

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-341/85-003(DRS)

Docket No. 50-341

License No. CPPR-87

Licensee: Detroit Edison Company
2000 Second Avenue
Detroit, Michigan 48224

Facility Name: Fermi Power Station, Unit 2

Inspection At: Fermi 2 Site

Inspection Conducted: January 14 through February 22, 1985

Inspectors: *S. G. DuPont*
S. G. DuPont

3/13/85
Date

D. E. Hills
D. E. Hills

3/13/85
Date

Approved By: *M. A. Ring*
M. A. Ring, Acting Chief
Test Programs Section

3/13/85
Date

Inspection Summary

Inspection on January 14 through February 22, 1985 (Report No. 50/341-85-03(DRS))

Areas Inspected: Routine, unannounced inspection by regional inspectors for Licensee action on previous inspection findings, actions with regard to IE bulletins, preoperational test results review, preoperational test results verification, preoperational test witnessing, surveillance program and startup test phase procedure review. The inspection involved a total of 103 inspector-hours onsite by one NRC inspector, including 31 inspector-hours onsite during off-shifts. In addition, the inspection involved 124 inspector-hours by two NRC inspectors in the regional office.

Results: No items of noncompliance or deviations were identified.

8503200373 850314
PDR ADOCK 05000341
G PDR

DETAILS

1. Persons Contacted

Detroit Edison Company (DECo)

- R. S. Lenart, Superintendent, Nuclear Operations
- *G. R. Overbeck, Assistant Superintendent, Nuclear Production
- M. Ripley, Startup Director
- *M. W. Shields, Lead Startup Test Phase Engineer
- *J. E. Conen, Engineer, Licensing
- *S. R. Brooks, Engineer, Nuclear Production Technical Staff

The inspectors also interviewed other members of the licensee's startup and nuclear production staffs.

*Denotes personnel attending the exit interview of February 22, 1985.

2. Licensee Action on Previous Inspection Findings

(Closed) Noncompliance (341/84-65-01(DRS)) and 10 CFR 50.55(e) item (341/85-02-EE(DRS)): Modifications to primary containment isolation solenoid valves were installed incorrectly and Maintenance and Modification Quality Assurance (M&M QA) failed to execute an adequate inspection to detect the error. Detroit Edison Company (DECo) addressed the installation of the modification, Field Modification (FMR) Number 6989, in 50.55(e) Report Number 145 (341/85-02-EE). Detroit Edison Company examined 65 additional solenoid valves that had been installed by similar FMRs and verified that only the 16 solenoids installed by FMR 6989 were in nonconformance with documented instructions and drawings. To provide adequate corrective actions, DECo instructed the M&M QA staff and provided additional instructions to the inspection effort of modifications. The inspector verified that the rework of FMR 6989 had resulted in the proper installation. Additionally, the inspector witnessed the supplemental preoperational test, STF 10, of the Primary Containment Pressure Control System and verified the correct operation of the 16 solenoid valves affected by FMR 6989.

(Closed) Noncompliance (341/84-37-02(DRS)): Inadequate preparation and review of a temporary modification during preoperational testing. The inspector reviewed the revised Detroit Edison Company Plant Operations Manual (POM) Procedure 12.000.25, "Temporary Modifications" and verified that adequate controls now exist to ensure that temporary modifications are reviewed by Nuclear Quality Assurance to determine inspection requirements for safety-related systems. Additionally, the inspector verified that training was received by the technical, startup, maintenance and instrumentation staffs on the controls and review requirements. These actions and scheduled training for new employees are adequate and the inspector has no further concerns in this area.

(Closed) Noncompliance (341/84-46-01(DRS)): Inadequate technical group station batteries surveillance procedures. The inspector reviewed the current revision of the following surveillance procedures and found them adequate:

- 42.309.01 - Weekly Battery Surveillance
- 42.309.02 - Quarterly Battery Surveillance
- 42.309.03 - Battery Load Profile Surveillance
- 42.309.04 - Battery Charger Surveillance
- 42.309.05 - Battery Performance Surveillance

