



Pacific Northwest Laboratories  
P.O. Box 999  
Richland, Washington U.S.A. 99352  
Telephone (509) 376-1202  
Telex 15-2874

June 16, 1981

Mr. Paul Psomas  
Division of Emergency Preparedness  
Emergency Preparedness Licensing Branch  
Nuclear Regulatory Commission  
Washington, D. C. 20555

Dear Paul:

Attached is PNL's review of the emergency plan for the Fermi 2 Nuclear Power Station.

Please do not hesitate to call if you need additional information. My phone number is 509-376-1202.

Very truly yours,

A handwritten signature in cursive script that reads "Bruce D. Pickett".

Bruce D. Pickett, Research Scientist  
Health Physics Technology Section

BDP:1sp

Attachment

cc: AE Desrosiers, Project Manager  
FG Pagano, NRC

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PDR FOIA  
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EMERGENCY PLAN EVALUATION REPORT  
ON

Enrico Fermi Atomic Power Plant--Unit 2

Detroit Edison

Emergency Plan Dated March 1981

## EVALUATION SUMMARY

The Enrico Fermi Atomic Power Plant--Unit 2 Emergency Plan dated March 1981 was evaluated using the sixteen Planning Standards and the 96 supporting criteria in NUREG-0654, Rev. 1.

The evaluation shows that of the sixteen standards, two were satisfied, 11 were satisfied except as noted, and 3 were not satisfied. Unsatisfactory ratings were given to planning Standard B, Onsite Emergency Organization; Planning Standard D, Emergency Classification Systems; and Planning Standard I, Accident Assessment. The fully satisfied Planning Standards are Planning Standard G, Public Education and Information on Planning Standard K, Radiological Exposure Control.

The Planning Standards rated as unsatisfactory were so rated because it is impossible to determine the adequacy of the information that is provided in the Emergency Plan for one or more of the criteria accompanying the Standards. When the Emergency Plan seemed weak with respect to pertinent points enunciated in the Planning Standards evaluation criteria or the evaluator thought clarity could be enhanced by further attention to certain of the criteria Planning Standards were considered satisfactory but further comments were made with respect to the nature of the weaknesses.

In the pages that follow, findings on each Standard and its evaluation criteria are addressed. A synopsis of criteria that are properly addressed is given, an evaluation of the degree of satisfaction provided by the plan is made and a criteria analysis are provided.

## EMERGENCY PLAN EVALUATION REPORT ON:

**FINDINGS ON STANDARDS & CRITERIA****A: ASSIGNMENT OF RESPONSIBILITY (ORGANIZATION CONTROL)****Planning Standard**

Primary responsibilities for emergency response by the nuclear facility licensee, and by State and local organizations within the Emergency Planning Zones have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established, and each principal response organization has staff to respond and to augment its initial response on a continuous basis.

**Synopsis:** The plan:

- identifies the primary responsibilities for emergency response for the States of Michigan and Ohio (Fig. A-1);
- indicates the responsible individual within each department at the State level (Fig. A-1);
- indicates by means of diagrams the State of Michigan emergency functions and agency assignments which will be activated in response to a nuclear incident (Fig. A-2; Fig. 2-3);
- charts the sequence of actions to be taken by the licensee, State and local governmental units following a nuclear incident (Fig. A-2);
- provides a cross-reference for where a detailed statement of the concept of operation for each State of Michigan organization can be found;
- indicates federal organizations intended to be part of the overall response organization;
- implies that agreements exist with medical support services, fire-fighting support, ambulance services, and law enforcement services to supply support if needed in an emergency, and indicates other utilities and private sector technical, engineering assistance which will be available (Sec. B);
- indicates the operational role, responsible individual, concept of operation, and relationship to the overall on-site response effort of the sub-organizations of the licensee (Table B-2; Fig. B-2);
- states that all principal organizations maintain 24-hour per day manning of emergency communications links;

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A: ASSIGNMENT OF RESPONSIBILITY (ORGANIZATION CONTROL) (Cont.)

- . indicates that the licensee intends to obtain letters of agreement from the federal, state, and local agencies and other support agencies within the EPZ which have emergency response responsibilities (Appendix 1);
- . states that Fermi-2 is capable of staffing an emergency organization on a continuous basis for a protracted period of time and that communications to offsite authorities are available and manned on a 24-hour a day basis via the Fermi-2 Control Room, with the same capability being available from the TSC and EOF upon activation and manning of these units;
- . states that the Detroit Edison Vice President-Nuclear Operations is responsible for ensuring continuity of resources (technical, administrative, and material).

