U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-341/88024(DRS)

Docket No. 50-341 License No. NPF-43

Licensee: The Detroit Edison Company
2000 Second Avenue
Detroit, MI 48224

Facility Name: Fermi 2

Inspection At: Fermi Site, Monroe, Michigan

Inspection Conducted: August 15 through September 9, 1988

Inspector: R. A. Gardner for J. H. Neisler 9/27/88
Date

Approved By: Ronald N. Gardner, Chief 9/27/88
Plant Systems Section Date

Inspection Summary

Inspection on August 15 through September 9, 1988 (Report No. 50-341/88024(DRS))
Areas Inspected: Routine announced inspection of licensee's implementation of Generic Letter 83-28 in the areas of equipment classification, vendor interface, post maintenance testing and reactor protection system reliability. IE Bulletins and open item followup. (25564) (25595) (92700)
SIMS 75 (B-77, B-78, B-79, B-80, B-86, B-87, B-88, B-92, B-93) MPA-C-02.
Results: Of the four areas inspected, no violations or deviations were identified in three areas. One violation was identified in the remaining area (inadequate procedures to control vendor technical information). Within the scope of this report a weakness was observed regarding the inadequate control of vendor equipment technical information. No significant strengths were observed.

DETAILS

1. Persons Contacted

Principle Licensee Employees

*S. G. Catola, Vice President, Nuclear Engineering
*W. S. Orser, Vice President, Nuclear Operations
*D. R. Gipson, Plant Manager
*P. Anthony, Compliance Engineer
*T. Riley, Supervisor, Compliance
*R. Mathews, General Supervisor, Instrument and Controls
*C. Gelletly, Director, Nuclear Engineering
*R. Stafford, Director, Nuclear Quality Assurance
*L. Goodman, Director, Nuclear Licensing
*T. Musseman, Supervisor, Nuclear Training
G. Shukla, Licensing
J. Pendergast, Licensing
A. Elibe, NPRDS
G. Booker, Production Information Center
D. Delk, Supervision, QA Programs
R. Bailey, Supervisor, Production QA
J. Kepus, Environmental Programs Coordinator
B. Wickham, Supervisor, Maintenance Programs
B. Catanese, Maintenance Support Supervisor
R. Ballis, Engineering Supervisor I&C
R. O'Sullivan, Surveillance Coordinator

*Denotes those persons attending the exit interview.

2. TI 2515/64RI (SIMS 75) (Closed)

a. Equipment Classification

The inspector selected four components in the reactor protection system and nine components in the core spray system for examination. The components selected were:

Reactor Protection System

Mode Switch
Scram Auxiliary Contactor
Pilot Valve Solenoid
Manual Scram Switch

Core Spray System (E21)

Core Spray Pump C001A
Core Spray Pump Motor
Core Spray Pump Circuit Breaker
Flow Transmitter N006A
Pressure Transmitter N007A
Motor Operated Valve F036A
Motor Operated Valve F005A
Check Valve F003A
Flow Element FE-N001A

For the selected components, the inspector performed the following reviews:

(1) The inspector reviewed the licensee's safety-related component list. At Fermi, the Q-List was replaced by the Fermi Central Component Data Base (CECo), a computerized listing that is used to identify safety-related components. The inspector selected several components from system drawings and verified that these components were properly identified in the data and that they were correctly classified as safety-related or non-safety-related components.

(2) To determine the level of plant management oversight, the inspector reviewed procedures controlling the classification of structures, systems and components; preventive and corrective maintenance; modifications; procurement, storage and issue; inspection and testing of safety-related items; quality assurance procedures, audits and surveillances; and corporate level procedures and directives for activities impacting safety-related structures, systems and components.

(3) The inspector reviewed surveillance procedures, calibration procedures, maintenance procedures and instructions, functional test procedures and storage procedures to verify that the licensee has issued adequate procedures and instructions for the performance of safety-related activities.

(4) The inspector reviewed the licensee's program and implementing procedures for the training and indoctrination of technicians, craft workers, staff engineers, planners and supervisors whose duties include safety-related activities. Training records indicated that the above personnel were being trained according to applicable procedures.

(5) The inspector reviewed 12 audit reports and 19 surveillance reports documenting Quality Assurance audits and surveillances involving safety-related activities. The quality assurance organization maintains a schedule of planned audits and surveillances of safety-related activities at the plant and at offsite vendor and supplier organizations.

(6) The corrective action program for safety-related activities is described in the licensee's Quality Assurance Manual and implementing procedures. The inspector's review of corrective action for audit and surveillance findings listed in the audits and surveillances in (5) above revealed that corrective action for those findings was timely and adequate.

(7) Review and evaluation of information concerning malfunctioning equipment is controlled by the licensee's procedure POM 12.000.059, "Operating Experience Assessment," by Deviation Events Reports and Nonconformance and Corrective action

procedures. Included in the reviews and evaluation is the determination of the suitability of the equipment to perform its design function.

(8) The inspector reviewed modification packages involving the reactor protection system and the core spray system. The design changes, work requests, drawings, inspection documents and procurement packages were correctly identified as to their safety classification.

b. Vendor Interface

The inspector reviewed procedures controlling the licensee's vendor equipment technical information program. The procedures reviewed were FMD 2.5.10, Revision 0, "Document Control," and NE 2.5.10, Revision 3, "Vendor Manuals". These procedures have no requirement to collect, review, and control existing vendor technical information pertaining to plant safety-related structures, systems, and components that are in possession of individuals, shops, or departments onsite. The inspector observed vendor information in each building visited but there was no indication that the information had been reviewed to determine its applicability to plant components. During discussions with licensee personnel, the inspector was informed that individuals and shops were in possession of uncontrolled and unreviewed vendor manuals.

