

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-346/85016(DRP)

Docket No. 50-346

License No. NPF-3

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

Facility Name: Davis-Besse 1

Inspection At: Oak Harbor, OH

Inspection Conducted: April 9 through May 13, 1985

Inspectors: W. G. Rogers

D. C. Kosloff

B. L. Burgess

Approved By: *B. L. Burgess for*
I. N. Jackiw, Chief
Reactor Projects Section 2B

5/29/85
Date

Inspection Summary

Inspection on April 9 through May 13, 1985 (Report No. 50-346/85016(DRP))

Areas Inspected: Routine, unannounced inspection by resident inspectors of licensee action on previous inspection findings, licensee event reports, operational safety, maintenance, surveillance, IE bulletins, operational events, meeting with licensee, action on regional requests and training. The inspection involved 209 inspector-hours onsite by three NRC inspectors including 49 inspector-hours onsite during off-shifts.

Results: Of the ten areas inspected, no items of noncompliance or deviations were identified in nine areas and one item of noncompliance was identified in the area of surveillance (failure to properly implement a procedure - paragraph 6).

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DETAILS

1. Persons Contacted

a. Toledo Edison Company

R. Crouse, Vice President Nuclear, SALP Improvement Task Force Leader
+T. Murray, Nuclear Mission Assistant Vice President, Acting Nuclear Mission Head
S. Quennoz, Plant Manager
*W. O'Conner, Operations Superintendent
*D. Lee, Maintenance Superintendent
+C. Daft, QA Director
+J. Faris, Administrative Coordinator
J. Ligenfelter, Technical Superintendent
J. Syrowski, Nuclear Training Analysis and Evaluation Supervisor
+R. Peters, Licensing Manager
*S. Wideman, Senior Licensing Specialist
J. Wood, Facility Engineering General Supervisor
*B. Geddes, Acting Operations QA Supervisor
*B. Beyer, Nuclear Projects Director

b. NRC

+W. Shafer, Branch Chief, DRP
+J. Harrison, Branch Chief, DRS
+C. Weil, Investigation and Compliance Specialist
+N. Choules, Reactor Inspector, DRS
+I. Jackiw, Section Chief, DRP
+*D. Kosloff, Resident Inspector

+Denotes those personnel attending the May 2, 1985 meeting in the Region III offices to discuss erroneous information provided by Toledo Edison Company personnel on April 1, 1985.

*Denotes those personnel attending the May 10, 1985 exit interview.

The inspectors also interviewed other licensee employees, including members of the technical, operations, maintenance, I&C, training and health physics staff.

2. Licensee Action on Previous Inspection Findings

(Closed) Open Item (346/85004-14) Establishment of a Maintenance Training Supervisor. A Maintenance Training Supervisor was appointed on March 1, 1985.

(Open) Open Item (346/85004-07) Channel separation between Safety Features Actuation system channels. On March 21, 1985, NRR requested additional information to determine the adequacy of the channel interconnections. This item remains open.

(Open) Open Item (346/84004-05) Eddy current inspection of the No. 1 steam generator. The licensee provided the inspector with the results of the special sample inspection of the #1 steam generator. The report has been forwarded to the regional office for review and evaluation. Closure of this item is dependent on that review.

No items of noncompliance or deviations were identified.

3. Licensee Event Reports Followup

Through direct observations, discussions with licensee personnel, and review of records, the following event reports were reviewed to determine that reportability requirements were fulfilled, immediate corrective action was accomplished, and corrective action to prevent recurrence had been accomplished in accordance with technical specifications.

(Open) LER 85-005, Reactor Trip from 28 Percent Power. This LER will remain open pending review of the licensee's change to the Plant Shutdown Procedure, PP 1102.10 and the licensee's evaluation of the component failure that caused the trip.

(Open) LER 85-006, Failure of Control Rod Drive E-3 to Meet Trip Time. This LER will remain open pending review of the corrective action included in the scheduled revision to the LER.

(Open) LER 85-007, Auxiliary Feed Pump Turbine Response Time Problems. This LER will remain open pending review of the corrective action included in the scheduled revision to the LER.

No items of noncompliance or deviations were identified.