Evaluation: The plan satisfies the planning standard except as noted:

Criterion 1: More detailed descriptions of the functions and assignments for personnel within emergency response organizations other than those of the licensee and State of Michigan is needed. The plan notes that the planning effort is not completed, with the most work remaining to be done with respect to local level (county) plans.

Criterion 3: The licensee provides a commitment to obtain letters of agreement from Federal, State and local agencies and other support organizations having an emergency response role within the EPZ or able to provide other assistance. Appendix 1 lists those organizations from which written agreements are likely to be obtained. It should be noted that although a small portion of Wayne County, Michigan, lies within the 10-mile EPZ no Wayne County organizations are included in the list. Also, the Michigan State Police do not appear on the list.

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B: ONSITE EMERGENCY ORGANIZATIONPlanning Standard

On-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available, and the interfaces among various onsite response activities and offsite support and response activities are specified.

Synopsis: The plan:

- . provides block diagrams depicting the normal staff complement for the plant during normal working hours daily Monday through Friday (Fig. B-1) and the nuclear operations emergency operation (Fig. B-2);
- . states that the Superintendent-Nuclear Production (or his designated alternate) has full responsibility for the emergency response measures and implementation of the RERP, specifying that the nuclear shift supervisor acts as emergency director until the Superintendent is available to assume full responsibility in the position of emergency director.
- . identifies two alternates for the emergency director position in their order of succession (Table B-2) should the Superintendent be unable to assume or continue the position of emergency director.
- . lists in Table B-2 the responsibilities of the Emergency Director, and states in the text of the plan that the Emergency Director cannot delegate decisions to notify and make recommendations for protective action to offsite response organizations.
- . states the intent to provide for interfaces between the plant and offsite centers and among onsite units;
- . states that at the corporate level the Detroit Edison Vice President-Nuclear Operations is responsible for ensuring continuity of resources (technical, administrative, and material); that this person or the Manager-Nuclear Operations will be present onsite to provide corporate sanction for procurement and commitments as needed; that the Executive Vice President-Operations is responsible for corporate support from the corporate headquarters; and that the Assistant Vice-President- : Public Affairs is to ensure coordination of public information releases.

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B: ONSITE EMERGENCY ORGANIZATION (Cont.)

- . indicates that the Detroit Edison Company is a member of a mutual assistance agreement with four other utilities which can provide assistance in the form of personnel and equipment and that the licensee can call upon the Institute of Nuclear Power Operations (INPO) for technical support.
- . describes offsite services which can be used to augment onsite response groups including two hospitals, an ambulance service, a local fire department, a county sheriff's department, the State Police, and corporate-provided medical services.

Evaluation: The plan fails to satisfy the planning standard as noted.

Criterion 1: A more systematic and graphic presentation of the relation between the normal staffing complement and the emergency staffing requirements, as well as of the emergency organization for all shifts would be useful.

Criterion 2: The person with responsibility for emergency actions is indicated. However, the plan is not explicit with respect to this person having the authority to initiate these actions and to do so unilaterally.

Criterion 3: The plan does indicate alternates who may take over for the Emergency Director, but it does not identify the specific conditions for higher level utility officials assuming this function.

Criterion 4: Although the text of Section B.2.1 of the licensee's plan indicates those responsibilities which may not be delegated by the Emergency Director, it might be desirable also to indicate this information in Table B-2, which lists the emergency organization functional responsibilities for each actor.

Criterion 5: There is not adequate comparability between the NUREG-0654 regulations and the Fermi-2 plan staffing descriptions to assess the adequacy of the Fermi-2 plan on Criterion B.5 as completely satisfactory. It appears that the Fermi-2 plant should have an additional control room operator and an additional auxiliary operator, and that there should be one health physics technician and one radiochemistry technician, rather than one person which is either one or the other. Also, it is not possible to ascertain from the Fermi-2 lists of minimum staffing requirements how the function of notification and communication is to be met either before the onset of an incident (when one communicator is called for by NUREG-0654) or after 60 minutes, by which time NUREG-0654 calls for four communicators. Following the lists on the site plan Table B-1 and in Table B-2 (indicating functional responsibilities) it appears that there may be adequate numbers of persons expected on duty at Fermi-2



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B: ONSITE EMERGENCY ORGANIZATION (Cont.)

within 60/90 minutes after onset of an incident to cover Radiological Accident Assessment. With respect to the functional area of Plant System Engineering, Repair and Corrective Actions (c.f. NUREG-0654 Table B-1) it appears that Fermi-2 provides for required numbers of persons to meet the Technical Support tasks, but it is not clear how many persons will be available for Repair and Correction Action tasks.

