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

REGION III

Report No. 50-346/80-25

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

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

Facility Name: Davis-Besse, Unit 1

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

Inspection Conducted: August 18-22, 25-29, September 2-5, 8-12, and 15-19, 1980

Inspectors: RFW for L. A. Reyes — Oct 14, 1980

RFW for W. G. Rogers — Oct 14, 1980

J. D. Smith — Oct 15, 1980

J. D. Smith (August 25-27, 1980)

T. N. Tambling — Oct 15, 1980

T. N. Tambling (September 15-19, 1980)

Approved By: RF Warnick — Oct 14, 1980
R. F. Warnick, Chief
Projects Section 3

Inspection Summary

Inspection on August 18-22, 25-29, September 2-5, 8-12, and 15-19, 1980 (Report No. 50-346/80-25)

Areas Inspected: Routine resident inspection of Followup Action on Previous Inspection Findings, Monthly Maintenance Observation, Monthly Surveillance Observation, IE Bulletin Followup, IE Circular Followup, Followup on Licensee Event Reports, Inspection During Long-Term Shutdown, and Organization and Administration. The inspection involved a total of 226 inspector-hours onsite by four NRC inspectors including 48 inspector-hours onsite during off-shifts.

Results: Of the eight areas inspected, no items of noncompliance or deviations were identified in seven areas; one apparent item of noncompliance was identified in the other area (Infraction - Failure to use the latest revision of an approved procedure - Paragraph 8).

DETAILS

1. Persons Contacted

*T. Murray, Station Superintendent
**B. [illegible]yer, Assistant Station Superintendent
P. Carr, Maintenance Engineer
S. Quennoz, Technical Engineer
***D. Huffman, Administrative Coordinator
D. Miller, Operations Engineer
D. Briden, Chemist and Health Physicist
J. Hickey, Training Supervisor
L. Simon, Operations Supervisor
C. Daft, Operations QA Manager
***C. Greer, Operations QA Supervisor

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

*Denotes those present at the exit interviews on September 5 and 19, 1980.

**Denotes those present at the exit interview on August 27, 1980.

***Denotes those present at both exit interviews.

2. Licensee Action on Previous Inspection Findings

(Closed) Unresolved Item (50-346/78-13-Paragraph 13.b): The inspector reviewed Facility Change Request 79-365 which has been completed. This modification provides a fast transfer from Startup Transformer 01 to Startup Transformer 02 when the Reserve Source Selector is in the "02" position. Prior to this change the transfer would occur only if the Startup Transformer locked out. This FCR also provides a fast transfer from Startup Transformer 02 to 01 when the selector is in the "01" position. This modification will make the plant less susceptible to loss of offsite power events in that it provides fast transfers between transformers (and their offsite sources).

The inspector reviewed Facility Change Request 78-454 which has been completed and tested at partial load. This modification provides a fast transfer from Auxiliary Transformer 11 to Startup Transformer 01 or 02 when the unit generator trips thereby maintaining a supply of offsite power to the plant as required by General Design Criterion 17 of 10 CFR 50 Appendix "B" and commitments in the Davis-Besse Final Safety Analysis Report. As part of the FCR review the inspector reviewed test PT 5103.06, "13.8kv System Buses A & B Transfer Test." This test verifies the transfer time of the 13.8kv Buses A & B from unit Auxiliary Transformer 11 to Startup Transformer 01 or 02. Results of this test demonstrated a transfer time of 8 cycles. This was with no large loads on the buses. Calculations by the licensee's

architect engineer (Bechtel Corporation) indicate a transfer time of 11 cycles with large loads on the bus. At the exit interview on August 27, 1980, the licensee committed to performing a test during the first planned shutdown to verify the transfer time with large operating loads on the buses.

This FCR has also added an underfrequency trip on the 13.8kv buses which will isolate them from the Startup Transformer should a grid underfrequency occur. This trip will occur if the grid frequency drops below 59.9HZ. If operating on Auxiliary Transformer 11, a trip of the 13.8kv buses will occur on the loss of voltage to the buses. Underfrequency trips are provided as part of the main generator protection when the generator is on line and backfeeding through Auxiliary Transformer 11. These two features provide adequate assurance that the reactor coolant pumps will be tripped on a low grid frequency condition thus insuring flow coastdown assumptions in the accident analysis.

(Closed) Noncompliance (50-346/78-01): Failure to properly implement Administrative Procedure AD 1839.01. The inspector verified that the transient logs are being maintained as required by the procedure.

(Closed) Unresolved Item (50-346/78-01): Investigation into why containment isolation valve RC 240A did not operate. The investigation indicated that the problem was due to the spring adjustment on the hanger. The licensee submitted a revision to LER 33-77-40 on September 27, 1978.

