



Federal Emergency Management Agency

Washington, D.C. 20472

MAY 3 1985

MEMORANDUM FOR: Edward L. Jordan
Director, Division of Emergency Preparedness
and Engineering Response
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission

FROM: *Harry D. Krimm*
Richard W. Krimm
Assistant Associate Director
Office of Natural and Technological
Hazards Programs

SUBJECT: NRC Request for FEMA Review of the Revised Monroe County
Offsite Radiological Emergency Response Plan for Fermi-II

On January 11, 1985, you requested the Federal Emergency Management Agency (FEMA) to provide the Nuclear Regulatory Commission (NRC) with a supplemental interim finding concerning the adequacy of the revised Monroe County, Michigan, Emergency Operations Plan dated October 1984. This plan was approved by the Monroe County Board of Commissioners on December 11, 1984.

In a telephone conversation on January 24, 1985, between Dave Matthews of your staff and Craig Wingo of my staff, it was agreed FEMA would provide NRC with a memorandum containing a statement concerning the adequacy of the revised Monroe County Plan by March 15, 1985. In my memorandum of March 12, 1985, I stated that the FEMA Region V Regional Assistance Committee had reviewed the revised Monroe County plan and concluded "...there is reasonable assurance that the revised Monroe County plan dated October 1984, is adequate and capable of being implemented in the event of an accident at the Fermi II Nuclear Power Plant."

It was also agreed during the January 24, 1985 conversation that FEMA would provide NRC with a supplemental interim finding on the revised Monroe County plan shortly after April 30, 1984. The finding, prepared by FEMA Region V, is attached. Based on this evaluation there is reasonable assurance that the revised Monroe County plan is adequate and capable of being implemented to protect the health and safety of the public.

If you have any questions, please contact Mr. Robert S. Wilkerson, Chief, Technological Hazards Division, at 646-2861.

Attachment
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Supplemental Interim Finding
Enrico Fermi Atomic Power Plant, Unit #2
Site Specific
Offsite
Radiological Emergency Planning For
Monroe County Plan Revised October, 1984
Approved December 11, 1984

I. Introduction

- A. This document constitutes an update of the interim findings submitted to FEMA National on January 31, 1983 and updated July 18, 1983 and April 25, 1984. It is in response to the January 11, 1985 Nuclear Regulatory Commission's request for FEMA Findings on the revised Monroe County Emergency Operations Plan, Appendix 1, Nuclear Facilities Procedures approved December 11, 1984 relative to its adequacy of radiological emergency preparedness in the event of an accident at the Enrico Fermi Atomic Power Plant, Unit #2.
- B. The current Michigan Emergency Preparedness Plan (MEPP) is dated September 9, 1983. Revisions to the Michigan Emergency Preparedness Plan were submitted to FEMA Region V for review November 7, 1983, August 1, 1984, and March 5, 1985. FEMA Region V review findings of the revisions reflected in the current Michigan Emergency Preparedness Plan were provided the State of Michigan March 11, 1985. The Michigan Emergency Preparedness Plan (MEPP) was found to be adequate in the Big Rock Point, Palisades, and Donald C. Cook Regional Director's Evaluations.
- C. The Region V Assistance Committee on February 21, 1985 completed its review of the revised Monroe County Emergency Operations Plan, Appendix 1, Nuclear Facilities Procedures. The Region V Assistance Committee Plan review consensus comments were provided the State of Michigan March 14, 1985. The Schedule of Corrective actions has been requested from the State of Michigan by April 15, 1985.
- D. The second full participation exercise to test the State plan and local site specific plans for the Enrico Fermi Atomic Power Plant, Unit #2 took place June 26-27, 1984. Exercise participants included the State of Michigan, the counties of Monroe and Wayne, Brownstown Township, Enrico Fermi Atomic Power Plant, Unit #2 and representatives of the Canadian Government and the Canadian Province of Ontario. The Fermi II exercise report was mailed to the State of Michigan and FEMA National September 19, 1984. The Federal Emergency Management Agency forwarded the Fermi II exercise report to the Nuclear Regulatory Commission October 15, 1984. There were no Category "A" deficiencies identified in the exercise report.

