

DmB

NOV 2 1984

Docket No. 50-341

The Detroit Edison Company
ATTN: Wayne H. Jens
Vice President
Nuclear Operations
6400 North Dixie Highway
Newport, MI 48166

Gentlemen:

We have received the attached Federal Emergency Management Agency (FEMA) letter dated October 15, 1984, and associated final exercise evaluations on the offsite emergency preparedness exercise conducted on June 26-27, 1984, for the State of Michigan, the Counties of Monroe and Wayne, and Brownstown Township. The final exercise evaluation lists several recommendations (which are referred to in the FEMA letter and attachments as deficiencies other than those which would affect public health and safety) regarding the offsite emergency response plans for the area around the Enrico Fermi II Nuclear Power Plant.

The final FEMA findings with respect to the status of plans and preparedness in the vicinity of your facility have not been received; however, based on the performance of the offsite agencies during the exercise, no deficiencies affecting public health and safety were identified.

We fully recognize that the recommendations to be implemented may involve actions by other parties and political institutions which are not under your direct control. Nonetheless, we would expect the subject of offsite preparedness for the area around the Enrico Fermi II Nuclear Power Plant to be addressed by you as well as others.

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NOV 2 1984

In accordance with 10 CFR 2.790 of the Commission's regulations, a copy of this letter and the enclosures will be placed in the NRC's Public Document Room.

Sincerely,

L. R. Greger, Chief
Emergency Preparedness and
Radiological Protection Branch

Attachments: As stated

cc w/attach.:

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Engineer

F. A. Marquardt, Corporate
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DATE	11/1/84	11/2/84					



Federal Emergency Management Agency

Washington, D.C. 20472

OCT 15 1984

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

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

SUBJECT: Exercise Report of the June 27, 1984 Exercise of the Offsite
Radiological Emergency Preparedness Plans for the Enrico
Fermi II Nuclear Power Plant

Attached are two copies of the Exercise Report of the June 27, 1984, joint exercise of the offsite radiological emergency preparedness plans for the Enrico Fermi II Nuclear Power Plant. This was a full participation exercise for the State of Michigan, Monroe and Wayne Counties, and Brownstown Township. The report, dated October 5, 1984, was prepared by Region V, Federal Emergency Management Agency (FEMA).

FEMA Region V will provide a copy of this report to the State of Michigan and request a schedule of corrective actions. As soon as we receive and analyze the response, we will send you our determination.

If you have any questions, please contact Mr. Robert S. Wilkerson, Chief, Technological Hazards Division, at 287-0200.

Attachments
As Stated

~~8410170283~~

Exercise Report

Enrico Fermi II Nuclear Power Station

Detroit Edison Company

Joint Exercise

Location of the Plant: Located in the State of Michigan,
Monroe and Wayne Counties, Near
the City of Frenchtown

Exercise Date: June 26-27, 1984

Date of Report: — ~~September~~ — 1984 — *OCTOBER 5, 1984*

Participants included: The State of Michigan, (full scale)
Brownstown Township (full scale)
Monroe and Wayne Counties (full scale)

Prepared By The:

Federal Emergency Management Agency, Region V, Natural & Technological
Hazards Division, Technological Hazards Branch, Chicago, Illinois 60606

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1. Deficiencies Affecting Public
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2. Other Deficiencies

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Exercise Summary

Two meetings were conducted by FEMA, within 48 hours of the completion of the exercise, providing a verbal narrative of the main events of the Enrico Fermi 2 exercise. The first meeting following the exercise was conducted with State and County and Township participants present. The second meeting with the Public and News Media provided them with the main events of the exercise, and also gave them an opportunity to make comments concerning radiological emergency preparedness for Enrico Fermi 2. Written comments were requested from the public at the close of the meeting with the public and media. No written comments have been received even though two or three citizens in attendance were requested to submit their comments to FEMA Region V. FEMA Region V received a Freedom of Information request dated 6/30/84, from the Safe Energy Coalition concerning the exercise and various documents and materials on the adequacy of planning. The response was coordinated with the FEMA Public Affairs and General Counsel's offices.