4. Operational Safety Verification

The inspector observed control room operations, reviewed applicable logs and conducted discussions with control room operators during the months of April and May. The inspector verified the operability of selected emergency systems, reviewed tagout records and verified proper return to service of affected components. Tours of the auxiliary and turbine buildings were conducted to observe plant equipment conditions, including potential fire hazards, fluid leaks, and excessive vibrations and to verify that maintenance requests had been initiated for equipment in need of maintenance. The inspector by observation and direct interview verified that the physical security plan was being implemented in accordance with the station security plan.

The inspector observed plant housekeeping/cleanliness conditions and verified implementation of radiation protection controls. During the months of April and May, the inspector walked down the accessible portions of the station battery and DC electrical distribution systems to verify operability.

These reviews and observations were conducted to verify that facility operations were in conformance with the requirements established under technical specifications, 10 CFR, and administrative procedures.

While reviewing the Unit Log on April 9, 1985 the inspector noted that the security and fire protection computer had been shut down for maintenance at 0915 and that the required fire watch patrols had not been established until 1120. Technical Specification Limiting Condition for Operation 3.3.3.8 requires specific fire detection instrumentation be operable. Shutdown of the security and fire protection computer renders that instrumentation inoperable. Technical Specification Action Statement 3.3.3.8 a. requires that fire watch patrols be established within one hour to inspect the zones with inoperable instruments. The time limit established by the action statement was exceeded by one hour and five minutes. A discussion of the occurrence with the Shift Supervisor revealed that although he had been informed that the security and fire protection computer was to be shutdown for maintenance that morning he was not notified at the time the computer was actually shut down. He established the fire watch patrols in accordance with existing plant procedures after his independent discovery that the computer had been shut down. This item is unresolved (346/85016-01) pending further review.

While touring the Startup Feedwater Pump/Auxiliary Feedwater Pump (SUFP/AFWP) area on April 24, 1985 at approximately 1210 the inspector observed that the only other person in the room was a sleeping unlicensed operator. At this time the plant was in Mode 3 and the SUFP was in operation. Paragraph 2.C.(3)(t) of Facility Operating License Number NPF-3 requires that Toledo Edison station an operator in the SUFP/AFWP area during operation of the SUFP to monitor SUFP and Turbine Plant Cooling Water (TPCW) piping status in the AFWP Rooms. In the event of SUFP/TPCW pipe leakage, the operator is required to trip the SUFP locally or notify the Control Room to trip the SUFP, and isolate the SUFP/TPCW piping. Another Toledo Edison employee entered the area and the operator was awakened in the presence of the inspector at approximately 1212. The inspector notified the appropriate Toledo Edison supervisory personnel of the occurrence. The operator was relieved and disciplinary action was taken. This item is unresolved (346/85016-02) pending further review.

No items of noncompliance or deviation were identified.

5. Monthly Maintenance Observation

Station maintenance activities of safety related systems and components listed below were observed/reviewed to ascertain that they were conducted in accordance with approved procedures, regulatory guides and industry codes or standards and in conformance with technical specifications.

The following items were considered during this review: the limiting conditions for operation were met while components or systems were removed from service; approvals were obtained prior to initiating the work; activities were accomplished using approved procedures and were inspected as applicable; functional testing and/or calibrations were performed prior to returning components or systems to service; quality control records were maintained; activities were accomplished by qualified personnel; parts and materials used were properly certified; radiological controls were implemented; and, fire prevention controls were implemented.

Work requests were reviewed to determine status of outstanding jobs and to assure that priority is assigned to safety-related equipment maintenance which may affect system performance.

The following maintenance activities were observed/reviewed:

- Installation of a fire wall and fire doors in the auxiliary building
- Emergency diesel generator preventive maintenance

Following completion of maintenance on the emergency diesel generator, the inspector verified that the system had been returned to service properly.

No items of noncompliance or deviations were identified.

6. Monthly Surveillance Observation

The inspector observed technical specifications required surveillance testing on the Control Rod Drive System, ST 5013.02, Control Rod Assembly Insertion Time Test, and verified that testing was performed in accordance with adequate procedures, that test instrumentation was calibrated, that limiting conditions for operation were met, that removal and restoration of the affected components were accomplished, that test results conformed with technical specifications and procedure requirements and were reviewed by personnel other than the individual directing the test, and that any deficiencies identified during the testing were properly reviewed and resolved by appropriate management personnel. While reviewing the test results the inspector noted minor errors in the calculation of rod insertion time. The inspector then reviewed the same calculations in the record of the previous test. Similar errors were noted. The inspector discussed these errors with the licensee and verified that the errors did not affect the results of the test.