II. Evaluation:

The following evaluation address the Region V plan review consensus of the Monroe County Emergency Operations Plan, Appendix 1, Nuclear Facilities Procedures revised October, 1984 and approved December 11, 1984. The evaluation follows the planning standards and evaluation criteria format of Nureg 0654/FEMA Rep-1, Revision 1, planning standards A through P.

A. Assignment of Responsibility

The Revised Monroe County plan identifies the State, local, Federal, private sector organizations, and the utility that are intended to be part of the overall response organization for emergency planning zones. The plan includes concepts of operation for each organization and suborganization having an operational role in emergency response. The concepts of operation explains each organizations relationship to the total effort. There is an illustration of the interrelationships of participating organizations in a block diagram. The chairperson of the Monroe County Board of Commissioners (Chief Executive) is responsible for implementing the necessary protective actions and for directing the disaster relief forces in the County.

The plan provides for 24 hour per day emergency response by all organizations including 24-hour per day manning of communications links. It also includes a table showing each organization and specifies the functions and responsibilities for major elements and response. The table depicts the respective agencies on one axis and the function as the other, showing primary and support responsibilities. The legal basis of the plan references Act 390, Public Act of 1976, the State Emergency Preparedness Act; and the Monroe County Emergency Preparedness Resolution, dated February 13, 1974 and amended June 14, 1977. The plan contains signed signature pages to serve to verify agreements with county organizations and it references Act 390 to indicate that response functions are covered by law.

It also states that the Monroe City/County Office of Civil Preparedness (OCP) director/coordinator will act as Chief of Staff for the chairperson and will provide the Chief Executive with necessary information and updates as required. The Chief of Staff is responsible for assuring continuity of operations. It further states that the Assistant CPD will act as the alternate Chief of Staff to provide for maintenance of direction and control on a 24-hour basis and in the absence of the City/County CPD.

B. On-Site Emergency Organization

These Planning Standards criteria items do not apply to off-site planning and they are not addressed herein.

C. Emergency Response Support and Resources

The plan states that "requests for Federal Assistance will be coordinated through the State. Local resources will be made available to Federal response teams on this basis." Provision is made for a utility representative to be present in the County EOC to provide liaison. Information from the EOF will be transmitted directly to the on-scene State EOC and to the Monroe County EOC via the liaison. Liaisons from the County will be present at the On-Scene State EOC and the Wayne County EOC. The Michigan Department of Public Health has the responsibility for identification of nuclear and other facilities, organizations or individuals, which can be relied upon in an emergency to provide assistance.

D. Emergency Classification System

The plan contains an emergency classification and emergency action level scheme consistent with that established by the facility licensee and includes procedures that provide for emergency actions to be taken which are consistent with the emergency actions recommended by the nuclear facility licensee. The procedures take into account local offsite conditions that may exist at the time of the emergency.

E. Notification Methods and Procedures

The plan states that if a nuclear incident occurs at Fermi II, the plant operator is required to promptly notify the nearest Michigan State Police post and the Monroe City/County Joint Communications Center within about 15 minutes. Notification will be made via dedicated telephone lines from the plant upon classification of a nuclear incident. Michigan State Police will verify Monroe County notification with the Monroe City/County Joint Communications Center. The plan is lacking in text on the additional verification by the County directly with the Fermi II plant as reflected on the "Fermi II Verification Form". This should be clarified as an addition to the text of the plan.

The plan includes procedures for alerting, notifying, and mobilizing emergency response personnel. It includes a system for disseminating to the public appropriate information contained in initial and follow-up messages received from the Licensee, including the notification to appropriate broadcast media.

