

UNITED STATES NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report of Operations Inspection

IE Inspection Report No. 050-346/76-15

Licensee: Toledo Edison Company
Edison Plaza
300 Madison
Toledo, Ohio 43652

Davis-Besse Nuclear Power Station
Unit 1
Oak Harbor, Ohio

Licensee No. CPPR-80
Category: B

Type of Licensee: PWR (B&W) 906 MWe

Type of Inspection: Routine, Announced

Dates of Inspection: July 12-16, and 20-21, 1976

Principal Inspector: *R. D. Martin*
R. D. Martin
(July 20-21, only)

1-29-76
(Date)

Accompanying Inspector: *T. L. Harpster*
T. L. Harpster
(July 12-16, only)

Other Accompanying Personnel: None

Reviewed By: *H. C. Knop*
H. C. Knop, Chief
Reactor Projects
Section 1

7-29-76
(Date)

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SUMMARY OF FINDINGS

Inspection Summary

Inspection on July 12-16, and 20-21, 1976, (76-15): Review of operating procedures; observation of hydrostatic testing of steam generator; review of preparations for preoperational testing activities; and the status of system flushing activities.

Enforcement Action

No items of noncompliance with NRC requirements were identified during this inspection.

Licensee Action on Previously Identified Enforcement Items

Not within scope of this inspection.

Other Significant Findings

A. Systems and Components

1. Hydrostatic testing of the steam side of the steam generators and the main steam piping up to the turbine stop valves is completed.
2. Modifications to the supporting structural members for the diesel generator emergency power units to reduce vibration problems have been completed.

B. Facility Items (Plans and Procedures)

The current rate of Test Procedure development appears adequate to assure that all preoperational and power ascension test procedures will be completed by the end of August, 1976.

C. Managerial Items

Unresolved item: Licensee was informed that the need for the modification to the diesel generator supporting structural members will be reviewed by the Construction Branch as to reportability requirements under the conditions of 10 CFR 50.55(e).

D. Noncompliance Identified and Corrected by Licensee

None identified during this inspection.

E. Deviations

None identified during this inspection.

F. Status of Previously Reported Unresolved Items

1. OIE Report No. 050-346/75-14

This report indicated the inspector's concern over the ability of the present incumbent of the Inspection Engineer position to meet the qualifications of a Level III inspector established by ANSI N45.2.6. During this inspection the inspector was informed that organizational changes were being undertaken to delete the position of Inspection Engineer. Accordingly, the above issue is no longer a matter of concern.

2. OIE Report No. 050-346/76-10

This report noted that the FSAR test abstract for preoperational test TP 160.01 was not in agreement with the test in that the test did not include motor RPM measurements. The inspector noted that revision 18 to the FSAR now contains a revised abstract which eliminates the differences. This matter is considered resolved.

Management Interview

This inspection was conducted in two phases; accordingly, management interviews were conducted on July 16, 1976 and July 22, 1976. These are summarized below:

A. The following persons attended the management interview on July 16, 1976 at the conclusion of the first phase of the inspection:

T. Murray, Operations Engineer
W. Green, Assistant to Station Superintendent
J. Buck, Operations Quality Assurance Engineer

B. Matters discussed and comments were as follows:

1. The inspector summarized his findings with regard to his review of Operational Procedures. (Paragraph 1, Report Details)

C. The following persons attended the management interview on July 22, 1976 at the conclusion of the inspection:

L. Roe, Vice President, Facilities Development
W. Green, Assistant to the Station Superintendent
J. Buck, Operations Quality Assurance Engineer

D. Matters discussed and comments were as follows during this exit interview:

1. The inspector informed the licensee that the details of the modification work to the structural support members for the diesel generator would be referred to the Construction Branch for review as to a possible noncompliance with respect to the reporting requirements of 10 CFR 50.55(e). This matter is considered as unresolved. The licensee acknowledged his understanding of the inspector's statement. (Paragraph 2.a., Report Details)
2. The inspector indicated that sufficient information was still not available to verify that the "break-in" run referred to in IEEE 387 for the diesels was satisfied during the testing conducted by the manufacturer of the emergency power units. The licensee indicated they would secure further information for review by the inspector. (Paragraph 2.b., Report Details)
3. The inspector summarized his review of the audit activities of the QA staff. (Paragraph 3, Report Details)
4. The inspector summarized his observations during the hydrostatic testing of the 1-1 steam generator. He indicated that information he obtained with regard to the leak detected during the 1-2 steam generator hydrostatic test and the repair to the feedwater nozzle on unit 1-1 would be transferred to the Construction Branch for follow-up.

