U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-341/83-10(DPRP)

Docket No. 50-341 License No. CPPR-87

Licensee: Detroit Edison Company
2000 Second Avenue
Detroit, MI 48226

Facility Name: Enrico Fermi Nuclear Power Station, Unit 2

Inspection At: Fermi Site, Monroe, MI

Inspection Conducted: March 1 through April 30, 1983

Inspectors: B. H. Little for 5/25/83

P. M. Byron for 5/25/83

Approved By: J. E. Konklin, Chief 5/25/83
Projects Section 2

Inspection Summary

Inspection on March 1 through April 30, 1983 (Report No. 50-341/83-10(DPRP))
Areas Inspected: Licensee Action on Previous Inspection Findings; Follow-up on Previous Identified Items; Follow-up on Headquarters Request; Design Change Control; Preoperational Test Program Implementation; Follow-up on Regional Request; Allegations and Concerns; Meeting with U.S. Department of Labor; and Plant Tours. This inspection involved a total of 275 inspector-hours on site by two NRC inspectors, including 48 inspector-hours on site during off shifts. Results: No items of noncompliance were identified in the eight areas inspected.

DETAILS

1. Persons Contacted

*T. Alessi, Director, Project QA
*F. Agosti, Assistant Manager, Startup Testing
*W. Everett, Assistant Project Superintendent, Construction
W. Fahrner, Manager, Fermi-2 Project
D. Ferencz, Supervisor, Construction QA
*E. Griffing, Plant Superintendent
A. Godoshian, Systems Completion Director
W. Holland, Vice-President, Fermi-2 Project
*S. Leach, Senior Administrator Security
R. Lenart, Assistant Plant Superintendent
T. Minton, Startup Director
*T. Nickelson, Startup Engineer
*G. Newton, QA Supervisor, Operational Assurance
*S. Noetzel, Site Manager
*G. Trahey, Assistant Director, Project QA

*Denotes those attending monthly management meeting.

2. Licensee Action on Previous Inspection Findings

(Closed) Open Item (341/82-10-16) This item was identified during the NRC Construction Assessment Team visit and related to conflicting specifications for installation of electrical conduit and supports. The inspector reviewed L. K. Comstock's QC Procedures 4.3.3, 4.3.6, and 4.3.7 which were revised to eliminate the conflicting specifications, and the QC inspector's checklists, which reference the appropriate acceptance/rejection criteria. The inspector considers the licensee's corrective action in this matter to be adequate, this item is closed.

3. Follow-up on Previously Identified Items

The inspector met with the NRR Licensing Project Manager, M. D. Lynch, and various members of the Auxilary Systems, Instrumentation and Control Systems, Power Systems, and Reactor Systems branches on April 28 and 29, 1983 in Bethesda to discuss resolution of the usage of non IE electrical components and control and power cables used in the Standby Liquid Control System (SLCS) (Unresolved Item 341/82-20-02). The component and system drawings were reviewed against FSAR commitments. Discussions were held relating to the usage of components which did not meet 10 CFR 50 Appendix B requirements in a Safe Shutdown System. The inspector was informed that NRR should resolve this issue before the end of May.

4. Follow-up on Headquarters Requests

A. Piping Support Clamps

It had been reported to NRR that snubber clamps manufactured by E-Systems imposed high local stresses on piping systems. These stresses were not taken into account when the piping system stress analyses were performed. E-Systems designed the snubber and its associated clamp in cooperation with General Electric (GE). These clamps were supplied to BWR licensees by GE as well as purchased directly.

The inspectors were requested by NRR to determine if any ASME Class 1 piping systems at Fermi-2, other than the main steam and recirculation systems, had E-Systems clamps. General Electric is reviewing the stress analyses for the NSSS-supplied piping systems, main steam and recirculation. The inspectors determined that only E-Systems clamps for NSSS-supplied systems were supplied to Fermi-2. DECo chose Pacific Scientific mechanical snubbers and clamps for the remaining ASME Class 1 systems.

B. Special Nuclear Material License

NMSS contacted the inspectors to obtain clarification to several questions raised in Fermi's application for its new fuel storage license in accordance with 10CFR70. The inspectors supplied the requested information to NMSS and were requested to review and comment on the Part 70 license. Subsequent to the inspectors' review, the licensee requested several additional changes. Several revisions to the draft Part 70 license have been written with the licensee requesting additional changes to each revision. The inspectors have responded to additional requests for information by NMSS and reviewed each revision. The licensee requested that the special nuclear material license be issued by March 28, 1983. The license had not been issued at the end of the reporting period. Fuel is expected to be on site on or about July 7, 1983.