The inspectors also witnessed portions of the following test activities:

ST 5013.03	Control Rod Program Verification
ST 5030.02	Reactor Protection System Functional Test
ST 5081.01	Diesel Generator Monthly Test
ST 5031.14	Steam and Feedwater Rupture Control System Monthly Test

While reviewing the results of the control rod program verification, the inspector noted that there was no Test Deficiency List attached. Administrative Procedure AD 1838.02, Performance of Surveillance and Periodic Tests, requires that a brief summary of any malfunctions be noted on a Test Deficiency List and that the list be attached to the completed test. Since several malfunctions had occurred during conduct of the test, preparation and attachment of a Test Deficiency List was required. The control rod program verification also requires that the reactor coolant system (RCS) boron concentration be determined at least once per two hours during the verification of the rod program by control rod movement. The test data sheet (enclosure 12 of ST 5013.03) shows that RCS boron concentration was not verified within the time required on two occasions and the test data sheet does not include any record of RCS boron concentration verification during other times when the rod program was being verified by control rod movement. The failure to prepare a Test Deficiency List and the inadequate verification of RCS boron concentration are considered examples of an item of noncompliance for failure to properly implement procedures (346/85016-03).

No other items of noncompliance or deviations were identified.

7. IE Bulletin Followup

For the IE Bulletin listed below, the inspector verified that the written response was within the time period stated in the bulletin, that the written response included the information required to be reported, that the written response included adequate corrective action commitments based on information presented in the bulletin and the licensee's response, that licensee management forwarded copies of the written response to the appropriate onsite management representatives, that information discussed in the licensee's written response was accurate, and that corrective action taken by the licensee was as described in the written response.

IEB 83-07, Fraudulent Material Supplied by Ray Miller, Inc. U.S. Steel stated that no Ray Miller material was supplied from U.S. Steel to Toledo Edison. Reynolds Aluminum stated that they were unable to determine if any material from Ray Miller was supplied from Reynolds Aluminum to Toledo Edison. The licensee researched the material supplied from Reynolds Aluminum to Toledo Edison and determined that none of the material was for safety-related application. This bulletin is considered closed.

No items of noncompliance or deviation were identified.

8. Followup on Operational Event

On April 17 and May 13, 1985, the licensee observed evidence of water hammer in the auxiliary feedwater steam supply lines. This water hammer problem is the subject of Inspection Report 85013 and was also addressed in a Confirmatory Action Letter on April 26, 1985.

On April 30 and May 1, 1985, the licensee experienced Level 1 Safety Features Actuations due to spurious trips of the Channel 4 containment radiation monitor. In each case, a single channel containment radiation monitor trip was sufficient to cause a Level 1 actuation because the Channel 1 containment radiation monitor had been declared inoperable and placed in the tripped condition on April 30, 1985. All systems responded as expected during each actuation except for one Emergency Core Cooling System Room Ventilation Damper (HV 5716). After the April 30 actuation, HV 5716 was manually closed and power to it was removed. All other affected equipment was restored to normal following identification of the cause of each actuation.

On May 5, 1985, the licensee declared an unusual event when the meteorological tower lost electrical power. The normal power supply was lost when a breaker tripped due to a ground. The meteorological tower automatic transfer switch did not automatically transfer to the backup power supply. The unusual event was terminated approximately one hour later when the transfer switch was manually transferred to the alternate power supply. The ground was eliminated from the normal power supply and the normal feeder was energized. When the alternate power supply was deenergized the automatic transfer switch performed its function and transferred automatically to the normal power supply.

Following the plant trip on April 24, 1985 the inspector ascertained the status of the reactor and safety systems by observation of control room indicators and discussions with licensee personnel concerning plant parameters, emergency system status and reactor coolant chemistry. The inspector verified the establishment of proper communications and reviewed the corrective actions taken by the licensee.

All systems responded as expected, except for an unexplained steam generator low level trip on one channel of the Steam and Feedwater Rupture Control System and an unexplained trip of one Main Feedwater Pump. The trip was caused by overly conservative flux-to-flow setpoints in the flux/delta flux/flow module of the Reactor Protection System (RPS), an overly conservative calibration of the flux inputs to the RPS and fluctuations in the reactor coolant flow input to the RPS. The details of this trip are discussed in Inspection Report 85009. After determining the cause of the trip the plant was returned to operation on April 25. The licensee is restricting reactor power to 90% until the optimum setpoints for the flux/delta flux/flow trip are determined.