A. State of Michigan

During the June 27, 1984 Enrico Fermi 2 Exercise twenty-four (24) objectives were evaluated during the States full scale participation. The One significant deficiency identified during the February 2, 1982 full participation exercise has been corrected (criteria item J.10. b). No new deficiencies were identified during the evaluation of this exercise.

The State Emergency Operations Center (EOC) in Lansing and the State on-Scene EOC at the National Guard Armory in Monroe, Michigan were activated. The State EOC in Lansing, Michigan has been evaluated on numerous occasions during previous Radiological Emergency Preparedness exercises within the State of Michigan. The most recent activation and mobilization occurred during the January 25, 1984 partial exercise of the Donald C. Cook Nuclear Power Plant.

The new location of the State On-Scene EOC in the Monroe National Guard Armory provided space for easy movement of EOC staff which was not the case with the facility utilized during the February 2, 1982 exercise. The capability for twenty-four (24) hour staffing was demonstrated. Primary and back-up

communications systems are available with all local EOC's, contiguous States, the licensee and FEMA. Hardcopy information capability was demonstrated throughout the exercise between State and local governmental facilities, the utility, and FEMA. Protective action recommendations were based on Plant status and weather conditions. These recommendations were defined according to developing changes throughout the exercise. Although no off-site evacuations were recommended, appropriate preparations were made and put on standby when levels appeared to be progressing towards a potential need for evacuation.

This exercise allowed the State Field Monitoring Teams to be pre-positioned. The team from Detroit Edison could be dispatched for the initial response because of their close proximity to the plant. The actions of the Field teams were in concert with the scenario. The scenario allowed only for the release of noble gases. The field team's actions and sampling was in agreement with a release of noble gases. There was no significant release of radio iodine off-site. The measurements made by the Field teams recognized that noble gases were the only significant radioactivity. The Field teams however, were prepared and properly equipped to detect and measure other isotopes such as radio iodine and particulates. Communications between the Field team and the State On-Scene EOC was good. Field personnel were equipped with personal monitoring devices of the self reading type and the permanent recording type. Respiratory protection was provided to the team members.

The Mobile Laboratory, located at the State OSEOC is a well equipped van operated by an experienced staff. The Mobile Lab is routinely used in the State's environmental surveillance program. The analytical systems are maintained daily including use of calibration check sources. The State also participates in the Environmental Protection Agency's (EPA) Quality Assurance Program for radionuclide laboratories.

Although the operations conducted within the scope of the scenario did not require analysis of a wide variety of samples, the radio chemist was prepared to demonstrate their analytical procedures. These procedures have been demonstrated in numerous previous exercises.

Organizations represented at the Joint Public Information Center, located at Monroe Community College were: the State of Michigan Departments of State Police and Public Health; Monroe and Wayne Counties, and Brownstown Township; the province of Ontario, Canada, and the Detroit Edison Company. Overall the Public Information Officers (PIOs) exhibited a knowledge of the JPIC and appeared to be trained in their duties. One exception to this was the Public Information Officer of Brownstown Township, this individual was involved in discussion with the News Media without coordinating information with the other PIOs. This was quickly corrected

and information from the PIOs for the rest of the exercise was coordinated with the other PIOs and restricted to press briefings.

Monroe County was the only JPIC organization to demonstrate a shift change of their PIO. There was a sufficient number of personnel at the JPIC to assist each agency with clerical duties, except for Brownstown Township. Brownstown Township was represented only by their PIO, thereby leaving their telephone unattended during press briefings.

The JPIC reportedly has the capability to accommodate 150 or more media personnel. Maps, displays and other illustrations were posted for the media. The Media briefing room was equipped with approximately 25 telephones for use by the media. Additional telephones and lines are reportedly stored at the JPIC to increase the number of phones to 500. Provisions for back-up electrical power are not maintained at the JPIC. Detroit Edison reportedly has at its disposal mobile generating equipment which could be dispatched if needed. In the event of a total loss of power the JPIC could relocate to the media facility in the EOF or to the utility's headquarters in Detroit, Michigan.