He informed the licensee that his observance of personnel activities during the hydrostatic test led him to conclude that the test, operating, and weld inspection personnel appeared to be performing their duties during the test in an efficient and thorough manner. He noted no deficiencies during the witnessing of this test activity. (Paragraph 4, Report Details)

5. The inspector indicated he had received a status report on the testing activities expected over the next several weeks. (Paragraph 5, Report Details)
6. The inspector summarized his review of CRD coupling activities. (Paragraph 6, Report Details)
7. The inspector summarized his review of the status of the Flushing Program. (Paragraph 7, Report Details)

REPORT DETAILS

Persons Contacted

The following persons, in addition to those listed under the Management Interview section of this report, were contacted during this inspection:

Toledo Edison Company

G. Waugh, Assistant Engineer
J. Hartigan, Assistant Engineer
J. Zell, Assistant Engineer
J. Orkins, Instrument and Controls Engineer
L. Stalter, Technical Engineer
C. Daft, Field QA Engineer
J. Lingenfelter, Senior Assistant Engineer
R. Adney, Shift Foreman
K. Cantrell, Operations Quality Assurance Engineer

Bechtel Construction Management

T. Horst, Lead Civil Field Engineer

Bechtel Start-up

D. Breinimer, Assistant Project Start-up Engineer

Babcock and Wilcox Company

E. Michaud, Test Program Manager

Results of Inspection

1. Operating Procedures

The inspector reviewed the following plant operating procedures to confirm that they adequately control safety related operations within the applicable regulatory limits.

- a. Nuclear Steam Supply System Limits and Precautions PP 1101.01
- b. Pre-Startup Checklist PP 1102.01
- c. Plant Startup Procedure PP 1102.02
- d. Trip Recovery PP 1102.03
- e. Power Operations PP 1102.04

- f. Plant Shutdown and Cooldown PP 1102.10
- g. Approach to Criticality PP 1103.08

In addition, procedure scope, content and format were inspected against Regulatory Guide 1.33 and ANSI 18.7.

The following comments were provided to the licensee on the indicated operating procedures by the inspector. These are to be resolved prior to the use of these procedures under the requirements of the Technical Specifications.

- a. Minimum nuclear instrumentation requirements should be verified prior to withdrawing safety rod groups 1-4 during plant startup.
- b. The approach to criticality procedure allows the rods to be reinserted after criticality and additional training restarts repeated as necessary. The procedure does not reverify the validity of the ECP calculation or provide precautions as to plant conditions which would preclude additional training startups.
- c. Certain inconsistencies were noted with regard to nomenclature and guidance which might cause confusion in the implementation of these procedures. Specific examples were:
 - (1) Interchanging nominal and long term bands for rod curves in the power operations procedure. The intent is that there be a nominal position within each of the long term and transient bands.
 - (2) Three different sets of guidance are provided as to when it is necessary to flood up above the steam generator nozzles: (1) 2-3 hours, (2) 3-4 hours, and (3) > 4 hours.

Additional comments were provided to the licensee for his consideration.

2. Diesel Generator Emergency Power Units

- a. During this inspection, the inspector was informed that modifications to the diesel generator supporting structural members were completed, and that the units were being prepared for preoperational testing. These modifications were undertaken to reduce a vibration problem which was found in the 1-2 diesel unit during initial system check-out. The following chronology of event took place:

- (1) NCR 41-76 was written on May 19, 1976 and recommended the services of the vendor be obtained to resolve the apparent vibration problem.
- (2) Start-up Field Report M581 written on May 26, 1976 requesting assistance from GPDE (Bechtel) on problem.
- (3) Letter on June 29, 1976 of Bechtel to Power Systems (Diesel unit vendor) requesting review and seismic reanalysis of modification proposed by Bechtel.
- (4) Start-up Field Report Reply of July 6, 1976 indicating revisions proposed by Bechtel to base structure.
- (5) Letter of July 8, 1976 of Bechtel to TECo discussing their analysis based on a 1.0g seismic input.
- (6) Bechtel authorization to Bentley General Contractors to purchase material only on July 8, 1976.
- (7) Drawing C754 (indicating modifications) transmitted by Drawing Transmittal Form dated July 9, 1976. Approved by TECo same date.
- (8) CWP's 24-M-9, 24-E-8, and 24-I&C-7 written on July 12, 1976 to control the work to be done.
- (9) Telecon between Bechtel and Power Systems still looking into problem.
- (10) Telegram from Power Systems to Bechtel on July 14, 1976 concurring in proposed Bechtel Design.
- (11) Work on diesel supports begun on July 14, 1976 and completed by July 19, 1976.

The above drawing and related specifications referenced appropriate work procedures, and the inspector verified that the three welders that worked on this modification were appropriately certified under the requirements of the applicable code.

