U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-346/84-25(DRS)

Docket No. 50-346 License No. NPF-3

Licensee: Toledo Edison Company
Edison Plaza, 300 Madison Avenue
Toledo, OH 43652

Facility Name: Davis-Besse Nuclear Power Station, Unit 1

Inspection At: Davis-Besse Site, Oak Harbor, OH

Inspection Conducted: October 10-12, 22-24, November 13-14, and December 26-28, 1984

Inspector: D. E. Jones — 1-14-85 Date

Approved By: D. H. Danielson, Chief
Materials and Processes Section — 1/14/85 Date

Inspection Summary

Inspection on October 10-12, 22-24, November 13-14, and December 26-28, 1984 (Report No. 50-346/84-25(DRS))

Areas Inspected: Routine unannounced safety inspection to review inservice inspection (ISI) procedures, work activities and nondestructive examination (NDE) personnel certifications; also activities related to the core barrel bolt inspection and upgrade of High Pressure Injection Crossover lines. This inspection involved a total of 51 inspection-hours onsite by one NRC inspector.

Results: No items of noncompliance or deviations were identified.

## DETAILS

1. Persons Contacted

Toledo Edison Company (TECo)

*C. Daft, QA Director
*M. Shephard, Code Inspection Supervisor
D. Mominee, QE Supervisor

Babcock and Wilcox Company (B&W)

C. Thompson, Group Leader ISI

Hartford Steam Boiler Inspection and Insurance Company

T. Sanford, Authorized Nuclear Inservice Inspector

The inspector also contacted and interviewed other licensee and contractor employees.

*Denotes those present at the exit interview.

2. Licensee Action on IE Bulletins

a. (Closed) I.E. Bulletin 83-06 (346/83-06-BB): Nonconforming Materials Supplied by Tube-Line Corporation. The inspector reviewed the final response dated November 10, 1983.

Toledo Edison identified caps, tees, flanges and stainless steel materials, as originating from Tube-Line Corporation, which were either installed or awaiting installation in safety-related systems. All other material received from Tube-Line had been installed in nonsafety-related systems. The installed caps and tees were analyzed and certified to be in compliance with ASME Section III, Class 2 requirements. The installed flanges were replaced during the 1983 refueling outage by new flanges manufactured in compliance with ASME Section III, Class 2 requirements. The stainless steel materials had not been installed and were removed from stock and returned to Capitol Pipe and Steel Company, through which they were originally procured. The inspector has no further questions regarding this Bulletin.

This item is considered closed.

b. (Closed) IE Bulletin 82-03 (346/82-03-BB, 346/82-03-1B): Stress Corrosion Cracking in Thick-Wall, Large-Diameter, Stainless Steel, Recirculation System Piping at BWR Plants.

Information only, the inspector verified that the licensee management had received the I.E. Bulletin and had reviewed it for applicability; this Bulletin did not apply to Davis Besse.

This item is considered closed.

3. Inservice Inspection, Unit 1

a. General Information

Toledo Edison Company contracted Babcock and Wilcox to perform the inservice inspection in accordance with the ASME Boiler and Pressure Vessel Code, Section XI, 1977 Edition through Summer 1978 Addenda. This is the fourth outage of the first ten year plan.

Eddy current examination was performed on Steam Generators (SG) A and B and tube 1 in row 77 of the SG A was plugged.

Core barrel bold inspection was performed utilizing visual and ultrasonic techniques. The following bolts were inspected:

| | Number Inspected | Number Defective |
|---|---|---|
| Upper core barrel bolts | 120 | 0 |
| Lower core barrel bolts | 108 | 0 |
| Surveillance specimen holding tube bolts | 72 | 19 |
| Lower thermal shield bolts | 96 | 35 |
| Upper restraint block bolts | 60 | 0 |
| Flow distributor bolts | 96 | 0 |

36 of the surveillance specimen holding tube bolts were replaced (50% of the total number).

96 of the lower thermal shield bolts were replaced (100% of the total number).

No items of noncompliance or deviations were identified.

b. Program/Procedure Review

The inspector reviewed selected portions of the following program/ procedures:

- TECo, 10 year Inservice Inspection Plan to 1977 Edition of Section XI of the ASME B&PV Code w/Addenda through Summer 1978, Revision 0, July 25, 1984.

- B&W, Administrative Procedure for Control of Inservice Inspection Procedure and Procedure Qualifications, ISI-1, Revision 5.

- B&W, Administrative Procedure for Records Management, ISI-2, Revision 5.

- B&W, Personnel Qualification - Magnetic Particle Examination, ISI-20, Revision 5.

- B&W, Personnel Qualification - Ultrasonic Examination, ISI-21, Revision 5.

- B&W, Personnel Qualification - Liquid Penetrant Examination, ISI-22, Revision 4.

- B&W, Personnel Qualification - Radiographic Examination, ISI-23, Revision 4.

- B&W, Personnel Qualification - Eddy Current Examination, ISI-24, Revision 5.

- B&W, Personnel Qualification - Visual Examination, ISI-25, Revision 7.

- B&W, Technical Procedure Describing Surface Requirements of Welds, Adjacent Base Metal, and Components for Nondestructive Examination, ISI-50, Revision 9.

- B&W, Technical Procedure for Sulfur Content Analysis, ISI-55, Revision 1.

- B&W, Technical Procedure for Halogen Content Analysis, ISI-56, Revision 1.

- B&W, Administrative Procedure for the Use of Consumables, ISI-60, Revision 7.

- B&W, Administrative Procedure for Control of Manuals and Reports, ISI-61, Revision 18.

- B&W, Administrative Procedure for Control of Documents, ISI-62, Revision 3.

- B&W, Administrative Procedure for Approval of Manuals and Reports for Baseline and Inservice Inspection Programs, ISI-63, Revision 7.

