

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-341/89035(DRSS)

Docket No. 50-341

License No. NPF-43

Licensee: The Detroit Edison Company  
6400 North Dixie Highway  
Newport, MI 48166

Facility Name: Enrico Fermi Atomic Power Plant, Unit 2

Inspection At: Fermi 2 Site, Monroe, Michigan

Inspection Conducted: December 18-21, 1989

Inspector: J. Foster *W. Snell for*

1/10/90  
Date

Accompanying Personnel: D. Barss

Approved By: *W. Snell*  
W. Snell, Chief,  
Radiological Controls and  
Emergency Preparedness Section

1/10/90  
Date

Inspection Summary

Inspection on December 18-21, 1989 (Report No. 50-341/89035(DRSS))

Areas Inspected: Routine, announced inspection of the following areas of the Fermi Nuclear Power Plant emergency preparedness program: emergency plan activations (IP 92700); and operational status of the emergency preparedness program (IP 82701). The inspection involved two NRC inspectors.

Results: No violations or deviations were identified. The Fermi 2 Radiological Emergency Response Program continues to be well implemented and maintained. Program enhancements have been made over the past year, and additional improvements/enhancements are in the planning stages.

## DETAILS

### 1. Persons Contacted

#### Detroit Edison Company

- \*S. Catola, Vice President, Nuclear Engineering and Services
- \*J. Mulvehill, Supervisor, RERP
- \*G. Trahey, Director, Special Projects
- \*K. Morris, Emergency Response Planner
- \*P. Anthony, Licensing Engineer
- \*J. Sweeney, Emergency Specialist
- L. Goodman, Director, Nuclear Licensing
- P. Piggott, Emergency Response Specialist

\*Denotes those personnel listed above who attended the exit interview on December 21, 1989.

The inspectors also contacted other members of the licensee's staff during the course of the inspection.

### 2. Licensee Action on Previously-Identified Open Items (IP 92701)

#### (Open) Open Item (341/89019-01(DRSS))

During the June 14, 1989 emergency preparedness exercise the licensee failed to successfully demonstrate the capability to conduct assembly and accountability within established time goals. This was considered as an Exercise Weakness in NRC Inspection Report 341/89019. Detroit Edison responded to this Exercise Weakness in writing, as requested, on July 24, 1989. Their review of the problems encountered during the exercise indicated that keycard reader operability, incorrect use of accountability forms, inadequate mechanisms for notification in some parts of the protected area, and untimely response by plant personnel were the causes for the observed failure. Corrective actions included replacement and realignment of keycard readers in high traffic areas, revision of the accountability forms, and a letter to all site personnel emphasizing the importance of timely response to emergency announcements. Additional enhancements were under consideration.

The licensee has now determined that additional accountability card readers should be installed in three areas: the Technical Support Center, Operational Support Center (OSC), and the Alternate OSC. A design change package (EDP 10,734) has been initiated to move unused card readers to these locations. The design change package was in the review cycle as of the date of this inspection, but it was hoped that the installations would be completed prior to the scheduled February 14, 1990 Emergency Preparedness Exercise. A second design change package (EDP 10,985) has been developed to provide plant Public Address (Hi-Comm) communication to

the Availability Improvement Building, the Relay House, and the Auxiliary Boiler House; three protected area buildings not previously serviced. This system will be activated when the Hi-Comm system switch is placed in the "full power" position in the Control Room. Discussion with cognizant licensee personnel indicated that the goal for installation was the end of January, 1990.

This item will remain open pending successful demonstration of Assembly/Accountability during an Exercise, utilizing the revised system.

3. Activations of the Emergency Plan (IP 92700)

A review of licensee and NRC records indicated that five activations of the licensee's Radiological Emergency Response Plan (RERP) had taken place during calendar year 1989.

On February 9, 1989, an Unusual Event was declared based on initiation of a reactor shutdown due to Technical Specification requirements relative to loss of onsite power capability. The event was declared at 1745 hours and terminated at 0115 hours the following day.

On April 17, 1989, an Unusual Event was declared based on a fire requiring offsite firefighting assistance. The event was declared at 1855 hours and terminated at 1958 hours the same day.

On June 15, 1989, an Unusual Event was declared based on initiation of a reactor shutdown due to Technical Specification requirements relative to loss of onsite AC power capability (emergency diesel generators). The event was declared at 1206 hours and terminated at 2103 hours the same day.