Criterion 6: The licensee indicates a commitment to provide for interfaces between and among the onsite functional areas of emergency activity. Currently Table F.1 of the Fermi-2 plan implies what these interfaces may be but it will be necessary to provide a block diagram for complete specificity and clarity as emergency organization interfaces are established.

Criterion 7: It would be desirable for the plan to be more specific as to which of the corporate positions indicated as providing support applies most directly to those areas indicated in NUREG-0654 Criterion B.7, a-d. This seems particularly true with respect to technical support for planning and reentry/recovery operations and management level interface with government authorities.

Criterion 8, 9: The letters of agreement supporting these arrangements and describing the authorities, responsibilities, and limits on actions of the different groups have not as yet been provided in the plan. The list of organizations from which letters will most likely be obtained (in Appendix 1) does not mention the Michigan State Police, although it is given in Section B.4.3 as a supporting agency. Section B.4.1 mentions that a local ambulance service will provide transportation of injured personnel, without providing the name of the ambulance service; the list in Appendix 1 mentions a specific ambulance service (as does section L.3). It would be desirable for the ambulance company to be identified by name in the body of the plan in the section where supporting emergency response services are described.

C:- EMERGENCY RESPONSE SUPPORT AND RESOURCESPlanning-Standard

Arrangements for requesting and effectively using assistance resources have been made, arrangements to accommodate State and local staff at the licensee's near-site Emergency Operations Facility have been made, and other organizations capable of augmenting the planned response have been identified.

Synopsis: The plan:

- specifies the Emergency Director as the person who will request Federal assistance from the Department of Energy, Chicago Operations Office, and notes that additional radiological assistance is available through the Federal Radiological Response Plan (which would ordinarily be initiated by the State);
- notes that the Federal resources expected would be DOE, Chicago Operations Office, indicating typical travel time from Chicago to the Fermi-2 site;
- indicates by name several commercial and municipal airports in the vicinity of the plant, giving their distance and direction from the plant;
- notes that the State and county organizations may send representatives to the EOF if deemed necessary;
- states that the licensee will send representatives to official governmental EOC's as needed;
- identifies four facilities with radiological laboratories from which health physics and/or analytical services can be obtained in an emergency;
- identifies nuclear and other facilities and organizations which can be relied upon in an emergency to provide assistance, including four other utilities with which Detroit Edison has a mutual aid agreement, the Institute for Nuclear Power Operation (INPO), and state and local organizations which can augment medical, security, and firefighting capabilities.

Evaluation: The plan satisfies the planning standard except as noted.



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C: EMERGENCY RESPONSE SUPPORT AND RESOURCES (Cont.)

Criterion 1c: Presently the DOE Chicago Operations Office is the only onsite Federal assistance indicated. Although air fields in the vicinity are identified in the plan, other support resources such as command posts, telephone lines, radio frequencies and telecommunications centers are not specified.

Criterion 2b: It would be useful if the plan could be more specific about who might be sent as a representative to principal offsite governmental EOC's, who would authorize this, and under what conditions this would be done.

Criterion 4: Letters of agreement supporting these arrangements have not as yet been provided in the plan. Also, in view of the plan's organization in which it follows the structure of NUREG-0654 evaluation criteria, it would be helpful if the discussion in Plan Section C indicated that emergency support services besides government support and industry support are discussed in Section B, and vice versa.

## Enrico Fermi--Unit 2

D: EMERGENCY CLASSIFICATION SYSTEMPlanning Standard

A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.

Synopsis:

- . Emergency classification and emergency level schemes conform to the ones in Appendix 1, NUREG-0654.
- . Specific instruments, parameters or equipment status for some emergency classes are defined.
- . Most of the example initiating conditions listed in Appendix 1, NUREG-0654 are addressed.

Evaluation: The plan fails to satisfy the planning standard. The failure of the plan to provide comprehensive parameter values and/or equipment status for all emergency action levels and initiating conditions and the absence of implementing procedures for review makes it impossible to determine the adequacy of the information that is provided.