The primary communications system with the EOF, the State On-Scene EOC, the State's primary EOC in Lansing and the utility was two Data Fax machines over dedicated telephone lines. The back-up system is via additional dedicated lines and commercial telephones. Monroe and Wayne Counties and Brownstown Township PIO's used verbal communications over dedicated lines to receive messages from their respective EOCs.

The JPIC briefings were informative, concise, and well managed. Technical jargon was avoided whenever possible and was defined in laymen terms as necessary. The press releases, as well as rumor control were coordinated between the various public information officers. Hard copies of news releases were available and distributed during the briefings. The utility video taped the briefings and made the tapes available following each briefing. In one instance data was excluded from a press release. This occurred in the in-place sheltering message which neglected to include the recommended procedures to follow as well as provide instructions to transients without shelter. The error was caught and verbal instructions with the information were provided to the media at the JPIC. The protective action for the sheltered area was described verbally, using familiar boundaries and landmarks as well as the EPZ sector designations.

B. Monroe County

The following exercise evaluation comments pertain to Monroe County. There were eighteen (18) exercise objectives established for Monroe County. During the closed door critique for the exercise participants and the open meeting for the public and media, on June 29, 1984, the FEMA Exercise Director reported that only two (2) of the eighteen (18) exercise objectives that were established for Monroe County was not fully demonstrated (objectives #14 and #17). A further review of the evaluation team files revealed that three additional objectives (#20, #27 and #29) was also not fully demonstrated.

During the exercise play the initial EBS message instructing the public to take shelter (objective #14) did not identify the affected areas in terms of landmarks that would be understandable to the general public. The description provided in the EBS message was by emergency planning sectors (i.e., sectors R-A-B-C). The message had been initiated on a timely basis and included the required protective actions (criteria items E.5 & F.7) for dissemination to transients and persons living and/or working in the affected areas, including the need to "keep pets inside, and to the extent possible, bring farm animals under covered facilities."

However, concurrently with the EBS announcement the same message, including landmarks that would be understandable to the general public was verbally described to the media at the JPIC.

It has been determined that the foregoing omission of the information which identifies the affected areas in terms of landmarks that would be understandable to the general public constitutes a category "B" deficiency, and requires demonstrated improvement in the next exercise of the Fermi 2 facility. In this instance the omission was not of sufficient magnitude to warrant an impedes to the welfare of the public. This is because the message included all the required information for the EBS message, except for identifying the affected areas in terms of landmarks that would be understandable to the general public. Further, it is believed that the situation would possibly have been a self correcting action through inquiries by the EBS Stations and the public.

During the exercise play it was also noted that the Emergency Broadcast System (EBS) was simulated (in accordance with the scenario) to notify farmers to place cattle on stored feed, although this information had been given to the media at the Joint Public Information Center. It was later determined through the State that the State retains the responsibility to notify farmers through the Michigan Department of Agriculture (MDA) that to the extent possible, to place farm animals under covered facilities and to place cattle on stored feed during the Site Area Emergency phase of an exercise. This procedure

is not clearly stated in the State plan, therefore it is recommended that it be clearly explained in the next revision of this section of the State plan.

The objectives of demonstrating the organizational ability to deal with impediments to evacuation, and that of demonstrating the ability to determine and implement appropriate measures for recovery and reentry were met within the scope of the exercise. Since there was no evacuation and only the sheltering of people and animals, recovery and reentry actions were limited to announcing that the sheltering recommendation had been lifted, remove road blocks and inform personnel initially placed on standby to demobilize.

The Monroe County Emergency Operations Center is a small facility. There were map displays posted showing the plume EPZ with sectors labeled, evacuation routes, relocation centers, access control, radiological monitoring points and population by evacuation areas. The EOC staff presently relies on a dedicated telephone communications link from the utility which exists next door in the Monroe County Sheriff's dispatch center. Messages received, by the Sheriff's dispatch Center for the EOC, are relayed via commercial telephone and/or messenger.