It also includes administrative and physical means for providing instructions to the public within the plume exposure pathway EPZ, but leaves out the time required for notifying this population. It should be noted that in the full participation exercises of February 2, 1982 and June 26-27, 1984 Monroe County did notify the public within the time required in Nureg 0654/FEMA Rep-1, Revision 1. The Region V Assistance Committee has recommended Monroe County revise its plan to include the Nureg time requirement to notify the public.

The plan includes draft messages to the public. However, two of them need to be corrected. There is a lack of clarity in the selective evacuation and warning EBS announcement on page B-1-F4, paragraph #2 (incomplete or misworded statement); and the statement in paragraph #6 should include the provision of food at the shelter, so that individuals will not be concerned about a need to take their own. Secondly, only the sheltering message included ad hoc respiratory protection. It should also be included as part of the selective evacuation announcement for individuals that may not have heard the sheltering message.

F. Emergency Communications

Monroe County is capable of providing 24-hour per day notification to and activation of the emergency response network, including 24-hour per day manning of communication links that initiate the response actions. The plan includes a description of primary and backup means of communications for the response organizations and provisions for communications with contiguous state/local governments within the EPZ and states that communications with federal agencies will be addressed through the State EOC.

According to the plan, communications between the nuclear facility, the EOF, the State On-Scene EOC and the State EOC is via dedicated telephone lines, radio communications, regular telephone lines, and/or LEIN radios. Radiological monitoring is conducted by plant and State personnel. The State On-Scene Emergency Operations Center retains responsibility for communications with the State radiological monitoring teams. Provisions are provided for alerting and activating emergency personnel in each organization.

Hospital and mobile medical support communications will be coordinated through the MECOM system and basic communications between risk health care facilities and the EOC will be via telephone. There are provisions for periodic testing of the entire emergency communications system (monthly).

LEIN = Law Enforcement Information Network

MECOM = Michigan Emergency Communications System

G. Public Education and Information

Upon activation of the Joint Public Information Center at the Monroe County Community College, the County Clerk who is the Public Information Officer (PIO) will assist in required activation tasks and report there as the County representative. The Monroe County PIO, as directed by the chairperson, will serve as the County's spokesperson and have access to all necessary information. Arrangements are included for timely exchange of information among designated spokespersons and for dealing with rumors. Provisions are included to conduct an annual program to acquaint news media with the emergency plans and procedures regarding dissemination of news during a nuclear facility incident.

H. Emergency Facilities

The plan states that the Monroe County EOC is located at 106 East First Street, Monroe. The EOC is the central point for command and control of local disaster relief forces. The Region V Assistance Committee recommended the location and address of the new EOC at 965 south Raisinville Road should be reflected, as necessary, throughout the plan. Provisions are included for the timely activation and staffing of the facilities and centers described in the plan. The Michigan Department of Public Health (MDPH) will provide reports of off-site conditions once activated. The MDPH will assume the primary responsibilities for radiological monitoring, exposure control, and protective action guidelines.

Monroe County has made provisions to inspect, inventory, and operationally check emergency equipment/instruments at least once each calendar quarter and after each use. According to the plan there are sufficient reserves of instruments/equipment to replace those which are removed from emergency kits for calibration or repair. The plan points out calibration of equipment shall be at intervals recommended by the supplier of the equipment. It further states "The Communications equipment will be inspected and inventoried as part of the annual small scale exercise." However, it is recommended communications equipment be inspected and inventoried more frequently.

According to the plan the emergency communications kit consists of a portable two way radio. The radiation monitoring equipment emergency kits as described do not include emergency supplies. There is a discussion of protective clothing but it is not clear if they are available.

The plan states "the on-scene State EOC at the Michigan State Police post will be the central point for receipt and analysis of all field monitoring data upon which decisions will be made." The plan should be revised to reflect the State on-scene EOC location at the National Guard Armory, Monroe, Michigan.

I. Accident Assessment

The plan states the MDPH will provide reports of off-site conditions once activated. The department will assume the primary responsibilities for radiological monitoring exposure control, and protective action guidelines. It also says the County will follow the recommendations for protective actions coming from the on-scene EOC and the licensee's EOF. The licensee will also send a technical representative to the County EOC as stated in planning standard C above.