## Enrico Fermi--Unit 2

E: NOTIFICATION METHODS AND PROCEDURES

Procedures have been established for notification, by the licensee of State and local response organizations and for notification of emergency personnel by all response organizations; the content of initial and followup messages to response organizations and the public has been established; and means to provide early notification and clear instruction to the populace within the plume exposure pathway Emergency Planning Zone have been established.

Synopsis: The plan:

- . indicates a commitment to establish procedures for notification of and message verification for applicable State and local response organizations and plant emergency personnel, indicating that these procedures will be consistent with the emergency classification and action levels established;
- . indicates a commitment to establish procedures for alerting, notifying and mobilizing emergency response personnel;
- . indicates a commitment to provide in the initial notification message to State and local response organizations information about the class of emergency, the release of radioactivity, the potentially affected population and areas, and the protective measures that may be necessary;
- . indicates a commitment to include in their followup messages whatever information is known and appropriate as specified in Criterion E.4, a-n.
- . indicates a commitment to the establishment of administrative and physical means for providing notification and clear instruction to the population within the plume exposure pathway EPZ.
- . indicates a commitment to provide the offsite authorities with supporting information for their messages to the public.

Evaluation: The plan satisfies the planning standard except as noted.

Criterion 1: The licensee will want to assure that the bases for notification are mutually agreeable to all response organizations.

Criterion 3: The licensee will want to establish the nature of the initial message in conjunction with State and local organizations. It would be desirable to include in the plan a sample of an initial message.

Criterion 4: It would be desirable if the plan contained a sample of a format which could be used for supplying the information called for in followup messages.

## Enrico Fermi--Unit 2

E: NOTIFICATION METHODS AND PROCEDURES (Cont.)

Criterion 5: This is not a requirement of the licensee. However, the licensee might want to consider inclusion in the plan of a brief description of the system for dissemination to the public that has been established by State and local government organizations.

Criterion 6: The licensee needs to give evidence that such means exist, and also to indicate the time required for notifying and instructing the public.

Criterion 7: The licensee should consider inclusion in the plan of a sample message which it would supply to offsite authorities which can be used to instruct the public with regard to specific protective actions to be taken.

## Enrico Fermi--Unit 2

F: EMERGENCY COMMUNICATIONSPlanning Standard

Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.

Synopsis: The plan:

- . states that provisions will exist for prompt communications among the principal emergency response organizations, and that communications capabilities include multiple systems and redundancies;
- . cross-references the RERP procedures as the location of organizational titles and alternates for communications links;
- . states that the Control Room which will have both telephone and radio communications capabilities and from which the initial notification will be made, is manned 24 hours per day and that communication modes and paths will be available on a 24-hour-per-day basis;
- . states that there will be direct-dial capability from the Emergency Response Facilities of the plant to Federal agencies.
- . indicates that there will be provision for communications between the nuclear facility and the licensee's near-site EOF, State and local emergency operations centers, and radiological monitoring teams;
- . cross-references the RERP procedures as the location of provision for alerting or activating emergency personnel;
- . indicates that there will be a telephone hotline between the plant Emergency Response Facilities and the NRC Operations Center or NRC Emergency Notification System, dedicated telephone lines between the Emergency Response Facilities and the NRC Health Physics Network and the near-site EOF, and direct dial capacity to the OSC;
- . indicates that there will be a radio link to mobile medical units via the State police and direct dial capability to participating hospitals;
- . states that the various emergency communications systems will be operationally checked at least once every quarter and that communications with State and local governments within the plume exposure pathway EPZ will be tested monthly.

Evaluation: The plan satisfies the planning standard except as noted.

## Enrico Fermi--Unit 2

F: EMERGENCY COMMUNICATIONS (Cont.)

Criterion 1: Those aspects of the communications system addressed in the plan but not put in place need to be completed. It would be desirable to be more specific about the provisions for communications with contiguous State/local governments within the EPZ's (Criterion 1.b) and about communications with Federal emergency response organizations (Criterion 1.c). Since the organizational titles for those operating the communications systems and provisions for alerting and activating emergency personnel are contained in the RERP procedures, which are not included in the plan, it is not possible to assess them. Consideration might be given to inclusion in the plan of a block diagram illustrating locations and paths of primary and backup communications means, and specifying those links now listed in plan Table F-1, titled: Typical Communications--Emergency Response Facilities

Criterion 2: A more specific description of backup means as well as primary communication means with medical support facilities would be desirable.