The scenario objectives did not include the evaluation of the activation and mobilization of the EOC staff. The exercise scenario for the utility was a two (2) day exercise (June 26-27, 1984) and a one day exercise for the off-site political jurisdiction (June 27). Therefore the EOC staff would have been mobilized on the first day of the exercise (June 26) in response to conditions at the plant. There was a demonstration of a shift change of the EOC staff for all but four (4) of the sixteen (16) staff members. There was a brief demonstration and explanation of a plan, by the RADEF Officer, for monitoring incoming second (2nd) shift personnel for potential contamination upon their arrival at the EOC, since the EOC is located within the 10 mile EPZ of the utility.

EOC Staff briefings on the progress of the exercise were conducted. However, the briefings started to lag later in the morning and after the second shift began operation. More frequent briefings throughout the exercise, particularly during major changes such as a change in the accident classification is recommended.

Communication in the EOC consisted of Commercial Telephones, a two way radio network to the Sheriff's office and a unit operated by the American Radio Relay League (ARRL). The Monroe County Sheriff's Communication Center is operated on a 24 hour, 7 days a week basis and serves as the warning entry point for the County EOC.

The Monroe County RADEF Officer was knowledgeable in the area of monitoring, worker exposure, and the plan for administering KI, if it had been necessary. He was prepared to coordinate the KI distribution and was effective in explaining to the EOC staff where the plume was traveling, how to minimize the dose to emergency workers, and the necessity of dosimetry distribution and record keeping.

The Public Information Officers from Monroe County at the JPIC were well trained and knowledgeable. A shift change was demonstrated by the PIO and the three per shift, Rumor Control Operators. Information intended for inclusion in a hard copy press release concerning protective actions (shelter areas as described by boundaries and familiar landmarks) was never developed. This information was provided verbally at the JPIC during media briefings in addition to being marked on an EPZ map at the same relative time as the EBS announcement.

During the Public Meeting of June 27, 1984, it was incorrectly stated that Monroe County deployed law enforcement personnel to control traffic and prevent access to the sheltered area during the exercise. The exercise objective (#17) "to demonstrate the organizational ability necessary to control access to an evacuated area, with a limited demonstration" was not fully met. There was no deployment of law enforcement and/or road commission personnel and vehicles as described in the exercise manual. The deployment of personnel consisted of the movement of push pins on a map at the County Sheriff's Office and the Emergency Operations Center. Because there was no demonstrated field activities the county did not issue TLDs or other permanent record devices (objective #20).

It was later determined by the FEMA Exercise Director that there was no deployment of personnel by the County Sheriff's Department because they were being utilized in response to calls for assistance at two strike locations within the County. The locations were the Fermi 2 Nuclear Power Plant and the Dundee Cement Plant.

According to a representative in the County Sheriff's Office the rank-n-file personnel of that office have not had any training in procedures relating to evacuation, access and traffic control and dosimetry as they pertain to the Fermi 2 Nuclear Power Plant. It was explained that per routine police procedures, personnel of that office rely heavily on centrally controlled dispatching and the experience of key personnel to organize the cordons. Monroe County did not fully demonstrate the ability to control access to evacuated areas (objective #17).

A reception/relocation center was activated at the Mason High School. The Center was staffed by representatives from the Departments of Health and Welfare, Mental Health, Red Cross, the County Volunteer Fire Department and the Monroe County Radio Communications Association. A shift change and personnel availability lists were planned if the emergency had lasted for a long period. One bus of twelve evacuees were

transported to the center where they were monitored for potential contamination, registered, fed and screened for other personal health needs during registration. Monitoring and decontamination teams were set up at the entrance of the Mason High School reception/congregate care center, and consisted of two (2) team members for radiological monitoring and two (2) team members for decontamination of evacuees. One additional team of two (2) individuals were located on the roadway leading to the school's parking lot for the monitoring of vehicles. The decontamination team at the reception/Congregate Care Center did not demonstrate simulation of decontamination of an evacuee or emergency worker as reflected in the exercise manual due to students using the gym area (Objective #29).