(Closed) Noncompliance (50-346/78-13): Failure to properly implement Administrative Procedure AD 1838.02, and AD 1844.00. The inspector verified the licensee corrective actions and revision to AD 1844.00.

(Closed) Noncompliance Item 2 (50-346/78-16): Failure of CNRB to review reports of audits under its cognizance during scheduled meeting. The inspector verified that the CNRB performed audit reviews September 8, 1978 (minutes #28) and September 28, 1978 (minutes #30). In the exit interview the licensee was reminded that although some audits were reviewed in subsequent meetings, they did not cover all audits under the CNRB cognizance. The Technical Specifications require these audits to be reviewed at least every 24 months. It was noted that CNRB members do receive copies of audit reports as they are issued for their review.

(Closed) Noncompliance Item 1 (50-346/78-20): Failure to document the starting time of the emergency diesel generators during monthly surveillance testing. The inspector verified that procedure ST 5081.01 had been revised to include recording of the diesel generator starting time.

(Closed) Noncompliance Item 1 (50-346/78-29): Failure to submit a special report when the diesel fire pump was inoperable for greater than seven days. The inspector verified a special report was submitted on April 3, 1979.

(Closed) Noncompliance Item 2 (50-346/78-29): Failure to submit a thirty day written report to the NRC to report the drift in setpoints on the main steam code safety valve. The inspector verified that LER 79-20 was submitted March 1, 1979.

(Closed) Noncompliance Item 3 (50-346/78-29): Failure to properly implement written procedures in the areas of administrative controls for surveillance testing and procedure revision. The inspector verified the licensee corrective actions.

(Closed) Noncompliance Item 3 (50-346/78-19): Failure to properly implement Administrative Procedure AD 1823.00, Jumper and Lifted Wire Control Procedure. The inspector verified the licensee corrective action.

(Closed) Noncompliance Item 1, responses 1, 2, and 3 and steps to prevent recurrence (50-346/78-19): Diesel generators were not capable of auto-connecting essential loads for all conditions of safety injection signals in conjunction with a loss of offsite power. The licensee reviewed the design features and made a comparison against the preoperational testing, retesting of the SFAS, revisions to Administrative Procedure AD 1845 concerning post installation/modification testing, and requirements for the architect-engineer to include post installation/modification testing in appropriate emergency documents.

(Closed) Noncompliance Item 2, responses 2(a) and 2(b) (50-346/78-19): Failure to properly implement test programs. The inspector verified the licensee's corrective actions.

(Open) Open Item (50-346/79-05-01): LER's 78-112 and 78-84. Open pending completion of corrective actions being initiated under FCR's 78-508 and 78-84, respectively. FCR 78-84 was completed and LER 78-84 was revised March 21, 1979. FCR 78-508 has not been implemented yet (installation of a heat exchanger in DI water line). However, FCR 78-450 was implemented during the current refueling/maintenance outage to change the location of the temperature sensor on the heat tracing to minimize the problem of low temperature in the boric acid line.

(Closed) Open Item (50-346/79-05-04): The inspector verified that the cause codes were appropriately revised on Feburary 22, 1979 for LER's 78-66 and 78-83.

(Closed) Open Item (50-346/79-05-05): Personnel errors were a subject in a series of management meetings held with the licensee April 18, May 31, July 17, September 19, 1979, and February 29, and June 4, 1980 (Inspection Reports 50-346/79-08, 79-12, 79-20, 79-26, 80—06 and 80-17).

3. 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:

Replacement of Emergency Diesel Generator #1 and #2 turbocharger Spring Drive Gear Assembly.

Following completion of maintenance on the Emergency Diesel Generators, the inspector verified that these systems had been returned to service properly.

No items of noncompliance or deviations were identified.

4. Monthly Surveillance Observation

The inspector observed technical specifications required surveillance testing on the Diesel Fire Pump (ST 5016.01) 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.

The inspector also witnessed portions of the following test activities: SFAS (ST 5031.06) and Emergency Diesel Generator (ST 5081.01).

No items of noncompliance or deviations were identified.

5. 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.