On August 20, 1989, an Unusual Event was declared based on initiation of a reactor shutdown due to Technical Specification requirements relative to both divisions of Control Center Heating and Ventilating being declared inoperable. The event was declared at 1415 hours and terminated at 1534 hours the same day.

On October 24, 1989, an Unusual Event was declared based on a fire lasting more than ten minutes (electrical extension cord fire). The event was declared at 0842 hours and terminated at 0942 hours the same day.

Documentation related to each RERP activation had been organized into a file specific to the activation. Included in each event documentation package were notification sheets, deviation reports, shift logs, individual's notes, relevant memoranda, press releases, and/or other documentation as appropriate. Each activation file had been summarized and reviewed. Review of notification times indicated that notifications had been made in a timely manner. Activations had been accomplished per the RERP and implementing procedures, and instances where problems existed had been identified and corrective actions proposed and/or completed.

Emergency notifications to offsite authorities are conducted according to Emergency Preparedness Implementing Procedure (EPIP) EP-290 (Revision 11). Section 4.2.4 of this procedure indicates that (after initial notification) subsequent notifications are considered as updates, "provided when more information becomes available or as the situation changes." No time frame or guidance is provided as to the regularity of such updates. A review of update times for the listed Unusual Events indicated that proper discretion was being exercised; more frequent updates were provided on events which were of elevated interest to offsite authorities, such as fires, and this practice appears appropriate for the Unusual Event classification. However, additional guidance should be provided for update frequencies associated with higher emergency classifications.

Based upon the above findings, this portion of the licensee's program was acceptable.

4. Operational Status of the Emergency Preparedness Program (IP 82701)

a. Emergency Plan and Implementing Procedures

Region III personnel have reviewed and approved the most recent revisions to the Fermi 2 Radiological Emergency Response Plan via letter dated December 7, 1989. These changes were largely administrative in nature.

The licensee's procedures related to onsite and offsite protective action decisionmaking were adequate and unchanged from those in use during the previous inspection. A revision to the personal computer dose projection system (Radose Version 3) has been prepared and will be implemented in the near future. This version was revised to incorporate human factors improvements and be more similar to the Emergency Response Information System (ERIS) mainframe dose projection system so that the number of different commands would be minimized.

Discussion with licensee personnel indicated that thought had been given to obsoleting the manual dose projection procedure. Given that the ERIS mainframe (primary dose projection system) has a high degree of reliability, and there exist multiple personal computers with primary and backup copies of the Radose software, licensee personnel were advised that maintaining the complicated hand calculation procedure was not necessary, but could be useful as a part of the historical documentation for the Radose program.

Site documents indicated that revisions to the Radiological Emergency Response Plan (RERP) and implementing procedures have been properly reviewed and approved. Review and approval forms for the most recent revisions of the RERP contained appropriate signatures.

The system utilized for Emergency Plan revision distribution was briefly reviewed to assure that revisions to the Emergency Plan and Implementing Procedures are provided to the NRC within 30 days. Site procedures provided for the standardized distribution of revisions to onsite and offsite recipients. A computerized tracking system provided the document distribution for each document and tracked the document receipt returns from recipients.

Plant documentation indicated that the licensee conducted its annual review of Emergency Action Levels and Protective Action Guidelines on August 29, 1989. This meeting was attended by a total of ten individuals representing agencies of the Counties of Monroe and Wayne, the State of Michigan and the Government of Ontario, Canada. This discussion/training session met the criteria for the annual review of these subjects by State and local agencies, as required by 10 CFR 50, Appendix E, Part IV, B.

Based upon the above findings, this portion of the licensee's program was acceptable.

b. Readiness of Facilities

The inspectors toured the Technical Support Center (TSC), Operational Support Center (OSC), the Emergency Operations Facility (EOF), and the Backup Emergency Operations Facility (BEOF). All were located as described in the emergency plan and procedures and were being adequately maintained in an operational state of readiness.

Record checks verified that periodic inventories of Radiation Protection (RP) and office supplies stored in onsite Emergency Response Facilities (ERFs) had been conducted by RP and administrative services staffs, respectively, through December 1989. Inventory procedures for RP supplies included provisions for conducting inventories after each use or in the event that a storage location was discovered unsealed.