J. Protective Response

Documents are included as attachments on decontamination criteria and procedures; criteria for use of thyroid-blocking drugs; protective actions for external and inhalation exposure; protective action guides for contaminated human and animal food, and protective action guides for drinking water. Maps show evacuation areas, relocation centers in host and shelter areas and evacuation routes, however these maps are illegible. Maps also show population distribution around the nuclear facility by evacuation areas. There are no maps showing pre-selected radiological sampling and monitoring points. The REP exercise report of 6/26-27/84 indicates that all the required maps were available and properly displayed in the County EOC.

Means for notifying all segments of the transient and resident population will be via public education, outdoor sirens, route alerting, and the emergency broadcast system. The plan states "fire personnel will assist immobilized or institutionalized persons in leaving their home or facility, if evacuation is ordered. The health and medical officer has the primary responsibility to coordinate the evacuation of medical facilities and medically impaired persons through the provision of ambulances and other suitable vehicles. The county jail is within the EPZ. Inmates will be transported to the Washtenaw and LeNawee jail facilities.

The plan is not clear on pre-incident development of lists of home bound and non-ambulatory persons needing transportation or what agency is responsible for its development, updating, and coordination with other agencies. An on-site visit by a FEMA staff member verified the existence of a pre-incident list of home bound and non ambulatory persons needing transportation. The Monroe County office of Civil Preparedness is responsible for its development, updating and coordination with other agencies as necessary. This is done in cooperation with Fermi II who annually conducts a mailing to residents within the 10 mile EPZ to identify people who need this assistance.

The County specifies that the Michigan Department of Public Health is responsible for directing the use of KI. The criteria for its use is outlined in the plan. The plan states the MDPH is responsible for directing the use of radioprotective drugs. The plan also includes a copy of the Criteria For Use of Thyroid Blocking drugs that is reportedly extracted from the MEPP. However, the extracted material content in the County plan is different than in the State plan. The criteria for use of KI in the County plan is 0-10 rem; 10 rem and above, whereas the State plan reflects 0-25 rem; 25 and above, etc. The RAC has recommended the plan be revised to be consistent with the State plan.

The primary means of evacuation will be by private vehicles. Buses will supplement this means for those who have no transportation. Persons requiring specialized transportation will be provided special services as stated in the Health/Medical and transportation annexes. The plan further states reception centers will be located outside the primary EPZ and be used primarily to direct evacuees to congregate care centers or monitoring/decontamination centers. The plan also contains a listing of the relocation/reception center locations.

Evacuation Time Estimates, extracted from PRC Voorhees's Study, "Preliminary Estimate of Evacuation Times," October 1980 are also included in the Monroe County Plan. It further includes attachments entitled Evacuation Routes and Capacities; Projected Traffic Volumes on Evacuation Routes and Traffic Congestion Summary. Access control to the area and by establishing access control points and traffic control points staffed by local law enforcement personnel.

The public works officer will assess potential impediments or weather factors affecting evacuation and prepare for appropriate remedial action. Evacuation time by sector is not shown and time estimates for adverse conditions is not presented in the plan. The RAC recommends the plan be revised to include evacuation time by sector and time estimates for adverse conditions.

The American Red Cross standard national forms will be used to record reception center and congregate care center contacts. Members of the Department of Social Services management staff will be assigned to collect necessary summary data provided by the ARC at periodic intervals. The ARC will be responsible for activation and operation of facilities to include feeding, sheltering, and registering evacuees.

Decontamination procedures shall be under the direction of Radiological monitoring personnel. Sufficient Radiological personnel and equipment will be present to monitor all residents and transients within a 12-hour period.