## Enrico Fermi--Unit 2

G: PUBLIC EDUCATION AND INFORMATIONPlanning Standard

Information is made available to the public on a periodic basis on how they will be notified and what their initial actions should be in an emergency (e.g., listening to a local broadcast station and remaining indoors), the principal points of contact with the news media for dissemination of information during an emergency (including the physical location or locations) are established in advance, and procedures for coordinated dissemination of information to the public are established.

Synopsis: The plan:

- . states that the Detroit Edison Company provides information to the public at least annually regarding how they will be notified in the event of an emergency and what their actions should be, and indicates that there will be a Fermi-2 newsletter distributed at least annually, advertisements in newspapers at least once a year, and various other types of information activities;
- . indicates that the public information distributed annually includes the information specified by a-d, Criterion G.1;
- . states that the public information program provides the transient as well as permanent, adult population with an adequate opportunity to become aware of the information that is available;
- . indicates the location of a news center about 11 miles away from the plant for use in the event of a serious emergency condition and states that there also will be a near site emergency news center for 20 to 50 newsmen at the Nuclear Operations Center with transportation provided from the offsite emergency news center by the licensee;
- . states that the Vice President-Nuclear Operations, or his delegate, has been designated as the spokesperson for Detroit Edison in the event of an emergency at Fermi-2 and will have access to all necessary information;
- . states that there will be a Joint Public Information Center at the off-site emergency news center where the public information officers from the community, county, states, and Federal groups may congregate to review all public information releases;
- . notes that the rumor control office is described in the Monroe County Nuclear Emergency Response Plan;

## Enrico Fermi--Unit 2

G: PUBLIC EDUCATION AND INFORMATION (Cont.)

- states that Detroit Edison Company, with the assistance of Federal, State, and local authorities will conduct annual program to acquaint the news media with emergency planning and procedures, information concerning radiation, and information to enhance public education.

Evaluation: The plan satisfies the planning standard.

## Enrico Fermi--Unit 2

H: EMERGENCY FACILITIES AND EQUIPMENTPlanning Standard

Adequate emergency facilities and equipment to support the emergency response are provided and maintained.

Synopsis:

- . The plan states that the licensee is designing and/or constructing facilities to house a Technical Support Center (TSC), Operation Support Center (OSC), and Emergency Operations Facility (EOF) and will activate them in a timely manner in case of an emergency.
- . Onsite monitoring systems used to initiate emergency measures including geophysical, radiological monitoring and fire and combustion detectors are identified.
- . Acquisition of monitoring equipment and/or data from offsite sources are discussed.
- . A meteorological instrumentation and procedural system that satisfies the criteria in Appendix 2, NUREG-0654 is described.
- . Supplies and equipment stored in the OSC; the inventory, inspections and calibration of equipment and instruments on a quarterly basis is discussed.
- . The contents and location of emergency kits is identified.
- . The control point for receipt and analysis of field monitoring data has been established.

Evaluation: The plan satisfies the planning standard except as noted.

Criterion 1: The plan does not indicate if an interim TSC, OSC and EOF have been established or when permanent facilities are expected to be completed and if they will comply with NUREG-0696 requirements.

Criterion 5a: Process monitors listed in Table H-8 of the plan are not adequately identified (i.e., reactor coolant system pressure and temperature, containment pressure and temperature, liquid levels, flow rates, etc.). In addition frequent use of undefined acronyms to describe plant system, etc. makes evaluation difficult.

Criterion 7: The plan does not indicate if radiological monitoring equipment is readily available at offsite locations for use in emergency situations.

I: ACCIDENT ASSESSMENTPlanning Standard

Adequate methods, systems and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.

Synopsis:

- . The methods and techniques for determining source term and magnitude of radioactive releases are discussed in general terms.
- . The methods used to determine release rates and projected doses if instruments are inoperable or are offscale are defined.
- . The capability and resources available for field monitoring is addressed.
- . The methods and techniques for acquiring and evaluating meteorological data in conformance with Appendix 2, NUREG-0654 criteria is discussed.
- . The methods, equipment and expertise required to make rapid assessment of actual or potential radiological hazards is addressed.