One of the manuals the inspector selected for review was the vendor manual for the core spray pump discharge check valve, a safety-related code valve that was included in the licensee's inservice inspection program. The inspector was informed by personnel in the Plant Information Center (PIC) that the manual was in use and had not been reviewed and approved. The licensee issued DER 88-1532 after the inspector had identified the unreviewed and unapproved vendor manual.

Based on the above examples, the inspector determined that Fermi 2 procedures controlling the vendor equipment technical information program are not adequate to assure that current, approved technical information is used in the performance of safety-related activities. This is a violation of 10 CFR 50, Appendix B, Criterion VI (50-341/88024-01).

c. Post Maintenance Testing

The inspector selected components from the reactor protection system and the core spray system for review to ascertain whether the licensee was implementing a post maintenance test program.

For the selected components, the inspector determined that:

(1) Written post maintenance test procedures and checklists have been developed by the plant staff. The inspector reviewed procedures, tests, and completed work requests to verify that post maintenance testing was being accomplished on the selected components in accordance with the licensee's commitments.

(2) Criteria and responsibilities for maintenance approvals and for designating activities as safety-related or non-safety-related have been established in work request and modification procedures. Criteria for post maintenance testing and inspections are delineated in work request procedures, quality inspection procedures and maintenance support planning procedures.

(3) Methods for performing functional testing following maintenance activities have been developed and are delineated in published plant operations and maintenance surveillance procedures.

(4) The inspector reviewed 26 compiled maintenance work requests and their supporting documentation. The work requests were appropriately classified, properly approved, and the persons who performed the activity and inspections or verifications were identified on the work requests and supporting documentation.

No violations or deviations were identified.

d. Reactor Trip Systems Reliability

At Fermi II, on-line functional testing of the scram pilot solenoid valves is performed with the protection system instrument channel functional tests at the frequency required by the plant Technical Specifications. The inspector reviewed test procedures and test results for the following functional tests:

Reactor Vessel Dome Pressure - High
Reactor Vessel Water Level - Low
Reactor Vessel High Steam Line Pressure - High
Average Power Range Monitor High Flux Trip
Backup Manual Scram Functional Test
Intermediate Range Monitor Trip
Manual Scram
MSIV Closure Functional Test
Main Steam Line High Radiation
Drywell Pressure - High
Scram Discharge Volume High Level
Turbine Control Valve/Turbine Stop Valve

The procedures appeared to be adequate and the test data dates indicated that the testing was being accomplished as required by Technical Specifications.

3. TI 2515/95 (MPA-C-02) (Closed)

The inspector verified by review of as-built drawings 6I721-2095-30, Revision K, 6I721-2101-02, Revision n, 6I721-2101-01, Revision L, and 6I721-2095-37, Revision G that the licensee has installed reactor recirculation pump trips that are actuated by either low reactor water level or high reactor vessel pressure.

4. Generic Letter 85-22 (Closed)

Potential for loss of post-loca recirculation capability due to insulation debris blockage. The inspector reviewed the licensee's evaluation of potential blockage of suction strainers in the drywell and torus. The bulk of the insulation is metallic reflective insulation and the remainder is totally stainless steel encapsulated fibrous material. Suction strainers are installed at a 45-degree angle in the torus above the bottom of the pool or halfway between the minimum water level and the pool bottom. The licensee concluded that the material used and the location of the strainers at Fermi would not result in significant blockage. This item is closed.

5. Generic Letter 85-14 (Closed)

Commercial storage at power reactor sites of low level radioactive waste not generated by the utility. Fermi does not store low level waste not generated by the utility onsite. Discussions with licensee personnel revealed that the site does not plan to store waste generated by others at the Fermi site. This item is closed.

6. Licensee Event Report 86-044-01 (Closed)

Potentially degraded torus relief line isolation capability during postulated accident event. An environmentally induced failure of a limit switch for a drywell vacuum breaker valve can be postulated to occur under harsh environmental conditions. This can result in degradation of the division II power supply circuit and cause the torus vacuum breaker isolation valve to fail open. The licensee has modified the drywell vacuum breaker valve limit switch circuit on the "close" side to limit the maximum current to ground. This change will prevent shorts to ground from being cleared by the power supply fuse and removing power from position indication for the vacuum breaker valves or the pilot valve solenoid on the air operated torus vacuum breaker valve. This item is closed.

7. Inspection and Enforcement Bulletin 81-03 (Closed)

Flow Blockage of Cooling Water to Safety System Components by Corbicula sp. (Asiatic Clams) and Mytilus sp. (Mussels). The inspector reviewed the licensee's program for detecting the presence of corbicula and sampling results for the years 1987, 1986 and 1985. The presence of corbicula was not detected in any of the samples during the three sample years reviewed. This item is closed.

8. Open Item 85003-01 (Closed)

Clarification of differences between Technical Specification and ASME Section XI requirements for declaring valves inoperable. The licensee has revised applicable procedures to remove the ASME requirement from the surveillance procedures. Surveillance Procedure 24.207.10 was repeated using the proper checklists and independent position verification performed by a person other than the person performing the surveillance. This item is closed.

9. Exit Interview

The inspector met with licensee representatives listed in Paragraph 1 and 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 inspector during the inspection. The licensee did not identify any such documents or processes as proprietary.