K. Radiological Exposure Control

The Radiological Officer will coordinate the distribution of dosimeters to emergency workers. He maintains a record, and seeks to control, the amount of exposure received by emergency workers, utilizing the individual exposure record cards. Each emergency worker assigned tasks within the primary EPZ will be provided two self-reading dosimeters (one CDV-138 or one DCA-622, and one CDV-742) and thermoluminescent dosimeter (TLD). 24 hour capabilities is demonstrated by an alternative officer sharing duties with the radiological officer. The plan states individuals are trained in reading dosimeters. They must report dosimeter readings at least every 12 hours and should notify their respective supervisors immediately under certain conditions.

The plan contains conflicting statements on the decision chain for authorizing emergency workers to incur exposures in excess of the EPA general public PAGs. It states "The maximum dose to emergency workers will not exceed a cumulative of 24 rem to the whole body. Exposure beyond this limit will be on a voluntary basis and then only for lifesaving purposes as authorized by the emergency worker's immediate supervisor upon consultation with the radiological officer at the EOC." It also says "only the Chairman, (Chief Executive), Monroe County Board of Commissioners or designee can authorize beyond the 25 rem limit." Action levels are included for determining the need for decontamination.

The plan is inconsistent in that it says nursing staff from the County Health Department will monitor emergency workers. It also states that workers will monitor themselves. The decontamination of equipment will be done by the fire personnel, and waste will be disposed of by the Department of Public Health personnel. Means for radiological decontamination of personnel wounds, supplies, equipment, and instruments are missing. The RAC recommends the plan be revised to correct these inconsistencies and omissions.

L. Medical and Public Health Support

The hospitals are listed as referenced, but there is no mention of their adequacy of treating nominal radiation injuries. Statements are needed from the hospitals indicating this capability. Arrangements are included for transporting victims of radiological accidents to medical support facilities.

M. Recovery and Reentry Planning and Post Accident Operations

The plan states The Michigan Department of Public Health will provide recommendations to the Governor on reentry decisions and references the MEPP for specifics. It further states the County procedures for reentry will be directed by the Chief Executive and coordinated by the Chief of Staff. All departments with emergency responsibilities will carry out their assigned tasks according to appropriate annexes and supporting procedures.

N. Exercises and Drills

The Monroe County plan paraphrases the criteria item on the definition and conducting of an exercise, and states Monroe County shall at the direction of the chairperson and/or the Monroe County Board of Commissioners participate in a joint federal, state, county, and plant operator exercise prior to the adoption of the nuclear facility procedures portion of the County EOP and thereafter as required. The plan also paraphrases the planning criteria item for communications drills in Monroe County.

A medical emergency drill involving a simulated contaminated individual will be held with participation by local support services agencies annually. This drill may be held as part of the required annual exercise. The plan needs to be revised as necessary to reflect the change to biennial exercises.

Radiological monitoring by the County Radiological officer and staff is limited to the monitoring of individuals and vehicles at reception centers, congregate care centers and emergency workers decontamination centers. The plan further states that the local radiological organization will participate with the Michigan Department of Public Health in the collection and analysis of all sample media during the required annual drill in the Fermi II primary EPZ. Communications and record keeping will also be tested.

The plan quotes the criteria items for the content of scenarios to be used in exercises, and states that the scenario will be written to allow free play for decision making. It also paraphrases the criteria item on the observation, evaluation and critique of exercises, and on areas needing improvements, procedural changes, corrective actions, and management control to ensure that corrective actions are implemented.

O. Radiological Emergency Response Training

The plan states that training programs will also be offered to other departments and agencies not directly affected, but which could become involved through mutual aid agreements. It does not address training and periodic retraining for director or coordinators of the emergency response organizations. It states that "Special training programs and drills will be coordinated by the City/County CPD/coordinator." The plan thereafter references the Michigan Emergency Preparedness Plan (MEPP) for a description of the State-wide training program.