Evaluation: The plan fails to satisfy the planning standard as noted.

Criteria 1, 2, 3, 4, 10: The plan discusses and describes the methods and techniques that will be used to perform dose assessments when instrumentation is installed and implementing procedures are written. There is not sufficient content in the plan to determine if the described methods and technique are adequate.

Criterion 9: The plan does not indicate if the licensee will have the capability to measure radioiodine concentration in air in the plume EPZ as low as  $10^{-7}$   $\mu\text{Ci/cc}$  under field conditions.

## Enrico Fermi--Unit 2

J: PROTECTIVE RESPONSEPlanning Standard

A range of protective actions have been developed for the plume exposure pathway EPZ for emergency workers and the public. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place, and protective actions for the ingestion exposure pathway EPZ appropriate to the locale have been developed.

Synopsis:

- . The means used to warn and advise onsite personnel of an emergency situation is described.
- . Evacuation routes are shown for evacuation of onsite non-essential personnel.
- . Transportation, decontamination and location of assembly areas for evacuated non-essential personnel are addressed.
- . The plan specifies that personnel accountability can be accomplished in about 30 minutes and that protective clothing, and respiratory protection will be issued to emergency workers.
- . The mechanism for recommending protective actions to appropriate state and local authorities and the bases for recommended actions is described.
- . The licensee states that evacuation time estimates are contained in Appendix 3 of the plant FSAR but has not included them in the emergency plan.

Evaluation: The plan satisfies the planning standard except as noted.

Criterion 6c: The use of radioprotective drugs for thyroid protection of emergency workers is not addressed.

Criterion 8: The plan fails to include time estimates for evacuation within the plume EPZ.

Criterion 10a: The plan does not contain a map(s) of offsite evacuation routes, relocations centers, medical facilities, shelter areas and relocation centers in most areas.

Criterion 10c: The means used to notify all segments of the transient and resident population and the notification time(s) are not addressed.

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K: RADIOLOGICAL EXPOSURE CONTROLPlanning Standard

Means for controlling radiological exposures, in an emergency, are established for emergency workers. The means for controlling radiological exposures shall include exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity Protective Action Guides.

Synopsis:

- . The exposure guidelines for emergency workers are addressed.
- . The individual authorized to approve radiation exposures in excess of 10 CFR 20 limits is identified.
- . Provisions for issuing and processing radiation dosimeters issued to emergency workers and maintaining their exposure records on a continuous 24-hour a day basis is addressed.
- . Specific action levels for decontamination of personnel and equipment and the control of onsite contaminated areas, drinking water and food supplies and release of areas, equipment and material to normal use is addressed.

Evaluation: The plan satisfies the planning standard.



## Enrico Fermi--Unit 2

L: MEDICAL AND PUBLIC HEALTH SUPPORTPlanning Standard

Arrangements are made for medical services for contaminated injured individuals.

Synopsis: The plan:

- . states that the licensee has made arrangements for medical treatment of patients from Fermi-2 at two hospitals in the vicinity which are adequately supplied and equipped to receive and treat contaminated patients and to evaluate radiation exposures and uptakes;
- . indicates that onsite first aid capability exists;
- . states that arrangements have been made for ambulance service from Fermi-2 to a medical treatment facility and that this service can handle injuries complicated by the presence of radioactive contamination.

Evaluation: The plan satisfies the planning standard.

Criterion 1: It is noted that Detroit Edison reserves the right to provide certain medical services or select consultants to perform these services, contracting as the need arises, and that Detroit Edison will coordinate medical emergency activities.

## Enrico Fermi--Unit 2

M: RECOVERY AND REENTRY PLANNING AND POSTACCIDENT OPERATIONSPlanning Standard

General plans for recovery and reentry are developed.

Synopsis: The plan:

- . indicates the existence of general plans and procedures for reentry and recovery;
- . provides a block diagram indicating the positions and titles of the key positions in the Recovery Organization (Fig. M-1) and describes in the text the functions of the various divisions in the recovery activities, including technical support and engineering.
- . indicates that the Recovery Organization structure is based on that recommended by the Atomic Industrial Forum's "Nuclear Power Plant Emergency Response Plan;"
- . states that the general recovery plan will be a group effort of both Detroit Edison and government officials;
- . states that the Nuclear Operations environmental and dose projection personnel will cooperate with State and Federal agencies to periodically update total population exposure estimates.

