

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report No. 50-346/78-04

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, Ohio

Inspection Conducted: January 30, 31; February 1-3, and 14-17, 1978

Inspectors: T. N. Tambling

3/13/78

J. S. Creswell
(February 2 and 3, 1978)

4/13/78

Other Accompanying Personnel: N. J. Chrissotinos
(February 14-17, 1978)

Approved By: R. C. Knop, Chief
Reactor Projects Section 1

5/13/78

Inspection Summary

Inspection on January 30, 31; February 1-3, and 14-17, 1978
(Report No. 50-346/78-04)

Areas Inspected: Routine, announced inspection of plant operation; followup on nonroutine event reports, and IB Bulletin; review of QA, records and license requirements related to startup testing and four plant areas. The inspection involved 73 inspection-hours onsite by two NRC inspectors.

Results: No items of noncompliance or deviations were identified.

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DETAILS

1. Persons Contacted

*T. Murray, Station Superintendent
*L. Stalter, Technical Engineer
J. Buck, Operations Quality Assurance Manager
*W. Green, Assistant to Station Superintendent
*J. Byrne, Operations Quality Assurance Engineer
*K. Maner, Operations Quality Assurance Engineer
M. Derivan, Operations Engineer
J. Zell, Operations Support Engineer

The inspector also talked with and interviewed other licensee employees, including members of the technical and engineering staff, operations staff and radiation protection.

*Denotes those attending exit interview.

2. Licensee Action on Previous Inspection Findings

(Closed) Noncompliance (346/77-31): Failure to adhere to Administrative Procedure AD 1823.00, Jumper-Lifted Wire Log. The inspector found that AD 1823.00 had been revised and that the jumper lifted wire log had been updated as stated in the licensee's response.

(Closed) Deviation (346/77-34): Failure to maintain the pressure boundary door between the auxiliary feedwater pump rooms closed, the inspector found that appropriate signs had been mounted on the door as stated in the licensee's response and that the door had been modified to facilitate closing and latching.

(Open) Unresolved (346/78-01): The licensee is revising AD 1845.00, changes, test, and experiments, to clarify certain sections. Progress has been made in closing out open Facility Change Requests, but the effort is still not complete.

3. Review of Nonroutine Events Reports by the Licensee

The inspector reviewed licensee actions with respect to the following listed nonroutine event reports to verify that the events were reviewed and evaluated by the licensee as required Technical Specifications, that corrective action was taken by the licensee, and that safety limits, limiting safety system

settings, and limiting conditions for operations were not exceeded. The inspector examined selected Station Review Board minutes, the licensee investigation reports, logs, and records, and inspected equipment and interviewed selected personnel.

Failure to perform the surveillance requirement for venting High Pressure Injection Valve, HP 72 (NP-33-77-92)

Failure of EVS Train 2 Dampers to modulate correctly (NP-33-77-82)

Source Range Detector NI-1 failed Low (NP-33-77-79, 88 and 100)

Failure of Radiation Monitor RI8-2007 (NP-33-77-89)

Failure of Radiation Monitor RE-2006 (NP-33-77-97)

Reactor Coolant Pump Current Detector Inoperable (NP-33-77-90)

Design Ground Problems on Containment Radiation Monitors (NP-33-77-87 and 91)

Main Steam Safety Valve SP 17A1, A2, B1, and B2 declared inoperable (NP-33-77-117)

Failure of Chlorine Detector (NP-33-77-108)

The inspector noted that the licensee had properly identified and corrected the above items. No other items of noncompliance or deviations were identified.

During the exit interview the inspector requested supplemental reports for NP-33-77-89 and 97 to cover the final analysis of the failure. The inspector also discussed a concern over the breakers found open on the EVS discharge and recirculation dampers (NP-33-77-82).

The following licensee event reports were reviewed and closed out on the bases of an inoffice review and evaluation:

Decay heat suction valve DH-12 Closed (NP-33-77-74)

Containment to annulus differential pressure limit exceeded (NP-33-77-84)

Surveillance Test ST 5080.01 performed late (NP-33-77-84)

SFAS channel 4 would not respond to its internal check source (NP-33-77-86)

Loss of O2 startup transformer due to fault in Ohio Edison Line (NP-33-77-106)

RPS channel 3 hot leg temperature indicator failed high (NP-33-77-103)

SFAS, Channel 3, BWST Level Trip, (NP-33-77-107)

AFPT 1-2, Speed Control was lost, (NP-33-77-116)

BWST level to SGAS Channel failed low (78-001)

Control Rod Position Indicator declared inoperable (78-002)

RCS unidentified leakage greater than 1 gpm (78-003)