No items of noncompliance or deviations were identified.

9. Meeting with Licensee

On May 2, the NRC met with the licensee in the Region III offices to discuss an apparent miscommunication between the NRC and licensee personnel on April 1, 1985. On April 1, licensee personnel told the NRC that the Control Rod Drive Mechanism leadscrew nut assembly leaf springs had been exercised. The inspector later determined that the exercising had not

been done. On May 2 the licensee presented the results of their investigation of the false statement and their corrective actions. The information presented showed that the miscommunication was the unintentional result of the licensee's poor internal communications. The corrective actions taken by the licensee appear to be sufficient to prevent future communications failures. This item is considered closed.

No items of noncompliance or deviations were identified.

10. Region's requests

Due to problems experienced at other licensed facilities, the region requested verification that:

- a. Directives or procedures exist that clearly define "at the controls" for a reactor or senior reactor operator.
- b. Directives or procedures exist implementing the requirement for an operator or senior operator to be present in the control room at all times.

The inspector reviewed Administrative Procedure AD 1839.00, Station Operations, and determined that sections 5.1.1 and 5.1.2 along with the sketch of enclosure II of the procedure provide adequate direction with regard to a. and b. above.

Due to a problem experienced at the Byron Nuclear Power Station, the region requested the inspector determine the:

- a. Installed configuration of the main steam isolation valves (MSIV).
- b. MSIVs' manufacturer.
- c. Methodology utilized by the licensee to demonstrate the operability of the MSIVs.

This information was compiled and provided to regional management on April 17, 1985. While compiling the information on the MSIVs (MS100 and MS101), the inspector discovered an apparent deficiency in the integrated Steam and Feedwater Rupture Control System (SFRCS) Test, ST5031.18. The test only verifies operability of part of the solenoids and associated air system for actuation Channel 1 to MS101 and for actuation Channel 2 to MS100. This item will remain unresolved (346/85016-04) pending review by NRR.

Due to a seismic qualification problem identified by Commonwealth Edison Company, regional management requested the inspector to inspect all safety-related batteries and:

- a. Determine whether the licensee received any notification of this problem from GNB Batteries, Inc. (GNB).

- b. If the licensee did receive notification, determine what action was taken to resolve this issue.
- c. Measure and ensure that the end gap on each end of a rack is between 1/8" to 1/4" maximum.
- d. Measure and ensure that the distance between the rack side stringers and the battery cells is no greater than 1/4".

The inspector determined that the licensee did not receive any notification of this problem from GNB. However, they were made aware of the problem during an inspection by the NRC Vendor Programs Branch. At the time the inspector inspected the batteries, the licensee had modified their battery racks in accordance with directions they had received after initiating contact with GNB. The end gaps on each rack are now all less than 1/4" and the distance between all rack side stringers and the battery cells is no greater than 1/4".

Regional management requested that the inspector verify that the safety evaluation for IEB 80-06, Engineered Safety Features Reset Controls, was consistent with the licensee's submittal on the bulletin. The inspector reviewed the safety evaluation and the licensee's responses to the bulletin and determined that they were consistent.

No items of noncompliance or deviations were identified.

11. Training

The inspector conducted a followup inspection of the training department with respect to the Performance Appraisal Section (PAS) findings and items previously identified in Inspection Reports 50-346/84019 and 50-346/85004. The inspection included a review of training department and administrative procedures and interviews with members of the training and maintenance departments. Of the seven items reviewed, two were ready for closure. One item is documented in paragraph 2 of this report and the other item was addressed as follows:

Report 50-346/84-19, Non-Operator Training Observation 1.c.(2) (Closed) Maintenance personnel were trained on material handling and storage requirements for nuclear safety-related material in accordance with Administrative Procedure AD 1847.00, Station Materials Control. The training was conducted in conjunction with other procedures during February and March of 1985. Also, job task analyses were completed to determine specific training requirements for maintenance personnel.

No items of noncompliance or deviations were identified.

12. 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. Unresolved items disclosed during the inspection are discussed in paragraphs 4 and 6.

13. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) throughout the month and at the conclusion of the inspection on May 10, 1985, and summarized the scope and findings of the inspection activities. The licensee acknowledged the findings. After discussions with the licensee, the inspectors have determined there is no proprietary data contained in this inspection report.