Evaluation: The plan satisfies the planning standard except as noted.

Criterion 1: The plan should provide more specificity with respect to the decision process. It currently indicates "typical criteria" for declaring an emergency situation resolved and gives a brief description of "actions which shall be examined" (sic) prior to authorizing reentry but does not seem really to describe the decision process. Also, it is not clear that the process indicated here attends to both existing and potential conditions.

Criterion 3: More specificity should be provided beyond the statement that it is to be a group process. For example, a better description might be provided of the means for informing members of the response organizations that a recovery operation is to be initiated or that changes have occurred in the organizational structure, and of definite lines of communication to be followed.

Criterion 4: The plan only addresses the point that there will be cooperation with the State and Federal agencies on updating population exposure estimates. Further indication of the method which will be used would be desirable.

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N: EXERCISES AND DRILLSPlanning Standard

Periodic exercises are (will be) conducted to evaluate major portions of emergency response capabilities, periodic drills are (will be) conducted to develop and maintain key skills, and deficiencies identified as a result of exercises or drills are (will be) corrected.

Synopsis: The plan:

- . states that exercises to test the integrated capability and a major portion of the basic elements of the Fermi-2 RERP will be conducted as set forth in NRC and FEMA rules;
- . states that the annual emergency exercise will include the mobilization of State and local personnel and resources and, periodically, of Federal response organizations, to verify the capability to respond to an accident involving an offsite radiological release;
- . states that the scenarios will be varied from year to year, in such a way that over a five-year period, all major portions of the plan and response organizations will be tested and exercises will be held during varying weather conditions and at different times of the day;
- . states that the exercises will be critiqued by Federal evaluators;
- . states that communications with State and local governments within the plume exposure pathway EPZ will be tested monthly, and that communications between the nuclear facility, State and local emergency operations centers and field assessment teams will be tested annually;
- . states that fire drills will be conducted in accordance with Fermi-2 Technical Specifications;
- . states that medical emergency drills, involving a simulated contaminated individual and providing for the participation by local support agencies (e.g., ambulance and hospitals) will be conducted annually;
- . states that radiological monitoring drills in the Fermi-2 environs (onsite and offsite) will be conducted annually and will include the collection and analysis of sample media;
- . indicates that appropriate health physics drills will be conducted semiannually and on an annual basis will include the analysis of implant liquid samples with actual elevated radiation levels;

## Enrico Fermi--Unit 2

N: EXERCISES AND DRILLS (Cont.)

- . indicates that each drill and exercise will be conducted in accordance with a scenario developed for that purpose and that each scenario will contain, as a minimum, the six elements laid out in Criterion N.3, a-f;
- . states that qualified observers will be assigned to drills and the annual exercise to evaluate general performance of individuals, organizations, and equipment to respond as specified in the Fermi-2 RERP;
- . states that a critique will be held as soon as practicable following the conclusion of a drill or exercise;
- . states that the evaluations and recommendations for corrective actions resulting from the critique will be documented and forwarded to the Fermi-2 Onsite Safety Review Organization, Independent Review and Audit Group, and Detroit Edison Corporate Management, and that corrective actions approved by the OSRO will be implemented by Corporate Management.

Evaluation: The plan satisfies the planning standard except as noted below.

Criterion 1: Although the plan states that exercises will be held at different times of the day, it would be desirable to specify that provisions will be made to start an exercise between 6:00 p.m. and midnight, and another between midnight and 6:00 a.m., once every six years. Consideration also should be given to providing for some exercises to be unannounced.

Criterion 2: Although two of the required communications drills are scheduled appropriately, the plan states that communications with Federal emergency response organizations and with the State of Ohio (which is within the ingestion pathway) will be tested annually while Criterion N.2 indicates the test should be quarterly. Also, the plan does not specify provisions for the aspect of understanding the content of messages.

Criterion 3: It would be appropriate for the plan to contain some discussion of the mix of structured and less structured aspects of the scenario which will allow free play for decision making during exercises and drills.

## Enrico Fermi--Unit 2

O: RADIOLOGICAL EMERGENCY RESPONSE TRAININGPlanning Standard

Radiological emergency response training is provided to those who may be called on to assist in an emergency.

Synopsis:

- . The plant emergency training and re-training program for instructing and qualifying personnel who will implement radiological emergency plans is discussed.

Evaluation: The plan satisfies the planning standard except as noted.