AFPT 1-1 declared inoperable (78-005)

Failure of Input Buffer 1-3 for SFACS, Channel 1 (78-006)

D/G 1-1 tripped on high crankcase pressure (78-007)

Decay Heat Pump 1-1 failed to start (78-011)

4. Auxiliary Feedwater Pumps Inoperable Due to Personnel Error
LER NP-33-77-113

The inspector reviewed the circumstances and corrective action associated with the reported event. The occurrence was caused when an operator performing surveillance test ST 5071.01 performed the wrong step of the procedure. This was due in part that the word NOT was used in the procedure to direct the operator as which step to use (i.e., "If the plant is not in Modes 1, 2, or 3 . . ."). The word NOT was not underlined or capitalized to highlight it. A review of other surveillance test procedures indicated that this condition existed in other procedures. During the exit interview this item was discussed with the licensee.

During the review of this event the inspector noted that Station Procedure SP 1106.06, Auxiliary Feedwater System had six temporary procedure modifications associated with it that required permanent revision to the procedure. The time span of these temporary procedure was March 2, 1977 to October 10, 1977. These six temporary procedure modifications were incorporated into one major revision and reviewed by SRB February 6, 1978. During the exit interview the inspector addressed this undesirable condition and expressed concern over the extra work load that this could place on the operator in the field and its potential effect on safe operation.

5. Licensee Action on IE Bulletins

The inspector examined licensee records and interviewed licensee representatives to verify that corrective action had been taken with respect to IE Bulletins 77-01 and 77-02.

77-02: The inspector found that the licensee had survey equipment lists, identify NAR latching relays in use, and take appropriate inquiry with Westinghouse to verify that relays used at the station were not of the subject date code.

77-04: The inspector found that the licensee had reviewed design specifications and calculations concerning heat load on control using TSP.

6. Startup Test Records

The inspector examined licensee procedures and records to verify procedures have been established for maintaining startup test records and for the appropriate storage of these records.

No items of noncompliance or deviations were identified.

7. QA for the Startup Test Program

The inspector examined licensee's procedures and records to verified the licensee has established QA/QC and administrative requirements to follow the conduct of testing, tracking of test deficiencies, test documentation and control of measuring and test equipment.

Operations QA had conducted an audit of the test program on April 28, 1977, and was in the process of conducting another during the inspection period. This item will remain open pending the completion of the second audit.

No items of noncompliance or deviations were identified at the time of this inspection.

6. Plant Operations - General

The inspector reviewed general plant operations including an examination of selected operating logs, jumper-lifted wire logs, deviation reports for the period October 1977 through January 1978, issuance of Standing Orders, Special Orders, and Administrative memorandum for the period October 1977 through January 1978, primary and secondary water chemistry, and interviews with selected operating personnel.

a. Deviations Reports

In the review of the licensee's deviation reports (DVR's) the inspector found considerable improvement of logging, tracking, and timely close out of DVR's. In followup discussions on several DVR's the Technical Engineer and Station Superintendent, the inspector was assured that there was equal concern about the freeing of DWSI level instrumentations (DVR 78-001 and 161-1. These DVR's require 30 days reports to the NRC) and that the licensee was reviewing the DVR's for observed inadequacies in the implementation of procedures and management controls (DVR 163-1).

b. Jumper and Lift Wire Log

In the followup on a previous item of noncompliance (Inspection Report 50-346/77-02 and the licensee's response, dated December 14, 1977). The inspector found that Administrative Procedure AD 1823 had been revised and the jumper-lifted wire log had been updated as stated in the licensee's response letter.

The inspector discussed the current status of the log with the Operations Engineer to determine if the Tagging Supervisors understand their responsibilities designated in AD 1823.000. Specific areas discussed were classification of critical tags (i.e., Safety Related), verification of the effect of placing jumpers or lifting wires, determinations made as to whether additional surveillance requirements or information tags are required, and whether there was a problem getting the information required to complete the log.

Based upon this discussion, the Tagging Supervisors apparently have some problems with the work load required to evaluate jumpers and lifted wire and getting the required information to complete the log. This information was brought to the licensee's attention during the exit interview.

c. Secondary Water Chemistry

The inspector noted that the licensee not yet submitted secondary water chemistry limits as required by Section 3.7.1.6 of the Technical Specification. The inspector discussed this item with the licensee at the exit interview.

d. Plant Tour

The inspector toured various areas of the plant to observe operations and activities in progress. This included general state of housekeeping, radiation controls, leaks, pipe vibration, status of operating equipment, shift handling, and discussion with operating personnel.

