

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-346/93015(DRS)

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

Inspection At: Oak Harbor, OH

Inspection Conducted: August 23 through August 26, 1993

Inspectors: R. Winter for
J. Neisler

9/15/93
Date

R. Winter
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9/15/93
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Approved By: R. N. Gardner for
R. N. Gardner, Chief
Plant Systems Section

9/15/93
Date

Inspection Summary

Inspection on August 23 - 26, 1993 (Report No. 50-346/93015(DRS)).

Areas Inspected: Announced followup inspection of previously identified EDSFI findings in accordance with Temporary Instruction (TI) 2515/111.

Results: The inspection determined that the licensee made adequate progress in resolving EDSFI issues. Eight previously identified findings were closed (Paragraph 2.0).

DETAILS

1.0 Principal Persons Contacted

Toledo Edison Company

- *G. Gibbs, Director of Engineering
- *P. Roelant, Plant Engineering
- *T. LeMay, Maintenance Planning Supervisor
- *A. Rabe, Quality Assurance Supervisor
- *N. Peterson, Regulatory Affairs, NRC Coordinator
- *G. Honma, Regulatory Affairs, Compliance Supervisor
- *M. Leisor, Regulatory Affairs, Senior Engineer
- *K. Nicely, Regulatory Affairs

U. S. Nuclear Regulatory Commission (NRC)

- *K. Walton, Resident Inspector

*Denotes those present during the exit meeting on August 26, 1993.

2.0 Action on Previously Identified Inspection Findings

- a. (Closed) Open Item (346/92007-01): The ELMS-AC calculation did not consider the worst case grid voltage in determining the potential short circuit current contribution from the offsite source during a fault and the calculation did not identify the backup service water/dilution pump as a normally operating load.

The inspectors reviewed the revised ELMS-AC computer based calculation C-EE-015.03-004 for short circuit current determinations. The revised calculation uses a worst case voltage of 1.05 p.u. to determine the grid contribution to the short circuit current. The 1.05 p.u. is identified as the maximum peak grid voltage in the station design criteria. In addition, the inspectors noted that Calculation C-EE-015.03-003 had been revised to show the service water/dilution pump modeled as a normally operating 300 hp motor. The revision did not significantly affect the findings of the original calculation. This item is considered closed.

- b. (Closed) Open Item (346/92007-02): EDG load table (DWG E-1043, sheet 1/2) did not include all step 1 loads for a loss of coolant accident (LOCA) event followed by a loss of offsite power (LOOP).

The inspectors noted that Drawings E-1042 and E-1043 were revised to include required all step 1 loads. Additionally, the revision increased step 1 cumulative load to include manual loads which could be energized. The final total load value was less than the continuous rating of the EDG. This item is considered closed.

- c. (Closed) Open Item (346/92007-03A): Several essential 4kV and 480 volt loads appeared to start outside their programmed design sequence steps.

The previous method of verifying these load starts used the plant computer which had a resolution of ± 1 second. A more accurate essential load response time was obtained using a chart recorder. This data showed that sequence times were acceptable and within their programmed design. This item is considered closed.

- d. (Closed) Open Item (346/92007-03B): Several essential 480 volt loads were not verified to start during bus energization.

Surveillance test procedure DB-SC-03114 was upgraded by listing procedure step numbers next to the acceptance criteria signoff statement and by the addition of a requirement to add a local recording device to monitor two 480 volt essential bus voltages. This data will be trended to identify equipment anomalies and failures. This item is considered closed.

- e. (Closed) Open Item (346/92007-04A): Minimum battery output voltage (105Vdc) was not adequately supported by calculation.

The inspectors verified that procedure DB-ME-03002, Station Battery and Performance Discharge Test, had been revised and that the results from calculation C-EE-002.01-010 had been used to establish minimum acceptance criteria during battery performance and service tests. The procedure requires that test data be recorded and compared against the minimum acceptance criteria at the end of each profile segment. This item is considered closed.

- f. (Closed) Open Item (346/92007-04B): Various components may not receive adequate voltage during a design basis scenario (LOCA with loss of AC).

The licensee changed calculation No. C-EE-002.01-010 to revise the minimum voltage acceptance value for MVO1060 to a value based on manufacturer's data, to add motors MP371C and MP372C which were not included in the original calculation and to justify low voltage during the first minute for these motors. Additionally, the revised calculation gave more thorough justification on the possible effects of low voltage on the design basis scenario. This item is considered closed.

- g. (Closed) Open Item (346/92007-05): Fault current protection for some containment electrical penetrations did not comply with commitments identified in USAR, Section 8.3.1.2.24; in that, RG 1.63, Revision 2, Part C and IEEE 279-1971 single failure criteria appear to require both primary and backup fault protection over the entire time-current curve.

The licensee is using a portable fuel oil filter skid in the fuel oil storage tank fill line in lieu of an installed strainer. Instructions and requirements for use of the filter are documented in Procedure DB-OP-06273, "Diesel Fuel Oil Transfer", revision 00, dated June 12, 1990.

The fuel oil storage tanks do not have high level alarms. The alarms were not included in the original design of the system although the 1976 version of the FSAR exceptions to ANSI N195 indicates that the storage tanks have high/low level alarms. Local high level indication is provided by red indicating lights at the storage area.

The licensee has initiated Change Notice, UCN 92-061 to include in the strainer and high level alarm exceptions in USAR section 9.5.4.2. This item is considered closed.

- j. (Closed) Unresolved item (346/90010-03)(DRS): Design engineering recommended a battery undervoltage (UV) setpoint of 126 ± 1 Vdc and overvoltage (OV) setpoint of $148 + 0, -2$ Vdc. However, the licensee's relay setting change notice did not specify a setpoint tolerance.

The plant assigned a setpoint tolerance of ± 3 Vdc based on a relay meter accuracy of $\pm 2\%$. As a result, there exists the potential for the station battery Technical Specification to be exceeded when Measuring and Test Equipment (MTE) accuracy was considered. Additionally Design engineering was not cognizant of the plant's implementation of the setpoint tolerance.

Subsequently, design engineering assigned new setpoint tolerances to assure even with the additional MTE uncertainty setpoints are within their respective Technical Specification limit. The inspectors verified that the licensee had revised Procedure NG-NE-0310, "Setpoint Control", to assure that the maintenance planning group cognizance of design engineering's setpoint changes. Procedure DB-MI-00001, "Control Review and Revision of I & C Data Packages, revision 01, dated March 8, 1991 was revised to delineate responsibility of the data package writer and the instrument and control (I & C) mechanics for assuring that complete and correct information is included in the I & C data packages. This item is considered closed.

3.0 Exit Interview

The inspectors met with licensee representatives (denoted in Paragraph 1.0) at the conclusion of the inspection on August 26, 1993. The inspectors summarized the scope and findings of the inspection activities. The inspectors also discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspector during the inspection. The licensee did not identify any such document or processes as proprietary.