U. S. ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS

REGION III

RO Inspection Report No. 050-346/72-05

Licensee: Toledo Edison Company
420 Madison Avenue
Toledo, Ohio 43601

Davis-Besse Nuclear Power Station
Oak Harbor, Ohio

License No. CPPR-80
Category: A

Type of Licensee: PWR - 872 Mwe Babcock & Wilcox

Type of Inspection: Routine, Unannounced

Dates of Inspection: September 12 - 14, 1972

Dates of Previous Inspection: July 11 - 13, 1972

Principal Inspector: Carl M. Erb — Carl M. Erb — Oct 16, 1972 (Date)

Accompanying Inspector: T. E. Vandel — T. E. Vandel — Oct 17, 1972 (Date)

Other Accompanying Personnel: None

Reviewed By: W. E. Vetter, Chief — W. E. Vetter — 10-17-72 (Date)
Reactor Construction Branch

8001290728

SUMMARY OF FINDINGS

Enforcement Action: None

Licensee Action on Previously Identified Enforcement Matters

The licensee provided a satisfactory reply, by letter, dated August 25, 1972, to two items of apparent noncompliance identified in a Region III letter dated July 27, 1972. The noncompliance involved improper storage practices for Class I components and failure to submit a report in keeping with the requirements of 10 CFR Part 50.55(e) relative to a damaged pump volute. Damage to the pump volute occurred when the transporting truck was involved in an accident. The inspector verified that proper action had been taken and these matters are considered to be closed.

Design Changes

The instrumentation guide tubes, and certain other aspects of the Davis-Besse reactor internals, have been redesigned and/or reworked following detection of applicable problems at a similar construction site. A Babcock & Wilcox topical report describing the problem and the cause was made available to the inspector. This matter will be examined during future routine inspections.

Unusual Occurrences: None

Other Significant Findings

A. Current Findings

1. Status of Construction

As of August 15, 1972, the engineering effort was estimated to be 84% complete and plant construction 26% complete.

2. Personnel

E. C. Novak has been appointed to the position of Nuclear Project Engineer for the Toledo Edison Company. In this position, Mr. Novak will assume much of the project engineering responsibility from Mr. L. E. Roe, who is the Chief Mechanical Engineer. However, Mr. Roe will continue to coordinate and supervise the environmental effort.

B. Status of Previously Reported Unresolved Items

1. As a result of the PX Engineering Company vendor audit of August 22 and 23, 1972, Toledo Edison has identified several areas of weakness in their Quality Assurance program. Changes to the program are being incorporated to eliminate these problem areas. A follow-up review will be made during the next routine inspection.

2. Documentation

A review of documentation data packages, for several NSSS Components, revealed that the previous problem (lack of definition for the necessary information to be available onsite to justify receipt acceptance) has not been fully resolved. B&W has added a quality control supervisor to the site staff who is working out methods to bring about resolution. This matter will be reviewed further during subsequent inspections.

3. Qualification NDT Operator

Personnel nondestructive qualification records were reviewed for personnel performing ultrasonic examination of steam generator support bolts, which were tested onsite. This examination was conducted by the Testmaster Inspection Company and certification of; Mr. Joseph Stegner to Level III and Mr. Richard Lambert to Level II, was verified. This matter is considered to be closed.

4. Containment Building Equipment Hatch

This item was damaged, when it rolled off a railroad car. The inspector examined the CB&I fabrication and inspection records for the repair. This matter is considered to be closed. (Paragraph 5 - Report Details)

5. Primary Pump Volute

The volute which was returned to Byron Jackson for repair, following damage sustained in a traffic accident, was inspected on September 5, 1972, at the vendor's plant. Mr. J. Lenardson, Quality Assurance Supervisor for Toledo Edison, witnessed the NDT. The inspector will examine the component and its documentation during the next site visit.