(Open) 50.55(e) Item (341/83-15-EE(DRS)): Debris in safety related piping. Detroit Edison supplemented their report on debris discovered in safety-related systems on February 7, 1985, to report additional debris discovered in the instrument volume of the north scram discharge system, the upstream isolation valve for the instrument volume drain line exceeded the allowable leak rate. Detroit Edison Company opened the valve and found a portion of a flashlight and a pneumatic grinder was also lodged in the north instrument volume. The corrective actions taken by DECO included removing the debris, inspecting the 8-inch scram discharge header piping with a TV camera and radiographing the elbows of the 2-inch drain piping. These inspections did not reveal any further debris being lodged in the scram discharge system piping. Additionally, a safety analysis was performed. Previous inspections conducted pertaining to debris in safety-related systems by NRC inspectors are documented in Inspection Reports 50-341/83-21, 50-341/83-22, 50-341/83-25, 50-341/83-28, 50-341/84-11, 50-341/84-29, 50-341/84-37 and 50-341/84-46. Detroit Edison's commitment includes tracking, trending and evaluating each occurrence of debris discovered in safety-related systems. The inspector is satisfied with the licensee's actions, pertaining to their commitment, to date including their corrections to administrative procedures as documented in Inspection Reports 50-341/83-28 and 50-341/84-11. However, this item is to remain open until the completion of the hot functional feedwater testing during the heatup test phase and operation of the High Pressure Injection System at rated pressure to provide additional flushing of any possible debris in the piping. This issue has also been proposed for inclusion in the Draft Fermi-2 Operating License by memorandum to H. R. Denton, Office of Nuclear Reactor Regulation from J. G. Keppler, Regional Administrator, Region III.

3. Licensee Action with Regard to IE Bulletins

(Closed) Bulletin 79-15: Long-Term Operability of Deep Draft Pumps. The Office of Nuclear Reactor Regulation has reviewed the licensee's submittals dated August 16, 1979, October 25, 1979, and November 23, 1981, in response to NRC Bulletin 79-15. The licensee's operability program appears to be acceptable as stated in the Fermi II Safety Evaluation Report, NUREG-0798, Supplement 4. This item is considered to be closed.

4. Preoperational Test Results Review

The inspector reviewed the results of the following tests against the FSAR, the SER, and Regulatory Guide 1.68 and determined that all test changes were processed in accordance with the applicable administrative controls, test deficiencies were processed and corrected as required, results were evaluated and met the acceptance criteria, and that the results were reviewed and accepted for turnover by Detroit Edison Company's Nuclear Production:

- PRET. C4100.001 - "Standby Liquid Control System"
- PRET. E1100.001 - "Residual Heat Removal System"
- PRET. R1102.001 - "Emergency Safety Feature System"
- PRET. R3000.001 - "Emergency Diesel Generator (EDG) System"
- PRET. R3000.003 - "EDG Load Profile Test"
- PRET. R3201.001 - "130/260 Volt Direct Current (VDC) System"
- PRET. R3202.001 - "24/48 VDC System"
- PRET. R3600.001 - "Normal and Emergency Lighting System"
- PRET. T4100.001 - "Reactor Building Heating, Ventilation and Air Conditioning (HVAC) System"
- PRET. T4700.001 - "Drywell Cooling Systems"

No items of noncompliance or deviations were identified.

5. Preoperational Test Results Verification

The inspector reviewed the following preoperational tests and verified that test results were reviewed against approved acceptance criteria and and evaluation of the test results had been performed in accordance with Regulatory Guide 1.68 and the Startup Manual:

- PRET. C5100.001 - "Source Range Monitors"
- PRET. C5111.001 - "Intermediate Range Monitors"
- PRET. C9100.001 - "Process Computer System"
- PRET. D1110.001 - "Process Radiation Monitors"
- PRET. H4000.001 - "Communication and Alarm Systems"
- PRET. P3320.001 - "Reactor Building Process Sampling System"
- PRET. P3320.001 - "Liquid and Solid Process Sampling System"
- PRET. X4103.002 - "EDG Switch Gear HVAC System"
- PRET. X4103.003 - "EDG HVAC System"

No items of noncompliance or deviations were identified.

6. Preoperational Test Witnessing

The inspector witnessed the performance of supplemental test, STF #10, to Primary Containment Pressure Control System preoperational test, PRET. T4800.001. The objective of the test was to verify the logic and operation of the inboard and outboard isolation valves with an automatic signal. The test was performed in a satisfactory manner and the inspector has no further concerns.

No items of noncompliance or deviations were identified.

