



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

Report Nos. 50-438/82-04 and 50-439/82-04

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

Facility Name: Bellefonte

Docket Nos. 50-438 and 50-439

License Nos. CPPR-122 and CPPR-123

Inspection at Bellefonte site near Hollywood, AL

Inspector: John W. York 3/17/82
J. W. York Date Signed

Approved by: A. R. Herdt 3/19/82
A. R. Herdt, Section Chief Date Signed
Engineering Inspection Branch
Division of Engineering and Technical Programs

SUMMARY

Inspection on February 22-26, 1982

Areas Inspected

This routine, unannounced inspection involved 37 inspector-hours on site in the areas of pipe support base plate designs using concrete expansion anchors (IE Bulletin 79-02), seismic analysis for as-built safety related piping system (IE Bulletin 79-14), licensee identified items and previous inspection findings.

Results

Of the four areas inspected, no violations or deviations were identified.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *W. R. Dahnke, Project Manager
- *F. E. Gilbert, Construction Engineer
- *D. Smith, Assistant Construction Engineer
- *H. C. Johnson, Supervisor Welding Engineering Unit
- *G. K. Blackburn, General Construction Superintendent
- *P. Mercer, Assistant Construction Engineer
- *D. R. Gillies, Hanger Engineering Unit
- *T. McCollum, Supervisor QC Welding Engineering Unit
- *K. Lawless, Engineer, Welding Engineering Unit
- *B. Sammons, CEO Administrative Officer
- *P. Mann, CEO Administrative Officer

Other licensee employees contacted included construction craftsmen, technicians, and office personnel.

NRC Resident Inspector

- *J. D. Wilcox

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on February 26, 1982, with those persons indicated in paragraph 1 above. The inspector identified the areas inspected and discussed in detail the inspection findings listed below. No dissenting comments were received from the licensee.

3. Licensee Action on Previous Inspection Findings

(Closed) Violation 438,439/81-16-03, Storage Shed for Reactor Coolant Pump Assemblies is not weathertight. This item involved the requirement that Level C items be stored in a weathertight structure. The licensee's removable roof panels on storage shed "F" had not been properly sealed when they were replaced. This fact and some leaking around nail holes allowed rain to leak onto some stored items. The licensee had repaired the nail holes and the inspector observed that the roof panels had been properly sealed. The licensee schedules six month inspections on this type of storage shed (August and February for this particular shed). The licensee agreed to reinspect these sheds on a random basis in addition to the scheduled six month inspections. The inspector examined the results of a random inspection conducted on December 14, 1981. The licensee has taken effective corrective action and this item is considered closed.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Licensee Identified Item (LII)

Prior to the inspection, the licensee identified the following items considered reportable under 10 CFR 50.55(e).

a. (Closed) Item 438,439/81-25-01, TPIPE Input Error (CEB 8007)

The calculated effects of a steam hammer occurrence in the Bellefonte Nuclear Plant main steam lines have been questioned because of an input error in the TPIPE computer program used in the analysis. The input error occurred when several forcing functions with different arrival times were applied at individual node names. The problems affected by the subject input error are N4-1SM-A, -B, -C, -K and -L. These represent main steam line piping in valve room A, piping transversing into the Turbine Building, valve room B, and main steam line piping which penetrates primary containment, respectively.

In a report dated December 8, 1981, the licensee stated that problems N4-1SM-A, -B, -C, -K and -L have now been issued with the corrected time histories included. The affected drawings have been revised to document the completed reanalysis.

This item is considered closed.

b. (Closed) Item 438,439/80-08-09, TPIPE Frequency/Analysis (CEB 80-16)

One function of the TPIPE computer program is to determine the frequency response of piping systems during a seismic event. The TPIPE program outputs information regarding the correctness of the calculation of the frequency analysis. Convergence information is calculated and printed out for each frequency that is analyzed. If, for a given frequency, the results do not converge to within specified limits, a message to this effect is printed and analysis continues. The generalized mass matrix is also printed out for review. The TVA personnel who utilized this program failed to check for the nonconvergence message and the correctness of the generalized mass matrix.

In a report dated April 21, 1980, the licensee stated that all analyses performed using TPIPE have been reviewed. There are no occurrences of erroneous design information resulting from this condition.

This item is considered closed.

- c. (Closed) Item 439/81-25-38, Gouges in Pressurizer Vessel (NCR 1522)

During an inspection, it was noticed that there were several gouges, approximately 1/16" to 3/16" deep and 1/2" to 1 1/2" long, on the pressurizer vessel. These gouges were made when a grinder came in contact with the pressurizer vessel wall during the grinding of shear bar welds. Based on wall thickness measurements, the as-ground wall thickness did not violate the minimum wall thickness. The affected areas were repaired by grinding the indications and blending then with the vessel surface. The inspector reviewed nonconforming condition report (NCR) No. 1522, the sequence control chart and the blended areas on the pressurizer.

This item is considered closed.