6. Primary Coolant Recirculation Piping - 36 Diameter

This piping, which is carbon steel overlaid with stainless on the inside surface, is tagged with "Hold" tags, pending receipt of documentation. However, the tags are not resistant to sun and moisture and this results in near illegibility following 2 months of outdoor exposure. The inspector will examine the tagging method during the next inspection.

Management Interview

An interview was conducted at the site with Bechtel and TECO personnel in attendance. The following people were present:

Toledo Edison Company (TECO)

E. M. Wilcox, Quality Assurance Engineer
N. L. Wadsworth, Construction Manager
W. G. Moring, Field Quality Assurance
L. A. Haigh, Mechanical Engineer
K. M. Cantrell, Quality Assurance Engineer
G. W. Eichenauer, Quality Assurance Engineer

Bechtel

J. L. Reddick, Project Field Engineer
M. R. Stephens, Project Construction Manager
R. L. Lykens, Project Quality Control Engineer
D. C. LaValla, Quality Assurance Engineer

Another interview was conducted at the Toledo Edison Company main office in Toledo, Ohio, with only the following Toledo Edison personnel in attendance:

L. E. Roe, Chief Mechanical Engineer
E. C. Novak, Nuclear Project Engineer
W. H. Schultz, Senior Technical Assistant
E. M. Wilcox, Quality Assurance Engineer

Nonconformance Reports (NCR)

The information required to be included on a nonconformance report (NCR) and the close out of an NCR was discussed. Bechtel and the licensee both agreed that added information should be furnished on NCR's. (Paragraph 3 - Report Details)

Tagging on Items Stored Outdoors

The inspector pointed out that the present tags for NSS items become illegible in a very short time. The licensee agreed that the tags should be improved and that better weather protection is necessary. (Paragraph 4 - Report Details)

Instrument Guide Tube Redesign - Vessel Internals

As a result of the failure of the subject internals at a similar Construction site, the licensee was asked whether Toledo Edison had approved the proposed corrective action for the Davis-Besse internals. The licensee replied that they were assuming that the proposed corrective action was satisfactory and had been approved by AEC "L". In addition, the licensee stated that this item would appear in the FSAR. The inspector will examine this item during a later inspection.

Impact Properties of Shell Material in Steam Generator

The licensee was asked whether the impact properties of the steam generator shell material would be reported in the FSAR. The licensee stated that the subject impact properties would be included. (Paragraph 2 - Report Details)

Quality Assurance Manual and Q-List

The inspector requested that the latest edition of the subject documents be made available to RO Region III. The licensee provided a copy of the latest Q-list and stated that the quality assurance manual was in revision and should be made available in 30 to 60 days.

Main Steam Safety Valve Attachments

The inspector asked whether the methods for attaching safety valves to main steam headers had been reviewed by the licensee. Mr. Roe replied that they had a copy of the safety guide dealing with this matter and were aware of the importance of adequacy of design in this area. He added that appropriate design review would be accomplished at a later date.

Valve Wall Thickness

The inspector asked how the licensee proposed to meet the requirement for verification of Class I valve wall thickness measurements. The licensee replied that all purchase orders will have a requirement that wall thickness measurement documentation must be made available for all Class I valves which are one inch or larger in size.

Outdoor Storage of Stainless Steel Class I Piping Spools

The inspector noted that the plastic coverings on these spools were holding water in small pools which resulted in the plastic hugging the ground. It was not possible to see the wooden chocks and determine whether ground water might be contacting the pipe. The licensee agreed that this was not a desirable condition and that the coverings would be removed and air allowed to circulate around the spools.

REPORT DETAILS

Personnel contacted at the site, in addition to those attending the site management interview, was Mr. D. E. Kinsala, Babcock & Wilcox, Quality Control Supervisor.

1. Qualification of Lifting Equipment

The Davis-Besse reactor pressure vessel has an estimated weight of 419 tons. The steam generators each weigh slightly over 577 tons. B&W has a procedure for these lifts. However, prior to the actual lifting of these components, a lift utilizing steel billets as weights will be completed as a proof test.