- B&W Administrative Procedure for Handling Nonreportable Nondestructive Examination Data, ISI-64, Revision 17.

- B&W, Administrative Procedure for Reporting of Nondestructive Examination Indications and Data to the Customer, ISI-69, Revision 12.

- B&W, Administrative Procedure for the Design, Fabrication, and Certification of Calibration Standards, ISI-76, Revision 13.

- B&W Administrative Procedure for Procurement, ISI-77, Revision 5.

- B&W, Administrative Procedure for Tagging and Correction of Nonconforming Items, ISI-78, Revision 8.

- B&W, Administrative Procedure for Preventive Maintenance of Nondestructive Examination Equipment, ISI-80, Revision 15.

- B&W, Measurement of Ultrasonic Instrument Performance Characteristics, ISI-83, Revision 2.

- B&W, Ultrasonic Examinations of Ligaments Between Threaded Holes and of Studs and Bolts 1 Inch and Larger in Diameter, ISI-104, Revision 21.

- B&W, Ultrasonic Examination of Calibration Blocks to Determine Block Quality, ISI-114, Revision 6.

- B&W, Ultrasonic Examination of Reactor Coolant Pump Motor Flywheel, ISI-117, Revision 8.

- B&W, Ultrasonic Examination of Piping and Vessel Welds Joining Similar and Dissimilar Materials, ISI-120, Revision 20.

- B&W, Ultrasonic Examination of Vessel Welds and Nozzle Inside Radius Sections, ISI-130, Revision 18.

- B&W, Ultrasonic Measurement of Stud or Bolt Preload and Residual Load Using the Pulse - Overlap Technique, ISI-163, Revision 9.

- B&W, Ultrasonic Examination of Bolts and Studs for Crack Detection, ISI-165, Revision 3.

- B&W, Penetrant Examination of Weld and Base Materials, Including Studs and Nuts, ISI-240, Revision 17.

- B&W, Wet or Dry Methods of Magnetic Particle Examination of Welds, Studs, Bolts, and Pump Motor Flywheels, ISI-270, Revision 14.

- B&W, Visual Examination of Welds and Surface Conditions, ISI-350, Revision 17.

- B&W, Visual Examination of Pipe Hangers, Supports, and Restraints, ISI-353, Revision 5.

- B&W, Remote Visual Examination of Welds and Surface Conditions, ISI-354, Revision 2.

- B&W, Identification and Layout of Welds and System Components, ISI-362, Revision 10.

- B&W, Insertion, Calibration, Operation and Removal of Eddy Current OTSG Tube Examination Equipment in the Upper Head, ISI-406, Revision 7.

- B&W, Eddy Current Procedure for Determining the Clearance Between OTSG Tubes and the Internal Auxiliary Feedwater Header, ISI-413, Revision 2.

- B&W, Multifrequency Eddy Current Examination of OTSG Tubing in 177 Steam Generators, ISI-416, Revision 9.

- B&W, Technical Procedure for the Evaluation of Eddy Current Data of Nuclear Grade Steam Generator Tubing, ISI-460, Revision 7.

- B&W, Technical Procedure for the Evaluation of Eddy Current Data for Debris and Sludge in Steam Generators, ISI-462, Revision 2.

No items of noncompliance or deviations were identified.

c. Material and Equipment Certification

The inspector reviewed the certification documents, relative to the following items:

(1) Ultrasonic instruments, calibration blocks and couplant.

(2) Liquid penetrant materials.

(3) Magnetic particle equipment and materials.

(4) Eddy current equipment.

No items of noncompliance or deviations were identified.

d. NDE Personnel Certifications and Observation of Work Activities

The inspector reviewed NDE personnel certification in accordance with SNT-TC-1A, 1975 Edition.

The inspector also observed the work and had discussions with personnel during the following examinations:

Wet magnetic particle examination of the Reactor Vessel Closure Studs in accordance with B&W Procedure ISI-270, Revision 14, "Wet or Dry Methods of Magnetic Particle Examination of Welds, Studs, Bolts, and Pump Motor Flywheels."

No items of noncompliance or deviations were identified.

4. High Pressure Injection Crossover Line Upgrade

a. General

The High Pressure Injection crossover line support upgrade was necessary to compensate for additional loading caused by motor operators being added to valves HP 31 and HP 32 under a previous modification. The upgrade consisted of the modification of five existing supports, removal of one support and the addition of one support.

b. Review of Procedures

The inspector reviewed the following procedures:

- TECo, Davis-Besse General Welding Procedure, Revision 3.
- TECo, S W Welding of Groove with Backing, Sockets and Fillets P1 to P1, WPS 1-11-1 Revision 6.
- TECO, Storage, Handling and Issuing of Welding Materials, AD 1851.03, Revision 6.
- TECo, Visual Examination of Welds, VT-1, Revision 3.

TECo NDE Qualification and Certification Procedure QCI 3023, Revision 8, is in the process of revision to reflect changes in visual certification philosophy. This is considered an unresolved item to be followed up to assure implementation of the revised procedure (346/84-25-01).

No items of noncompliance or deviations were identified.

c. Review of Records, Reports and Certifications

The inspector reviewed the following documentation items and determined that the applicable requirements of QC/QA commitments have been met:

- Welding material certification.
- Welder qualification records.
- Weld examinations and acceptance records.
- Fabrication and inspection records.
- NDE personnel qualification records.

No items of noncompliance or deviations were identified.

5. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviations. An unresolved item disclosed during the inspection is discussed in Paragraph 4.

6. Exit Interview

The inspectors met with site representatives (denoted in Paragraph 1) at the conclusion of the inspection. The inspectors summarized the scope and findings of the inspection noted in this report.