5. Design Change Control

An inspection of the licensee's design change and document control activities was performed by an NRC Inspection Team during the week of April 11, 1983. The team members included NRC Senior Resident Inspector, Headquarters and Region III staff. The inspection consisted of on-site and off-site document review, in-plant inspections and included plant systems undergoing preoperational testing.

Items of noncompliance were identified during the above inspection. Inspection findings are documented in NRC Inspection Report (341/83-07(DETP)).

6. Preoperational Test Program Implementation

The inspectors reviewed Preoperational Test PRET C1150.001, "Control Rod Drive (CRD) Hydraulic System", in preparation for the performance of segments of the CRD preoperational test. Various problems, such as leaking nitrogen, work on the hydraulic control units, and adjustment of the limit switches, resulted in delaying the CRD preoperational test.

F. W. Reimann, Region III Test Programs Section, discovered many apparent inconsistencies in the performance of the emergency diesel generator Preoperational Test PRET R3000.001. The apparent inconsistencies included such items as: improper synchronization of the diesel generator to the bus, failure to use a Standard Operating Procedure (SOP), failure to determine causes of problems, and failure to follow procedure. A meeting was held on March 14, 1983 at Fermi with licensee management, Region III management, and the inspectors. This is documented in Inspection Report 50-341/83-04 (DE).

The inspectors met several times with various licensee management personnel before and after the March 14, 1983 meeting to discuss the apparent problems, their effect on the preoperational program, and implementation of corrective action.

7. Follow-up on Regional Requests

A. Structural Steel Sliding Connections

At NRC Region III's request, the resident inspectors performed a review of structural steel sliding connections at Fermi-2. The regional request was based on bolt securing deficiencies, i.e., connections being too loose and/or too tight, identified at other nuclear plants. During the review of this matter, the inspectors looked at construction drawings, procedures, and QC records and inspected seven structural steel sliding connections installed in the drywell and steam tunnel.

An in-plant inspection with licensee's Project QA representatives on March 25, 1983 identified the following conditions:

One of four bolts was loose on whip restraint No. RPG-2 located in the drywell (Drawing No. 6C721-2446). The face nut and jamb nut were tight together but the bolt was loose. The installation sketch No. E51-2192 contained a note; "Heavy hex nut and jamb nut finger tight". The work package did not contain QC verification.

Two of three bolts were loose on each beam Nos. A-3113 and B-3113 located in the steam tunnel (Drawing Nos. 6C721, 2538, 3538). The drawings specified that the nuts were to be finger tight and tack welded to bolts. The installation was QC verified in Wismer and Becker work package No. 18427.

The inspectors found three licensee accepted methods for the securing of sliding connections; nuts finger tight and tack welded, face and jamb nuts finger tight, and face and jamb nuts torqued to equivalent 5000 to 10,000 pounds tension (installation using the last method had not yet started).

The inspectors did not assess sliding connections for excessive tightening, however, based on the in-plant findings, the methods which specified "finger tight" have not resulted in consistent tightness and construction records do not provide reasonable assurrance that the sliding connections are appropriately secured.

On March 28, 1983 the licensee notified Region III of a potential 10 CFR 50.55(e) item on structural steel sliding connections. Deviation Disposition Request (MP-11006) documents the deviations which were identified during the in-plant inspection. Licensee's evaluation of this matter is continuing. This matter remains open pending licensee's corrective action and final construction deficiency report.

No items of noncompliance or deviations were identified.

B. Assistance in the Emergency Response Drill at Davis Besse

Davis Besse held its annual Emergency Response Drill with Region III participating on April 13, 1983. At the request of the Region III Response Team, the Senior Resident Inspector reported to the Davis Besse Technical Response Center (TRC) as a member of the NRC Response Team.

8. Allegations and Concerns

A. On February 22, 1983, the NRC received allegations related to the installation of Control Rod Drive (CRD) insert/withdraw piping at Fermi-2, which was being performed by a site contractor, Reactor Controls Incorporated (RCI). The following allegations were received:

1. Installation of the CRD insert and withdraw piping was performed using unapproved drawings.

2. Nonconformances were not written for the alleged above unapproved activities.

This matter was inspected on site during the period February 23 through March 4, 1983 and included the following:

- In-plant inspection of CRD insert/withdraw pipings
- Review of drawings and installation sketches
- Review of Travelers (work request) including field changes
- Review of licensee and RCI procedures.