2. Documentation and Impact Properties of Steam Generators

The documentation identified Part No. OTSG 620-0012-55-1 as formerly being a Consumers Power unit which has been exchanged with Toledo Edison and reidentified as Part No. OTSG 620-014-55-11, Unit 1. The second Toledo Edison unit is identified as Part No. OTSG 620-014-55-12. The paper work for this exchange is in order. The 4-7/16 inch shell plate for these generators developed 20 foot pounds in the impact test at 70°F. This temperature was used because the material did not meet the required impact at the specified 40°F. Hartford Insurance Company and Toledo Edison Company have approved the material. The licensee stated that this deviation would be noted in the FSAR.

3. Nonconformance Reports - Hold Tag Procedures

The inspector examined a nonconformance report concerned with bolts, nuts, and washers for embedments. There were 3 deviations noted on a single NCR and it was difficult to determine the status of any of the items. The licensee agreed that NCR's should be explicit in describing the problem and that the status of conformance should be readily in evidence.

The inspector questioned whether an adequate system was in effect to assure that followup corrective action is taken when an item is on "hold" for any reason. Bechtel stated that for their receipted items, one week is allowed before action is taken to secure documentation on the basis that documentation may arrive within one week. The licensee said that the new quality assurance manual would address itself to receiving inspection matters in terms of specifying followup action relative to tagged equipment and components.

4. Tags on Outdoor Stored Items

Fourteen primary recirculation piping spools (36" diameter) were stored outdoors. Each piece was tagged with a "hold" tag and signed by a B&W representative. The "hold" was for lack of documentation. One piece had been received 2 months previously and the tag was nearly illegible due to exposure to sun and moisture. The licensee agreed that tags with better resistance to outdoor conditions would be used. The inspector will check on this matter during the next inspection.

5. Repair of Damaged Equipment Hatch - Containment

The inspector examined the Chicago Bridge and Iron Company repair documentation to the subject equipment hatch. This item was being returned from the site to CBI, Chicago, for performance of a stress relief operation. During transit, the railroad car was humped and the part rolled onto the ground, causing dents in the convex closure plate (Inquiry Report 050-346/72-02). A circular section including the damaged portions was removed and a formed circular piece of the proper convexity and dimensions was welded in.

The special repair procedure, SRP-70-6449-2, Revision 1, states that the repair meets ASME Section III, Subsection B, Summer 1969 Addenda, and CBI drawings 2, 25, and 26.

The rework procedure was as follows:

a. Sandblast all weld seams and all attachment welds to clean off paint for magnetic particle test. Remove shipping bracing and cover hatch barrel.

b. Visual inspect all weld seams and entire surface.

c. Clean machined surfaces and level flanges optically.

d. Magnetic test all weld seams, all attachment welds and damaged areas.

e. Cut out damaged portion (25C assembly).

f. Install insert plate (arc gouge bevel).

g. Weld and x-ray insert seam weld and remaining portions of seam E.

h. Make any weld repair necessary to drawing 25.

i. Remove eyebolt and pin.

The inspector considers the repair to have been documented properly and this item is considered to be closed.

6. Class I Concrete Records

Concrete report records were examined for six Class I concrete pours. (Numbered 957 Q, 973 Q, 911 Q, 889 Q, 891 Q, and 932 Q). The reports records included report number, cylinder number, pour number, class of concrete and date, as well as test results of slump and compressive strength (7 and 28 days). Two additional reports were examined and determined to document batch compliance with design requirements (numbers D1-3A-NoFA and D1-3A-FA). These two additional reports were for pour numbers 984 Q and 985 Q. Calibration of batch plant and test plant equipment was also examined. All records were found to be acceptable.

REGULATORY OPERATIONS, REGION III

RO Inspection Report No. 050-346/72-05

Transmittal Date : October 19, 1972

Distribution:
RO Chief, RCB
RO:HQ (5)
DR Central Files
Regulatory Standards (3)
Licensing (13)