Criterion 1a: Specific emergency training for medical, ambulance, police and fire response groups is not addressed.

Criterion 2: On the spot corrections of erroneous performance during drills is not addressed.

Criterion 3: Multi-media training for onsite First Aid personnel is not specified.

Criterion 4: The scope, nature and frequency of training for the categories (a through j) listed in the criterion are not discussed.

## Enrico Fermi--Unit 2

P: RESPONSIBILITY FOR THE PLANNING EFFORTPlanning Standard

Responsibilities for plan development and review and for distribution of emergency plans are established, and planners are properly trained.

Synopsis: The plan:

- states that a training program has been established for personnel who plan and/or will implement radiological emergency response plans (Sec. 0);
- specifies the Superintendent-Nuclear Production and the Manager-Nuclear Operations as being responsible for the preparation, review, and updating of the Fermi-2 Emergency Plan and its associated procedures;
- indicates that it is the Emergency Plan Coordinator who has responsibility for the coordination of all emergency planning efforts;
- states that the Emergency Plan Coordinator presents recommendations to the Onsite Safety Review Organization (OSRO) for changing, updating, and improving the plant specific portions of the RERP, including changes indicated by drills and exercises;
- states that Detroit Edison will certify on an annual basis that the RERP and all agreements are current;
- states that revisions in the plan will be brought to the attention of holders of controlled copies of the Fermi-2 RERP and that organizations with assigned responsibilities under the plan will be apprised of applicable changes, with revised pages dated and marked to indicate changes;
- states its commitment to append to the plan the plans of groups (industrial and governmental) that are directly supportive;
- contains an appendix, listing by title, procedures required to implement the plan;
- contains a specific table of contents and in its organization follows the structure of the NUREG-0654 Criteria for Preparation and Evaluation of RERPs;



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P: RESPONSIBILITY FOR THE PLANNING EFFORT (Cont.)

- indicates that an independent audit will be provided by having the plan reviewed by IRAG, and that the audit will address the five points indicated in Criterion P.9, and that the results of the audit will be forwarded to the Fermi-2 Superintendent, the Detroit Edison Vice-President-Nuclear Operations, and to involved Federal, State, and local organizations for their review and action;
- states that all telephone numbers listed in emergency procedures will be updated quarterly.

Evaluation: The plan satisfies the planning standard except as noted.

Criterion 1: Some more specific indications in Section 0 that the Emergency Planning Coordinator will be included in the training program would be desirable.

Criterion 3: As an informational point, it would appear that all functions called for in Criterion 2 and Criterion 3 are covered, but not in strict accordance with the wording of these two criteria. For example, Criterion 3 calls for the Emergency Planning Coordinator to have responsibility for the development and updating of emergency plans while the Fermi-2 plan indicates that the Superintendent-Nuclear Production and the Manager-Nuclear operations have responsibility for preparation, review, and updating of the plan, and the Emergency Plan Coordinator is responsible for the coordination of all emergency planning efforts. Nothing specific is said about which of these roles has the final authority on plan preparation and updating.

Criterion 6: The Fermi-2 plan does not as yet contain a detailed list of supporting plans and their source but does state that it will. In Appendix 1, page 2, there is a list of four supporting governmental plans and their status. No industrial plans are indicated at this point.

Criterion 7: Appendix 2 lists emergency plan procedures by title but does not include the section (s) of the plan to be implemented by each procedure.

Criterion 8: This plan is organized in a manner whereby sections of the plan more or less correspond to the structure of NUREG-0654 evaluative criteria which would make it possible to eliminate cross-referencing between the plan and the planning standards. However, at this point the subpoints within sections of the plan do not necessarily correspond to the subpoints as numbered in the evaluative criteria, making cross-reference desirable even though not critical. Within a section, in order to avoid redundancy, the plan might indicate that a certain point which is called for by the criterion being addressed in that section is covered in another section. The plan should make sure that this type of cross-referencing is complete.

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P: RESPONSIBILITY FOR THE PLANNING EFFORT (Cont.)

Criterion 9: Although the plan provides for an independent audit procedure, it does not make it entirely clear how management controls will be implemented for evaluation and correction of review findings. The plan states that the audit will be conducted by IRAG at least once every two years, while Criterion P.9 calls for such a review at least every 12 months. The plan does not specify that the results of the review, along with recommendations for improvements, shall be documented and retained for a period of five years.