As a result of plant tour on February 1, 1978, the following items were brought to the attention of the licensee for corrective action as follows:

- a. Contaminated clothing was noted laying partially outside a controlled area in pump room 119. No receptacle had been provided inside the controlled area for storage of the contaminated clothing.
- b. Contamination above 220 dpm was found in the area of the miscellaneous waste evaporator storage tank pump discharge sample station. The sample station is constructed using a small shelf with approximately 1/2 inch lips to collect overflow. The shelf was found to contain a substantial amount of boric acid that was contaminated. Smears taken of the surrounding area revealed additional contamination that had apparently occurred due to splashing from the shelf. After smears were taken a controlled area was set up to enclose the contamination. The licensee was taking smears in the area when the inspector arrived on the scene. It should be noted that sample stations of the type described above are used in several locations in the auxiliary building and are subject to similar contamination problems.

- c. Buckets were noted under four hydraulic snubbers in the ECCS pump room on the 555 elevation. Discussions with licensee representatives after the tour revealed that these snubbers were leaking oil but were operable. The licensee stated that five snubbers are scheduled to be replaced as soon as the replacements arrive.
- d. The inspector noted a temporary run of copper tubing in the ECCS pump room. The copper tubing was installed to provide flushing water to the miscellaneous water system radiation monitor. After the tour the inspector attempted to locate a work request for the installation of the temporary line but was not successful. Facility Change Request (FCR) No. 77-336 was located, however, which required the installation of permanent piping. This FCR had been active since September 20, 1977.
- e. The inspector noted a deposit of material resembling boric acid on the floor of the ECCS pump room next to the number 1 High Pressure Injection Pump. The licensee could not immediately identify the source of the leak.
- f. Inspection of the boric acid addition tank room revealed a metal guard touching one of the heating elements which maintains room temperature to prevent boric acid solution from freezing. In addition, boric acid was noted on one of the heating elements.
- g. Inspection of No. 4 mechanical penetration room on elevation 565 revealed an apparently unapproved installation of tubing to Pressure Indicator 5147. Review after the tour disclosed that the line had been moved to allow the installation of a ladder. The work had been performed per maintenance Work Order No. 77-2223 which classified the work as non-nuclear safety related although the flow sheet showed the piping as Seismic Category I. The rerouting of the line was accomplished on October 10, 1977. On October 18, 1977, Nonconformance Report No. 368-77 was initiated which identified that the alteration was done without proper engineering design approval. As of the time of the inspection the engineering design analysis had not been performed although the site Quality Assurance Engineering is actively pursuing the resolution of the nonconformance report.

10. Control Room Temperature/Pressure Recording Instrumentation

During a tour of the control room, the inspector noted that the licensee does not have full range reactor coolant temperature recording capabilities. Presently the licensee have recorders to record RCS Tave temperature from 520 to 620°F and RC hot leg temperature from 520 to 620°F. The inspector referred the licensee to IE Bulletin No. 75-08 which specifically addresses this problem (The licensee was not required to respond to this bulletin at time of issuance). In the exit interview the inspector stated that this item would remain unresolved pending an opportunity for further review by the licensee.

Exit Interview

The inspectors met with licensee representatives (described in Paragraph 1) at the conclusion of the inspection. The inspector summarized the scope and findings of the inspection. The licensee representative made the following remarks in response to certain of the items discussed by the inspector.

Acknowledged the close out or status of previous inspection findings. (Paragraph 2)

Acknowledged the inspectors request for supplementary closeout reports to specified licensee event reports. (Paragraph 3)

Acknowledged the inspectors concern over the breakers found open on the EVC discharge and recirculation dampers. (Paragraph 3)

Stated that they would review procedures that use the word NOT to direct specific operator action to determine whether clarification is required to prevent operating errors. Stated that they would give surveillance testing first priority and that other procedures would be reviewed whenever a revision is made or during the annual review of the procedures. (Paragraph 4)

Acknowledged the inspectors concern over the number of temporary procedure modifications outstanding against given procedures. Stated that temporary procedures modification are tracked and that they are limiting the maximum number to five. However, they were through their review processes trying to expediate the inclusion of temporary procedure modification into major revision. Also that they were trying to minimize the use of temporary modifications. The large use of temporary modifications was in-part due to the large number of procedures corrections required during initial operation. (Paragraph 4)

Stated they would review the problems that the Tagging Supervisors were having with the jumper-lifted wire logs. (Paragraph 5.b)

Acknowledged the inspectors statements concerning the submittal of Secondary Water Chemistry Specifications. (Paragraph 5.c)

Acknowledged the inspectors statements concerning IE Bulletin No. 75-08. (Paragraph 7)