80-12	Loss of Indication for Letdown Cooler Valve MU2A
80-13	Control Rod 5-11 Position Indication Inoperable
80-14	Pressurizer Sample System Valve RC240B Inoperable
80-15	Control Rod 5-11 Position Indication Inoperable
80-16	Overdue Surveillance for Containment Airlock
80-17	BWST Channel 3 out of Tolerance
80-18	BWST Channel 3 Freeze
80-20	Loss of Position Indication for Containment Vacuum Relief
80-21	Failure of Diesel Fire Pump Controls
78-104	Deficiency in Grid Stability Analysis
78-125	Loss of Power to 4.16kv Essential Bus D-1
79-01	Station Ventilation Radiator Monitors Inoperable
79-19	Containment Spray Pump 1-2 Suction and Discharge Valves Not Opened During Startup
79-31	Verification of Axial Power Imbalance Failed to Satisfy Surveillance Requirements
79-36	SFAS Channel 4 Output Relay K21B Failure
79-38	RPS Channel 3 Intermediate Range Rate of Change Amplifier Out of Specification
79-40	EDG 1-2 Sprayed With Water From the Fire Protection System
79-34	Inoperability of HPI Pumps
79-47	Makeup Pump 1-1 Removed From Service Due to Decreased Performance
NP-33-77-56	Diesel Generator #1 Inoperable

80-61 On September 10, 1980, the licensee reported that while reviewing their calibration records it was determined that valve SV5005, which controls containment purge isolation damper CV5005, was not qualified for nuclear service. This valve was originally installed for temporary use on August 26, 1976 but was never replaced with the proper valve. The inspector requested the licensee provide more details on the occurrence and review the cause code used in the report. The inspector will followup on this item to verify and sample the results of the ongoing review of calibration records being performed by the licensee. (50-346/80-25-01)

80-62 On September 18, 1980, the licensee reported that while performing the walkdown required by Bulletin 80-11, it was discovered that protective curbs designed to prevent flooding in lower elevations during a feedwater line break outside containment had not been installed in Rooms 303 and 314. The licensee has initiated facility change request 80-215 to install curbs. This modification has been assigned a high priority but the licensee does not consider it a requirement for startup based on their review of the consequences of a feedwater line break outside containment with no curbs in these rooms. The inspector requested that the licensee document the review made by the architect engineer and by TECo. The licensee agreed to document the review and to provide a copy for review by the inspector. The inspector will followup on this item.
(50-346/80-25-02)

No items of noncompliance or deviations were identified. The inspector noted that the licensee had identified and corrected several items related to Technical Specifications.

The following licensee event reports were reviewed and evaluated in-office and are considered closed.

78-126	Component Cooling Water Heat Exchanger Service Water Outlet Valve Operating Improperly
78-127	API for Group 5, Rod 4 Inoperable
NP-09-79-04	Station Vent Monitors RE 2024 and RE 2025 Declared Inoperable
79-07	Containment Hydrogen Analyzer Channel 2 Inoperable
79-10	Fire Detection System Became Inoperable When Remote Indication on Data Logger Typewriter Was Lost
79-20	Main Steam Safety Valves Were Tested and Found to be Outside of ±1% Design Setpoint Range
79-24	Fire Alarm Panel C4706 Inoperable Due to Erroneous Detector
79-26	Failure of the System 7 Security/Fire/Radiation Computer
79-27	API for Control Rod 9, Group 5 Inoperable
79-29	Inadvertent Closure of BWST Isolation Valves
79-30	AFWS Valve Torque Switch Failed
79-37	Group 8, Rod 6 Inoperable
79-41	Failure of the Pressurizer Auxiliary Spray Containment Isolation Valve (DH 2735) to Close
79-42	Failure to Satisfy Increased Surveillance Requirements When Group 8 was in Asymmetric Bypass
79-43	Failure of the IBM System 7 Security/Fire/Radiation Computer
79-44	Tripping of RCP 1-1 Due to Motor Thrust Bearing Low Oil Level
79-45	BWST Low Level Trip Setpoint Out of Tolerance
78-121	BWST Level Transmitter Inoperable
78-122	API For Control Rod 4, Group 3 Inoperable
78-103	Boric Acid Flow Path Heat Trace Inoperable
78-110	NI Imbalance Indication Out of Calibration

6. IE Bulletin Followup

For the IE Bulletins 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.

79-04	Incorrect Weights for Swing Check Valves Manufactured By Velan Engineering Corporation
79-09	Failures of GE Type AK-2 Circuit Breaker in Safety Related Systems
79-11	Faulty Overcurrent Trip Device in Circuit Breakers for Engineered Safety Systems
79-18	Audibility Problems Encountered on Evacuation
79-27	Loss of Non-Class-1-E Instrumentation and Control Power Systems During Operation
80-15	Possible Loss of Hotline with Loss of Offsite Power
80-19	Failures of Mercury-Wetted Relays in Reactor Protective Systems of Operating Nuclear Power Plants Designed by Combustion Engineer
80-20	Failures of Westinghouse Type W-2 Spring Return to Neutral Control Switches

No Items of noncompliance or deviations were identified.

7. IE Circular Followup

For the IE Circulars listed below, the inspector verified that the Circular was received by the licensee management, that a review for applicability was performed, and that if the circular were applicable to the facility, appropriate corrective actions were taken or were scheduled to be taken.

