weld IND00685T1 was observed for proper surface conditioning and proper performance of the examination. The inspector observed the welding material at the three welds for proper handling and control.

Within the areas examined, no violation or deviation were identified.

8. Safety Related Piping - Observation of Work Activities (Units 1 and 2)

The inspector observed welding and non-welding work activities for safety related piping as described below to determine whether applicable code and procedure requirements were being met. See paragraph 7 above for the applicable code.

a. Observation of Welding (Units 1 and 2)

The following welds were observed at the status indicated:

WELD*	PIPE SIZE	SYSTEM	STATUS
1ND00267R4	14" X .438"	Decay Heat Removal	Repair in progress
2ND00233	12" X 1.312"	Decay Heat Removal	Weld in progress
2SM00061	32" X 1.34"	Main and Reheat Steam	Weld in progress
2SM00081	32" X 1.34"	Main and Reheat Steam	Root just completed

\*First digit of weld number indicates Unit.

The work was observed for proper weld identification, welding procedure, welder qualification, preheat and interpass temperatures, welding materials, grinding between passes, repair procedure, and weld appearance.

The inspector observed the welding material at each of the welds for proper handling and controls.

b. Observation of Ultrasonic Examination of Piping Material Thickness  
(Unit 1)

The inspector observed ultrasonic examinations of damaged piping for thickness. The piping location and damage description were identified on QCIR 12684. The inspector verified the qualification of the examiner and verified proper performance of the thickness check in accordance with TVA Specification G29M.

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