Discussion and observations of the monitoring teams revealed that some have reportedly had no training on the proper use of the monitoring equipment, while others stated they received a basic course in dosimetry approximately eighteen (18) months ago (objective #27). Discussion with a representative of the Michigan Division of Emergency Management revealed that the State in conjunction with the utility operator have provided training to Monroe County personnel of all organizations participating in RER, including those responsible for radiological monitoring of evacuees in March 1984. However, the failure to provide initial training and follow-up annual retraining for all individuals who may be called on to assist in emergency response is contrary to NUREG criteria items O.1.b, O.4.c. and O.5 and constitutes a deficiency in training.

This area of training will be closely examined during the next exercise to determine if participants are lacking in training and/or retraining.

The rapid degradation of the plant created sustained pressure on the EOC staff, which allowed them to demonstrate their extensive knowledge of the plan. However, the fact that the release from the plant did not necessitate an evacuation made the late morning and afternoon quite slow for the staff.

The scenario as developed and submitted would have driven an evacuation off-site affecting Monroe and Wayne Counties. The time of the release on site began at 8:50 a.m. but the readings were too low to have any affect off-site until 9:37 a.m. when the release rate had increased to a point when a general emergency was declared and off-site protective action recommendations were appropriate. When the general emergency was declared evacuation recommendations and boundaries were developed by the State. There was a wind shift at approximately 10:00 a.m. which impacted on the area of the release so that the State had to develop three different sets of evacuation boundaries. During this period of time the release coming out of the stack was terminated at approximately 10:15 - 10:20 a.m. Consequently, the evacuation recommendation was changed to an in-place shelter recommendation.

Note: The Prompt Alert and Warning System Sirens were not sounded during this exercise. The certification demonstration of this system was held July 20, 1984. The results of that test will be reported in a separate document.

C. Wayne County

There were eighteen (18) exercise objectives established for Wayne County. One objective was not fully demonstrated (#20). The Wayne County Emergency Operating Center was staffed and operational by 0700 hours. The county demonstrated twenty-four (24) hour manning capability by a shift change and in some cases by double staffing of personnel. The personnel on both shifts displayed training and knowledge in County emergency procedures. Coordination was maintained with the State, Monroe County and Brownstown Township throughout the exercise. A representative from the utility was present at the EOC and provided clarification on the plant status throughout the exercise. The staff was managed by the County Chief Executive during the first shift and a designated secondary chief executive during the second shift. Periodic briefings were held, with staff members providing updates on their respective areas. The staff was active in decision making with final decisions on major issues made by the Chief Executive.

The EOC facility, although small and slightly crowded was functional. All required maps and displays were posted and were easily accessible to the staff. There were numerous communications systems available in the EOC and the adjacent Police Communications Center for contact with all required agencies. However, there were no means for direct information hard copy from the EOC to the Joint Public Information Center. This presented some communications problems during the exercise.

The alerting of the public was coordinated between the State, Monroe & Wayne Counties and Brownstown Township. The Activation of the sirens was simulated. Emergency Broadcast Messages (EBM) were drafted in the EOC and coordinated with the JPIC to advise and instruct the public of conditions and protective actions.

The county in coordination with Brownstown Township activated control points and manned roadblocks in anticipation of an evacuation or in-place sheltering. According to the EOC staff ample materials and personnel are available to staff all traffic and access control points simultaneously.

The Department of Health maintains a list of names, addresses and types of impairment of persons residing in Wayne County who have special evacuation needs. The arrangements for transportation are made by the Health Department.

Dosimeters and field measurement instruments were issued to emergency workers. Permanent record dosimeters were not available (objective #20). Emergency Worker Personnel were briefed on the use of equipment and provided written instructions and record keeping cards. Radioprotective drugs (KI) was available but not required.