7. Surveillance Program

The inspector reviewed the following surveillance procedures for conformance with Technical Specifications. The review included acceptance criteria and requirements to determine conformance with Limiting Conditions of Operations (LCO) and determination of component or system operability:

24.204.01, Rev. 1	Division I LPCI and Suppression Pool Cooling and Spray Pump and Valve Operability Test
24.204.02, Rev. 2	LPCI and Suppression Pool Cooling and Spray System Discharge Piping Fill and Valve Lineup Verification
24.206.02, Rev. 1	RCIC Cold Shutdown Valve Operability and Timing Test
24.206.03, Rev. 1	RCIC Discharge Piping Venting and Valve Lineup Verification
24.206.04, Rev. 1	RCIC Flow Rate Test - 150 psig
24.206.05, Rev. 0	RCIC System Local Valve Position Indication Verification
24.307.01, Rev. 2	Emergency Diesel Generator (EDG) 11 ECCS Start with Loss of Offsite Power Test
24.404.05, Rev. 2	Standby Gas Treatment System Local Valve Position Verification
24.207.10, Rev. 1	Reactor Building Closed Cooling Water Local Valve Position Verification

The above procedures perform two functions, the specific Technical Specification surveillance for operability and the Section 4.0.5, Inservice Testing (IST) requirements. However, the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME) Section XI requirement for declaring a valve inoperable if a valve fails to exhibit the correct change of valve stem or disc position and can not be corrected within 24 hours is in conflict with Technical Specifications which requires declaring the valve inoperable immediately upon discovery of the condition. Since the Section XI statement is in the Technical Specification surveillance procedure's general instruction, confusion can exist with declaring a valve or system inoperable and therefore a Technical Specification action statement to an LCO could be violated. The licensee is in agreement and has committed to clarify or remove the Section XI requirement where it conflicts with the Technical Specification. This is an open inspection item(341/85-003-01(DRS)) and will be inspected with the remainder of the Technical Specification surveillances prior to the unit achieving five percent power.

In addition to procedure review, the inspector reviewed the completed surveillance 24.207.10 and found the following discrepancies as part of open inspection item (341/85-003-01): The independent position verification sheet (Attachment 3 to 24.207.10) was initialed by the same person that had also performed the surveillance. Additionally, the pen and ink corrections made during the initial run of the surveillance were not correctly implemented by the Temporary Change Request T0748 and the Designated Reviewer Checklist (Enclosure 2 of procedure 12.000.18) was not the correct checklist for an initial run of a surveillance. Since these discrepancies were also identified by the licensee's Quality Assurance during a current audit, this is not an item of noncompliance and is part of open item 341/85-003-01. The inspector will verify the licensee's corrections with the review of surveillance procedures prior to Fermi 2 achieving five percent power.

No items of noncompliance or deviations were identified.

8. Startup Test Phase Procedure Review

The inspector reviewed the following Startup Test Phase procedures against the FSAR, SER, Regulatory Guide 1.68 and the Startup Manual and found them satisfactory unless otherwise noted:

- STUT. 06B.027 - "Turbine Stop Valve Trip and Generator Load Rejection Test"
- STUT. 01A.028 - "Shutdown From Outside the Control Room - Hot Shutdown Demonstration"
- STUT. 06B.028 - "Shutdown From Outside the Control Room - Cold Shutdown Demonstration"
- STUT. 020.031 - "Loss of Turbine Generator and Off Site Power Test"

Regulatory Guide 1.68.2, Rev. 1, Initial Startup Test Program to Demonstrate Remote Shutdown Capability for Water-Cooled Nuclear Power Plants indicates that the test should demonstrate that "the reactor coolant temperatures and pressure can be lowered sufficiently to permit operation of the core decay heat removal system that is to be ultimately used to place the reactor in a refueling shutdown mode." As also required by the regulatory guide, STUT. 01A.02B, Rev. 5, shows that hot shutdown can be reached and maintained from outside the control room and STUT. 06B.028, Rev. 3, shows that when conditions permit RHR shutdown cooling can be initiated and used to reduce temperature from outside the control room. However, neither procedure satisfies the first requirement by demonstrating that the plant can be taken from outside the control room from the hot shutdown condition of STUT. 01A.02B to the point where conditions permit RHR shutdown cooling to be initiated in STUT. 06B.028. This is to remain an open item (341/85-003-02(DRS)) until adequate methods to satisfy this requirement are determined and incorporated into the appropriate procedure.

No items of noncompliance or deviations were identified.

9. Open Items

Open Items are matters which have been discussed with the licensee which will be reviewed further by the inspector, and which involve some action on the part of the NRC or the licensee or both. Open items were disclosed during the inspection are discussed in Paragraphs 7 and 8.

10. Exit Meeting

The inspector met with site representatives (denoted in Paragraph 1) at the conclusion of the inspection on February 22, 1985. The inspector summarized the scope and findings of the inspection. The inspector also discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspectors during the inspection. The licensee acknowledged the statements made by the inspector with respect to items discussed in the report and did not identify any documents or processes as proprietary.