78-02	Proper Lubricating Oil for Terry Turbines
78-07	Damaged Components of a Bergen-Paterson Series 25000 Hydraulic Test Stand
78-09	Arcing of General Electric Company Size 2 Contactors
78-15	Check Valves Fail to Close in Vertical Position
80-07	Problems with HPCI Turbine Oil System
80-17	Fuel Pin Damage Due to Water Jet From Baffle Plate Corner

No items of noncompliance or deviations were identified.

8. Inspection During Long Term Shutdown

The inspector observed control room operations, reviewed applicable logs and conducted discussions with control room operators during

the period of August 18 - September 19, 1980. The inspector verified surveillance tests required during the shutdown were accomplished, reviewed tagout records, and verified applicability of containment integrity. Tours of containment, Auxiliary, and turbine building accessible areas, including exterior areas were made to make independent assessments of equipment conditions, plant conditions, radiological controls, safety, and adherence to regulatory requirements and to verify that maintenance requests had been initiated for equipment in need of maintenance. The inspector observed plant housekeeping/cleanliness conditions, including potential fire hazards, and verified implementation of radiation protection controls. 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 reviewed the licensee's jumper/bypass controls to verify there were no conflicts with technical specifications and verified the implementation of radioactive waste system controls. The inspector witnessed portions of the radioactive waste systems controls associated with radwaste shipments and barreling.

While conducting the control room observations on September 17, 1980, the inspector determined that the procedure being used by the operators to align and operate the makeup and purification system was not the latest approved revision. The operators were using Revision 9 of Procedure SP 1104.02 while Revision 10 was approved for use on July 3, 1980. This appears to be contrary to 10 CFR 50 Appendix B Section VI which requires that measures be established to control the issuance of documents to assure that documents, such as procedures, are used at the location where the prescribed activity is performed. It also appears to be contrary to TS 6.8.1 and Regulatory Guide 1.33 which requires that procedures for operation of safety related systems be implemented.

The inspector learned that the control room operators maintained a file of "uncontrolled copies" of certain procedures used routinely during plant shutdown and startup. These uncontrolled copies led to the item of noncompliance and are conducive to repetition of the problem. This matter was discussed at the exit meeting.

No other items of noncompliance or deviations were identified.

9. Organization and Administration

The inspector examined the licensee's onsite and offsite organizational structures to determine whether these organizational structures were in conformance with the licensee's Administrative Technical Specifications. The inspector ascertained that the licensee's organization structure was not as delineated in the Technical Specifications. Specifically:

a. The position of "Project Management" had been deleted.

b. The title "Power Engineering and Construction General Superintendent" is now "Nuclear Engineering and Construction Director."

c. The positions supervised by the "Nuclear Engineering and Construction Director" are not the same positions supervised by the superceded "Power Engineering and Construction General Superintendent."

Original positions supervised were the Special Projects Manager, the Project Engineer, and the Power Plant Construction Superintendent. The new positions are the Nuclear Licensing Manager, the Nuclear Engineering Manager, the Nuclear Construction Manager, and the Nuclear Projects Manager.

d. The Fossil Generation Facilities General Superintendent's title is now Fossil Facilities Engineering and Construction Director.

e. The supervisor for the Training Supervisor is the Nuclear Services Director instead of the Station Superintendent.

f. The chairman of the Company Nuclear Review Board is the Fossil Facilities Engineering and Construction Director instead of the Power Engineering and Construction General Superintendent.

These organizational changes (or at least most of them) were discussed with the Director of Region III by the TECo Vice President on July 28, 1980, before their implementation. As of this inspection period, the licensee had not yet submitted a proposed change to their Technical Specifications to bring the TS into agreement with the actual organizational structure. Because these changes had been discussed with RIII before their implementation this is not identified as an item of noncompliance; however, the inspector is very concerned with the licensees failure to submit a timely proposed change to the Technical Specifications.

Additionally, the inspector examined select onsite and offsite personnel to determine if their positions were commensurate with the educational and professional requirements delineated in ANSI Standard N18.1 - 1971. All personnel inspected were found to meet or exceed the above standard.

No items of noncompliance or deviations were identified.

10. Exit Interview

The inspector met with licensee representatives (Denoted in Paragraph 1) throughout the month and at the conclusion of the inspection on September 19, 1980, and summarized the scope and findings of the inspection activities.

During the exit interview, the inspector discussed with the licensee representatives the NRC - wide position on licensed power level. The inspector explained that minor excursions above the licensed power level of 2772 MWt are allowed as long as the average power level over the eight hour shift does not exceed the licensed power level.