All news releases were made at the Joint Public Information Center. A representative from Wayne County was present and participated in news conferences. There was no shift change or double staffing at the JPIC for Wayne County. The Wayne County representative did not monitor the EBS messages but did coordinate with the PIO in the EOC prior to the release of information.

The decontamination, reception and congregate care facilities were co-staffed by Brownstown Township and Wayne County. It was physically located in Brownstown Township and is covered in that report. During the exercise the Romulus High School was opened for a demonstration of staffing and operation of a congregate care center but was not evaluated by the Federal Evaluation Team. This center was in addition to the reception/congregate care and decontamination center at the Wood Haven High School, which was evaluated and is a part of this report. The opening of the Romulus High School Center had gone unknown by Federal Evaluators and reportedly unreported to the State until the end of the exercise.

According to information from the State the Romulus location had been opened by Brownstown Township to demonstrate the movement of evacuees from the Wood Haven Reception/Congregate Care Center after that location had reached its capacity.

Recovery and reentry was minimal because no contamination remained after the passing of the plume. Messages to dismantle roadblocks and instructions to relax protective actions were based on monitoring data provided by the state. The reentry/recovery decision was promptly communicated to all response organizations.

The scenario was realistic and was adequate to drive the exercise objective with the exception of evacuation.

D. Brownstown Township

There were seventeen (17) exercise objectives established for Brownstown Township. Two of the objectives were not fully demonstrated (objectives #4 and #20).

In accordance with the exercise scenario, the EOC was fully staffed at 0800 hours, when the off-site part of the exercise began. Around the clock staffing capability was demonstrated though a complete shift change by individual staff replacements. The staff was replaced one at a time which

permitted briefing of in-coming staff without disruption of on-going activities. The Brownstown Fire and Police Central Dispatch has a direct line from the utility and serves as the warning entry point. It is manned twenty-four hours, seven days a week.

The door to the operations room was locked from the inside and persons wishing admittance were either personally recognized or required to show identification. It is recommended that a manned sign-in station be established outside the operations room to improve security.

The initial protective action ordered (sheltering out to 5 miles) did not affect the Township but was recognized as a potential threat and possible follow-on events and action were reviewed. Activities were coordinated with Wayne County through a County representative at the State OSEOC.

The operations room is well lighted, large, carpeted and acoustically tiled. Desks or table space and telephones were available for each EOC staff member.

Back-up power and kitchen facilities are available. Large laminated maps with the township area highlighted, depicted the EPZ, street names and landmarks were easily identifiable. One map was used to plot plume data.

The maps did not show locations of reception/congregate care centers, decontamination station and other information such as population distribution required by NUREG-0654/FEMA Rep-1, Revision 1, Criteria items J10a and J10b (objective #4).

The communications center is the police radio room. Commercial telephone was the main communications link. The police radio net was used to receive some of the up-dated information. A weather station radio contact with the water department was available. One AM/FM radio was available for monitoring EBS reports. The EBS system was simulated in this exercise. EBS and media contacts were available via the Brownstown EOC representative at the JPIC. The Michigan State LEIN network was in operation. No information hard copy capability was available between Brownstown Township EOC and the JPIC.

Note: The Prompt Alert and Warning System Sirens were not sounded during this exercise. The certification demonstration of this system was held July 20, 1984. The results of that test will be reported in a separate document.

Contact with EBS was made at 10:05 a.m. initially through the Monroe County EOC by commercial telephone. At 10:10 a.m., when the State OSEOC directed sheltering, a message was simulated to the EBS. It contained instructions to the public and described recognizable geographic boundaries. Exercise

objectives were exceeded through a limited demonstration of evacuation using volunteer Boy Scouts, a volunteer bus driver and an elevator lift equipped school bus. The Scouts were moved from a school to a decontamination and reception center. Public Alerting was complimented by capability from the Township Supervisor's office to input printed advisories on cable television.

The capability to set-up traffic control access points was demonstrated and observed by the evaluation team. The EOC Staff indicated there are adequate resources, in both vehicles and manpower, to cover traffic and control functions.