An annual training seminar will be conducted to familiarize radiological personnel, dispatchers, law enforcement, and fire personnel involved in warning functions (including mutual aid departments) with emergency operational aspects regarding a nuclear power plant incident. This annual training seminar will serve as the periodic retraining required of warning personnel since all warning support groups will be included. Training will be coordinated by the Monroe County Office of Civil Preparedness and will include sessions offered by the organizations. The Monroe County plan refers to the MEPP for radiological related training programs. It also refers field monitoring to the State. It also includes provisions for training of first aid and rescue personnel, local support, services personnel, civil defense/emergency services, medical personnel, and personnel responsible for transmissions of emergency information and instructions. The plan further states it is the responsibility of each agency committed to a nuclear power plant incident response to initially train and maintain the capability of its staff to respond to an incident. This will include annual meetings as well as special training programs designed specifically for Fermi II incident response.

P. Responsibility for the Planning Effort: Development, Periodic Review and Distribution of Emergency Plans

The plan does not clearly address the provision of training for individuals responsible for the planning effort. It cross references Attachment A to the Health and Medical Annex.

The Chairperson of the Monroe County Board of Commissioners (Chief Executive) has the primary responsibility for the direction and control of all county and local emergency forces and resources conducting emergency response activities within the County. The Monroe City/County Civil Preparedness Director/Coordinator is responsible for emergency planning and updates, and overall coordination of emergency operations in Monroe County. He will coordinate all off-site operations to assure that the proper notification and utilization of agencies occur, that requests for assistance are met, and that the continuity of resources is maintained.

The plan also states The nuclear facility procedures of the Monroe County EOP will be reviewed and certified as current annually. The City/County CPD/Coordinator will update the plan when needed and based on the evaluations received from the exercise and drills. He will hold an appendix review session annually, involving all department heads with radiological emergency responsibilities. The Monroe City/County OCP (Chief of Staff) will distribute revised pages or additions to the plan as needed to those who have control copies of the plan. A control sheet will be included, to be signed by the receiving party and returned to the coordinator. Revised pages shall be dated and marked to know where changes have been made.

The plan contains a detailed listing of supporting plans and their source, an appendix listing, by title, procedures required to implement the plan, and a specific table of contents. However, the cross reference to the criteria items need to be corrected.

The City/County Office of Civil Preparedness Director/Coordinator will update telephone numbers and personnel assignments quarterly. He will do this by requesting a review of this information by each agency responsible for an annex. Each agency will submit changes to the coordinator who will incorporate them into the plan.

III. Summary

Preceding evaluations have found the State of Michigan, Wayne and Brownstown Township's radiological emergency preparedness plans adequate and capable of being implemented in the event of an accident at the Enrico Fermi, Unit #2, Atomic Power Plant. These preceding evaluations were based on Region V Assistance Committee reviews of the State of Michigan, Wayne and Monroe counties, and Brownstown Township's plans and their revisions, evaluations of two full participation exercises, FEMA participation in ASLB hearings concerning off-site issues, and FEMA responses provided the Nuclear Regulatory Commission (NRC) regarding specific planning concerns raised in petition to the NRC by Monroe County.

The Region V Assistance Committee conducted a review of the revised Monroe County Emergency Operations Plan, Appendix 1, Nuclear Facilities procedures on February 21, 1985. This evaluation is based on the Region V Assistance Committee findings of that review meeting. It was noted by the RAC there are no remaining deficiencies which would impede the health and safety of the population in the vicinity of the Enrico Fermi, Unit #2, Atomic Power Plant.

IV. Supplemental Interim Report Conclusion

It is currently felt that deficiencies identified in the revised Monroe County plan and implementing procedures are such that once corrected would serve to improve upon the overall emergency response capability.

As a result of the foregoing evaluation, FEMA Region V is of the opinion the revised Monroe County site-specific radiological emergency plan for the Enrico Fermi Atomic Power Plant, Unit 2, is adequate and capable of being implemented to protect the population.

Exceptions of the plan to the criteria found in the planning guide, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants, NUREG 0654/FEMA REP-1, Revision 1, have been discussed in this and previous evaluation reports. Accordingly, any new information discovered as a result of additional Regional Assistance Committee reviews and meetings with Monroe County officials will be submitted to FEMA.