The licensee was informed that while the inspector had no questions regarding the design review sequence involved with this modification, he noted that the regional office

had not been contacted with regard to the above being reportable in accordance with 10 CFR 50.55(e) during the period of June 29, 1976 - July 6, 1976 when it appeared that seismic reanalysis was indicated. The inspector indicated this matter would be turned over to the Construction Branch for final resolution with the licensee.

- b. In response to an earlier inquiry by the inspector, the licensee indicated that the vendor for the diesel units had informed the licensee that the factory testing of the diesel had satisfied the "break-in run" called for in section 6.1.2 of IEEE 387, and that the records would be in the Quality Documentation Package at the site.

The review of the related records by the inspector indicated that the units had been put through a performance test which was approximately nine hours long. However, the documents did not indicate that this nine hour period was in excess of the initial failure period for the units as determined by the unit manufacturer as is called for in section 6.1.2 of IEEE 387.

The licensee indicated they would pursue this matter further, and collect further information for review by the inspector. This matter remains unresolved.

3. Licensee Audit Activities

The inspector reviewed Audit Reports, as listed below, which are related to preoperational testing and operational preparedness activities.

<u>Audit No.</u>	<u>Topic</u>	<u>Dates</u>
* 395	Station/Bechtel Start-up Organization and activities (16 AFR's issued)	2/17-24/76
399	QA Review of AD's (1 AFR issued)	1/30/76
400	Audit of Carol Program (1 AFR issued)	1/30/76
402	MWO Preparation (1 AFR issued)	2/11/76

<u>Audit No.</u>	<u>Topic</u>	<u>Date</u>
410	Purchase Order/Requisition Conformance (1 AFR issued)	4/8/76
411	Surveillance of ASME Section III Class 2 & 3 Items (1 AFR Issued)	4/13/76
419	Subcontractor Tagging Violation	5/20/76
* 420	Continuing Audit of Station Activities to Satisfy FSAR Commitments (14 AFR's issued to date)	Began 6/20/76
426	Document Review Relative to "Q" Item Designation on SFR and Nuclear Safety Related Classification of a Test (2 AFR's issued)	6/25/76
429	B&W Site Operations Manager QA Program, Duties, and Responsibilities	6/16/76

Those activities noted above with an asterisk (*) are the formal audits conducted in a preplanned fashion. The other Audit Reports merely serve to document surveillance activities by QA staff.

The inspector reviewed in detail the two formal audits that were conducted on operations related activities since January 1, 1976. No significant discrepancies were found in the conduct, content, or handling of audit results.

The inspector informed the licensee that credit for meeting audit schedule commitments cannot be taken by the licensee for:

- a. Surveillance activities that are documented using the format of an Audit Finding Report.
- b. NRC inspections of areas to be covered by scheduled audits.

The licensee indicated that he understood these circumstances, and had not planned to use either of these activities to satisfy any of his audit commitments.

4. Steam Generator Hydrostatic Test

The inspector witnessed portions of the licensee's implementation of TP 200.09 "SG Secondary Hydro Test" as performed on steam generator (S/G) 1-2.

During the initial pressurization of this S/G (500 psig) a leak was detected in a shop weld in a feedwater nozzle (#56) into the generator. The unit was drained and cooled, the weld inspected by dye penetrant, and repaired. Following repair of the weld, the S/G was satisfactorily hydrotested and no further leaks were found.

During the performance of the test, personnel actions were timely, and appeared correct and thorough. A review of the appropriate test documentation revealed no deficiencies when compared to the Administrative Procedures which govern these test activities.

The inspector was informed of and observed the location of, the one unisolatable leak found in a vent line during the hydrostatic testing of the 1-1 S/G previously.

The details of this leak and the previously mentioned nozzle repair will be transmitted to the Construction Branch for any appropriate follow-up activity.

5. Test Scheduling

The inspector was briefed on the test activities expected over the next several weeks and informed the licensee of his desire to be kept specifically informed of the schedule for:

TP 203.03 "DH Preop Test"
TP 410.01 "D/G Preop Test"

6. CRDM Coupling Activities

The inspector reviewed the activities of the licensee in coupling of control rod drive mechanisms (CRDM's) to dummy guide assemblies.

The inspector determined that the work was done by licensee personnel under an appropriate MWO (#1315) utilizing an approved procedure (MP 1401.08). All discrepancies determined during this activity are being corrected by the use of appropriate administrative controls.

The inspector has no further questions on this matter.

7. Flushing Activities

The inspector received a status report on flushing activities at the facility. The cleaning activities are covered by 53 cleaning procedures. Of these 53:

- a. Eight procedures are completed and undergoing management review.
- b. At least 16 procedures are more than 90% complete.
- c. All other procedures are being implemented, many of them in advanced stages of completion.

The inspector indicated that he will continue to monitor the general progress in this area.