The RERP staff has conducted and adequately documented monthly operability checks of the TSC's computer terminals. As the RERP staff's offices were in the EOF, operability checks of the EOF computer terminals were more informally accomplished by their routine use by RERP personnel and others. Records of the various inventories and operability checks were maintained by the responsible departments.

A review was conducted of the documentation of monthly siren tests for the period January 1989 through December 1989. Problems that were identified were repaired in a timely manner.

A review was conducted of the licensee records of monthly communications tests for the period January thru December 1989. Communication systems specified in 10 CFR 50 Appendix E, Part IV, E.9.a and d, requiring monthly checks had been completed. A direct

line to the Michigan State Police was inoperable for approximately two months; however, alternate phone lines and numbers were available and satisfactorily tested. The inoperable line was reported through appropriate channels and repaired.

No specific documentation was provided to record completion of annual communication systems tests required by 10 CFR 50 Appendix E, Part IV, E.9.b and c. (communication among the Control Room, Technical Support Center, Emergency Operations facility, the principal State and local emergency operation centers and field assessment teams). These communication links were successfully used during several drills and no major operational deficiencies were noted. It is suggested that some formal documentation be provided to ensure all of these communication links are annually verified to be operational.

The call-out list of emergency personnel is updated monthly. The notification system and call-out procedures are described in the Emergency Procedures.

Completed inventory records for 1989 were reviewed on a selective basis, indicating that required inventories had been completed and adequately documented, including corrective actions taken on identified deficiencies. Reviewed documents included those relative to inventory checks of: first-aid kits, ambulance, and emergency kits (in the TSC, EOF, offsite, onsite, hospital).

Documents indicated that copies of the annual public information pamphlet were distributed to households and businesses in the Emergency Planning Zone (EPZ) during 1989. A telephone directory insert was coordinated with Wayne County Emergency Management, Michigan Department of State Police and Monroe City-County Office of Civil Preparedness officials. A revised 1989-1990 public information brochure and telephone directory insert were developed, with a change to the routine siren test date and listing of Emergency Broadcast System stations as the major changes. A special May 18, 1989 mailing by Century Telephone distributed the changes to the telephone directory insert.

Based upon the above findings, this portion of the licensee's program was acceptable.

c. Organization and Management Control

The organization and management control of the Radiological Emergency Response Program (RERP) is largely unchanged from that in place during the last routine inspection. One individual has been added to the RERP staff, bringing chemistry expertise to the group. The RERP staff now consists of the Supervisor, RERP, two Emergency Response Specialists, an Emergency Response Planner, and a "special clerk-powerplant". The Supervisor, RERP continues to report to the Vice President, Nuclear Engineering and Services.

Based upon the above findings, this portion of the licensee's program was acceptable.

d. Emergency Preparedness Training

Relevant records were reviewed and discussions held with cognizant personnel regarding the training program for Emergency Response personnel.

The Radiological Emergency Response Plan (RERP) delineates training requirements in Section D, "Radiological Emergency Response Preparedness Training," which contains a training matrix of requirements for each position in the Emergency Response Organization (ERO).

A review of a random sample of 25 training records was conducted. Training was completed on an annual basis as required for the records which were reviewed. However, records of drill attendance was noted, and had previously been identified by the licensee, to be an area of weakness. Several individuals appeared, according to recorded drill attendance dates, to be beyond the annual requirement. This is apparently because an individual does not need to attend a drill prior to being placed on the ERO. An individual who has not been on the ERO for some time may be reassigned to the ERO. Subsequent to this reassignment the individuals' previous drill attendance date will show on the training record. Since this is a new appointment to the ERO no drill is required but the previous drill date appears and in some cases creates the appearance of a lapse in the annual drill attendance requirement. The licensee is currently developing administrative methods to resolve this difficulty in their record keeping system.

To ensure personnel assigned to the ERO remain current in their retraining requirements, this information has been incorporated into the Work Force Management (WFM) system as well as the Access Qualification Report (AQR). Consequently, the Security department will deny Protected Area Access to those individuals whose RERP requalification training has expired.

Radiological Medical Training was conducted at two local hospitals in March 1989, Seaway and Mercy Memorial Hospital. Also an inservice training session regarding response to radiological medical emergencies was conducted in October 1989 for 24 employees of the local ambulance service company.

Training was conducted for offsite fire department personnel in July 1989, with a total of 16 people attending this training.