Brownstown Township was represented at the JPIC by their PIO; there were no assistants, back-up personnel, or clerical help. The PIO displayed a need for additional training concerning procedures and responsibilities. A shift change was not demonstrated because of pre-arrangements to give the primary representative as much experience as possible. It is recommended that additional PIO personnel be trained to assist in the JPIC.

There was one dosimeter distribution control point manned for the exercise. The staff seemed knowledgeable concerning the handling, reading, and use of dosimeters. Radioprotective drugs were available but not needed. The Township does not have TLDs or other permanent record devices as required by NUREG-0654/FEMA Rep-1, Revision 1, criteria item K3a (exercise objective 20).

A reception/congregate care and decontamination center was operated jointly by Wayne County & Brownstown Township as part of the exercise. The level of staffing and the training of the staff enabled the facilities to operate smoothly. There were trained back-up personnel available to provide for a 24 hour staffing capability.

There was a limited demonstration of an evacuation during the exercise. Thirteen individuals including one person that portrayed a mobility impaired individual participated. There were means for communication (via commercial telephone and fire/rescue department radios) with the State OSEOC and the Township EOC. There was an actual demonstration of procedures for monitoring and decontamination of vehicles by Fire Department personnel manning the decontamination center. This was done by use of two school buses. The participating evacuees simulated the use of shower facilities for decontamination.

Exercise Report

A. INTRODUCTION

1. Exercise Background:

The Enrico Fermi 2 Nuclear Power Plant full scale exercise held June 26-27, 1984 was the second exercise of the utility. The previous exercise was held February 1 and 2, 1982.

Participating in the exercise with the utility was the State of Michigan, Monroe and Wayne Counties and Brownstown Township. All governments involved in the exercise were participating under the criteria established for a full scale exercise. All jurisdictions within the 10 mile EPZ participated during the exercise.

The exercise was evaluated by use of the Michigan Emergency Preparedness Plan, dated September 1983 and revised Emergency Operations Plans, Nuclear Power Plant Incident Procedures for Monroe County, dated February 1984; Wayne County, dated February 1984, and Brownstown Township, dated February 1984. Additional evaluation materials used were the NUREG-0654/FEMA-REP-1, Revision 1, Criteria for Preparation and Evaluation of Emergency Response Plans and Preparedness in Support of Nuclear Power Plants, and the Modular Format for Uniformity of Radiological Emergency Preparedness Exercise Observations and Evaluations, dated June 1983.

2. Participating and Non-Participating State and Local Governments:

The 0-10 mile emergency planning zone (EPZ) of the Enrico Fermi 2 Nuclear Power Plant impacts on parts of Monroe and Wayne Counties in the State of Michigan, and part of the province of Ontario in Canada. The State of Michigan, Monroe and Wayne Counties and Brownstown Township participated in the exercise with representatives of the Canadian government and the Province present in the State On-Scene EOC at Monroe, Michigan. In addition to the Canadian representation within the State On-Scene EOC there were Canadian observer/participants assigned to the EOF and the JPIC (one at each location).

The Township of Brownstown also actively participated in the exercise for the first time. Brownstown is in Wayne County and is situated just outside the ten (10) mile EPZ of the Enrico Fermi 2 Nuclear Power Plant. The township with a population of approximately 17,647 have included procedures for response to Nuclear facility incidents in their basic emergency operations plans. The township's plan is written in accordance with NUREG-0654, FEMA REP-1.