6. Inspector Followup Items

- a. (Closed) Item 438/81-16-08, Pipe End Reactor Coolant Pump Assembly Not Covered. The inspector reviewed Storage Inspection Form No. 81-182 which indicated that the pipe end had been cleaned, inspected and recovered. The inspector also inspected the pipe end and other areas in warehouse storage shed "F" and found them to be satisfactory.

This item is considered closed.

- b. (Closed) Item 438,439/81-16-04, Bellows Section of Containment Penetration Not Adequately Protected From Damage. The inspector reviewed storage and maintenance inspection sheets for bellows assemblies on transfer tube nos. 3030A, 3030B, 3030C and 3030D. The forms indicated that metal covers were placed over the bellows for protection.

This item is considered closed.

- c. (Closed) Item 438/81-10-01, Documentation of Preheat and Interpass Temperature Checks. This item refers to the condition that preheat and interpass temperatures are monitored during weld fabrication by the QC inspectors on a periodic basis, however, these checks are not documented. The procedure BNP-QCP-8.1 Rev. 4, "Weld Filler Material Control", states in Par. 7.1, that a week's inspection weld filler material storage, issue and control for compliance with the procedure shall be made by the Welding Engineering Unit and documented on Attachment B, "Welding Surveillance Weekly Checklist". This list indicates a check of preheat and interpass temperatures along with other surveillance items. The inspector reviewed individual records of temperature checks and the weekly check list dated 2/12/82.

This item is considered closed.

- d. (Closed) Item 438,439/81-05-03, Welder's Performance on Class 3 Welds. This item concerned a welder observed by an NRC inspector to be using welding techniques that resulted in a rejectable weld on an ASME

Class 3 weld joint. The licensee compiled a list of all the Class 3 welds performed by this welder and x-rayed all these welds. Rejected welds were removed and repairs made per QCIR No. 7479. The records revealed that this welder had not welded on ASME Class 1 and 2 systems. This welder's certification for welding was revoked on 2/13/81 by the licensee. The welder's employment at this site ended on the same date.

This item is considered closed.

- e. (Closed) Item 438,439/81-05-01, Control of Surface Finishing Tools Used on Austenitic Stainless Steel. This item involves a welder not being aware of the licensee's practice of segregating brushes that are used on carbon steel and stainless steel, i.e., the brushes for stainless steel use have an orange or red mark and the brushes for use on carbon steel have no distinctive markings. A random survey of 5 welders revealed that they were all aware of the brush segregation technique.

This item is considered closed.

- f. (Closed) Item 438,439/81-18-03, Frequency of Inspector Eye Examination. This item involved the licensee's agreement to develop a better method to keep track of eye examination renewals. The inspector reviewed a log that is kept on all the welding inspectors. Each inspector is sent a letter 30 days before the expiration of current eye certification. The inspector sends a copy of the eye examination to the Welding Engineering Unit for entry into the log book. If the inspector does not take the eye examination, NDE certification is revoked.

This item is considered closed.

- g. (Open) Item 438,439/81-05-02, Improper Techniques Used to Read Gas Flow Meters. This item involved an apparent confusion of some of the welders on where the floats on the gas flow meters should be read. The inspector surveyed five welders concerning reading the floats on the gas flow meters and found that three knew the correct method to read the floats and two did not.

This item will remain open.

7. (Open) Pipe Support Baseplate Designs Using Concrete Expansion Anchor Bolts (IE Bulletin 79-02)

At Bellefonte the IEB 79-02 program will be performed by the Hanger Engineering Unit. ENDES suggested to the site that their program for this bulletin be started in November 1982. The inspector reviewed a rough draft of the IEB 79-02 program plan.

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

8. (Open) Seismic Analysis for As-Built Safety-Related Piping Systems (IE Bulletin 79-14)

Bellefonte officially started its IE Bulletin 79-14 program in January 1982. Any discrepancies found by this group is sent to the Hanger Engineering Unit or the Mechanical Engineering Unit. The site has not formally worked out the interface with ENDES in regards to the handling of discrepancies found during the IEB 79-14 inspections. The site is awaiting the writing of General Construction Specification N4C-913 for "Support and Installation of Piping Systems in Category I Structures". This specification is being written only for Bellefonte and spells out the interference clearances for piping. Once this specification is completed the Mechanical Engineering Unit can disposition some of the piping discrepancies found during the IEB 79-14 inspections.

The inspector reviewed the following:

- a. "Bellefonte Nuclear Plant Units 1 and 2 - Program Plan for IE Bulletin 79-14".
- b. IEB 79-14 Inspection Package for Isometric No. 1AW0454-NM-C1 Rev. 2 for the Spent Fuel Cooling System.

The inspector observed walkdown inspections being performed on portions of the following:

- a. Isometric No. 1AW0456-KC-L1 Rev. 5 in the Component Cooling System.
- b. Isometric No. 1AW0419-NV-H1 Rev. 3 in the Makeup and Purification System

Currently, the IEB 79-14 inspection group is composed of six people of which four perform inspections. The inspections are being performed on the second shift.

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