The licensee conducted a total of 7 drills in 1989 which included the following types: Offsite Fire Department (4/17), Medical Emergency Drill which involved a simulated contaminated individual (3/16), Radiological Monitoring Drill (5/23, 6/6, 6/14), Health

Physics Drill (3/16, 5/23, 6/14), and Assembly/Accountability Drill (7/26, 8/9). For each drill an appropriate scenario package was prepared which included specific objectives to be met. Each of these drills was critiqued by licensee personnel and appropriate corrective actions taken to improve self-identified weaknesses.

The two Assembly/Accountability drills were conducted as a result of a previously identified exercise weakness (Open Item No. 341/89019-01). In both of these drills the Assembly/Accountability objective was successfully met within a 30 minute time frame.

In the course of this inspection the licensee conducted their annual off-hours shift staffing and augmentation drill which was observed by an inspector. The drill commenced at 1800 hours and personnel started calling in at 1801 hours. At 1910 the drill was terminated. Personnel were not required to actually report to emergency response facilities but instead were requested to call a number provided in the callout message. As individuals called in their name and position in the emergency response organization as well as an estimated time to arrive at the assigned emergency facility was obtained and recorded.

By the conclusion of the inspection the licensee had not yet compiled and analyzed all the data obtained to determine fully whether the minimum staffing requirements of Table B-1, page B-4 of the RERP Plan had been met. A preliminary review by the inspector of a few key positions indicated that emergency facilities would have been staffed in a timely manner.

Based upon the above findings, this portion of the licensee's program was acceptable.

e. Independent Reviews/Audits

The licensee's Quality Assurance group performs a Radiological Emergency Response Preparedness (RERP) audit every 12 months which meets the requirements of 10 CFR 50.54(t). Individuals assigned to perform the audit had no responsibilities for implementing the Emergency Response Program.

Licensee procedures provide for the standardized conduct, documentation, and corrective action associated with audits. Audit findings are tracked via a computer tracking system. Proposed corrective actions, if any, are evaluated for adequacy, and if actions are determined inadequate, the responsible organization is advised.

The Emergency Plan audit for 1989 (Audit 89-0079) was performed during March 9-17, and March 30, 1989, requiring 330 man-hours in preparation, conduct and documentation. The audit was performed by a six man team including a consultant from the Institute for Nuclear Power Operations (INPO), and incorporated an assessment of a March 16, 1989 drill. The audit report, issued on April 21,



1989, was comprehensive and professional, resulting in eight observations, two of which required a response. One response was assigned to Nuclear Services, and the other was assigned to the RERP staff itself. The auditor's review of previous Audit Findings indicated that the actions taken to correct the previous audits' findings were effective in preventing recurrence of the previous conditions.

10 CFR 50.54(t) requires that the annual emergency preparedness audit address the adequacy of the interface with offsite authorities, and that the audit be made available to offsite authorities. Included in Section 3.0 of the audit was an evaluation of the interfaces with offsite agencies, and documentation was available to show that it had been made available to licensee management, the Radiological Emergency Response Preparedness Committee, and offsite authorities (June 2, 1989), including Canada.

Also reviewed was Surveillance 89-0044, conducted on January 27, 1989, which reviewed the graded exercise five-year cycle. The auditor concluded that the required program elements were tested as part of the FERMEX exercises in the five-year cycle as required.

Surveillance 89-0153, conducted May 23, 1989, served as a followup to NRC report 341/87029, to assure that there had not been a recurrence of the problems previously noted and corrected. This surveillance resulted in four observations.

A NQA Review of the Fermi 2 public information brochure for Emergency Preparedness was conducted on November 13, 1989. This review found the public information brochure acceptable.

Also, a NQA audit was conducted of audits of the RERP program, to determine if any different auditing methods should be utilized. The audit resulted in two items for possible improvement of the audit program.

Based upon the above findings, this portion of the licensee's program was acceptable.

#### 5. Exit Interview (IP 30703)

The inspectors met with the licensee representatives denoted in Paragraph 1 on December 21, 1989. The lead inspector summarized the scope and results of the inspection and discussed the likely content of the inspection report. The licensee was advised that the inspection results were positive, indicating a well implemented and maintained emergency preparedness program where minor enhancements were continually being made.

The licensee did not indicate that any of the information disclosed during the inspection could be considered proprietary in nature.