Findings:

Allegation 1--not substantiated. Installation of CRD insert and withdraw piping was performed using approved drawings. Drawings and installation sketches were developed, reviewed, approved, and released for construction by GE & ISE, the licensee and, in addition, approved and released by RCI.

The inspector reviewed GE & ISE General Arrangement Drawing No. 5185-E5769 and SK442-73-B-10 from which single line sketches were developed for the construction and installation of each CRD insert and withdraw piping. These drawings and sketches contained Detroit Edison Company (DECo) stamp, "This drawing does not require Edison Project Engineer's approval--no further Edison approvals are required. This drawing is released for construction." The construction sketches also contained RCI approvals and were released for construction.

The inspector found that licensee design change control of this activity differed in that DECo had contracted to RCI both construction and engineering responsibility for this specific work. RCI in turn contracted Teledyne as Architect Engineer.

The inspector reviewed RCI work packages containing twenty-seven construction sketches, eight of which contained Revision Request (RR). This review was made to determine approval status of RR (field changes), to compare approval dates to installation dates and to assess procedural compliance for this activity. Revision Requests (field changes) were processed in accordance with RCI Procedure Section 3.10 (DECo approved procedure) and changes were approved prior to the date the work was performed in the field.

Allegation 2--not substantiated. The inspector found no basis for nonconformances as RCI activities were in accordance with approved procedure.

No items of noncompliance or deviations were identified.

B. On March 29, 1983 the Senior Resident Inspector received allegations from an anonymous caller. The allegations related to the welding of structural steel reinforcement in the Fermi-2 Drywell by a site contractor, Chicago Bridge and Iron Company (CBI). The caller made the following allegations:

1. CBI welders were not on-site qualified.

2. CBI welders were using "downhill" welding technique to make vertical welds.

This matter was investigated during the period March 29 through March 31, 1983 and included the following:

- A review of CBI welder qualification and welding procedures.
- Personnel interviews.
- Observation of CBI welding practices during regular day shifts and off-shifts.

Findings:

Allegation 1--not substantiated. CBI welders had qualified and had been certified on site.

The inspector reviewed CBI Qualification Procedure (WPS-AWS-E-18-6157W), Active Qualified Welders List, dated March 23, 1983, and CBI Performance Qualification Records. The active Qualified Welders List identified thirty-four welders and dates qualified. The inspector selected nineteen performance qualification records for review. The records indicated that CBI welders had been qualified and certified on site.

Allegation 2--not substantiated. CBI welders were observed to be performing vertical welds using the specified up-hill welding technique.

The inspector reviewed the following CBI procedures:

- General Welding Procedure GWPS-SMAW-IN
- Joint Welding Procedures WPS-AWS-E7018/1/2
- Q.C. Inspector Checklists.

CBI Weld Procedures have been reviewed and approved by the licensee. CBI Welding Procedure GWPS-SMAW-IN prohibits down-hill welding except for the "repair of undercuts". This procedure is in agreement with AWS Standard D1.1-80 Section 4.14.1.6 which states in part, "...shall be upward except for repair of undercuts."

CBI welders performing vertical welding were observed to be using the specified up-hill welding technique. The inspector discussed procedural specifications and techniques with CBI supervision, welders, and QA/QC personnel. All were knowledgable of procedure, specifically that down-hill welding was prohibited. This matter is closed.

No items of noncompliance or deviations were identified.

9. Meeting with U.S. Department of Labor (DOL)

On April 4, 1983 the NRC Senior Resident Inspector met on site with a USDOL Compliance Officer. The meeting was requested by the compliance officer to obtain information relative to a complaint filed with USDOL by a former employee of a site contractor SACO/ICMS (S/I). The former employee complained that he was laid-off because he had discussed quality concerns with the NRC.

The quality concerns relate to allegations made to the NRC by the former S/I employee. The allegations were investigated by NRC and documented in NRC Inspection Report (341/83-05).

During the meeting, the inspector provided an interview statement and background information relative to this matter.

No items of noncompliance or deviations were identified.

10. Plant Tour

The inspectors conducted tours of the RHR Complex, the Reactor, Auxiliary, and Turbine Buildings and the Rad Waste area, including the fifth floor of the Reactor Building and cable spreading rooms. These areas were inspected for general housekeeping/fire prevention practices, work controls, and maintenance of safety-related system integrity. There has been an overall improvement in general housekeeping conditions within the plant.

No items of noncompliance were identified.

11. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) at the conclusion of the inspection and summarized the scope and findings of the inspection.