3. List of Evaluators (With Assignments)

During this exercise there were sixteen (16) Federal evaluators assessing the off-site radiological emergency preparedness of the State of Michigan, Monroe and Wayne Counties, Brownstown Township and the various support organizations. Five (5) of the evaluators were FEMA Region V staff members, while six (6) evaluators were from the Argonne National Laboratory, a Federally contracted organization that provides support to FEMA. The additional five (5) evaluators were from the Federal Drug Administration (FDA) Environmental Protection Agency (EPA), Nuclear Regulatory Commission (NRC), the Department of Transportation (DOT), and the U.S. Department of Agriculture (USDA). The sixteen (16) evaluators are as follows:

a. Exercise Director and Team Leader Assignments:

Dan Benent, Exercise Director

Ed Robinson, Team Leader, State of Michigan

Woodie Curtis, Team Leader, Monroe County

Wiley Howell, Team Leader, Wayne County

Rick Anthony, Team Leader, Brownstown Township

b. State of Michigan Evaluation Team:

(1) State Emergency Operations Center
Emergency Services Division
Michigan Department of State Police
111 South Capitol Avenue - Basement
Lansing, Michigan

Ed Robinson, FEMA Region V, (Team Leader)
Carol Herzenburg, Argonne National Laboratory

(2) State On-Scene Emergency Operations Center

Michigan Army National Guard Armory
15483 South Dixie Highway
Monroe, Michigan

Floyd Davis, Argonne National Laboratory
Dorothy Nevitt, U.S. Department of Agriculture
James Kraeger, Food and Drug Administration
Peter Tedeschi, Environmental Protection Agency

(3) Joint Public Information Center

Monroe Community College
1555 South Raisinville
Monroe, Michigan

William Gasper, Argonne National Laboratory

c. Monroe County

- (1) Monroe County Emergency Operations Center
106 East First Street
Monroe, Michigan

Woodie Curtis, FEMA Region V (Team Leader)
Edward Tanzman, Argonne National Laboratory
Norman Stoner, Department of Transportation

- (2) Reception, Congregate Care and Decontamination

Mason High School
2400 Lakeside Road
Erie, Michigan

Donald Hulet, Argonne National Laboratory

d. Wayne County

- (1) Wayne County Emergency Operations Center
25500 Gilbralter Road
Flatrock, Michigan

Wiley Howell, FEMA Region V, (Team Leader)
Marsha Smith, Nuclear Regulatory Commission
Region III

e. Brownstown Township

- (1) Brownstown Township Emergency Operations Center
21313 Telegraph Road (Municipal Building)
Trenton, Michigan

Rick Anthony, FEMA Region V (Team Leader)
Lester Poch, Argonne National Laboratory

- (2) Reception, Congregate Care and Decontamination
Center

Woodhaven High School
24787 Van Horn Road
Trenton, Michigan

Lester Poch, Argonne National Laboratory

4. Evaluator Assignments of Exercise Evaluation Modules:

The following exercise evaluation modules were utilized for the purpose of assessing the off-site radiological emergency preparedness of the participating organization during the June 27, 1984. Fermi 2 Exercise.

a. State of Michigan:

EOC Module	Ed Robinson
EOC Module	Carol Herzenburg

State On-scene Emergency Operations Center

EOC Module	Floyd Davis
EOC Module	Dorothy Nevitt
Media Center Module	William Gasper
Radiological Laboratory Module	James Kraeger
Field Monitoring Module	Peter Tedeschi

b. Monroe County

EOC Module	Woodie Curtis
EOC Module	Edward Tanzman
Media Center Module and EOC Module, Section IX	William Gasper
Field Activities Module	Norman Stoner
Reception, Congregate Care and Decontamination Module	Donald Hulet

c. Wayne County

EOC Module	Wiley Howell
EOC Module	Marsha Smith
Media Center Module and EOC Module (Part IX)	William Gasper

d. Brownstown Township

EOC Module	Rick Anthony
Field Activity Module	Lester Poch
Media Center Module and EOC Module (Part IX)	William Gasper
Reception, Congregate Care and Decontamination Modules	Lester Poch

5. Evaluation Criteria:

The State of Michigan, Monroe and Wayne Counties and Brownstown Township's Radiological Emergency Response Plans were evaluated during the June 27, 1984, Enrico Fermi 2 Exercise to ascertain the capability of implementation should an accident occur at the Enrico Fermi 2 Nuclear Power Plant. The exercise was conducted

in accordance with the requirements set forth by 44 CFR Part 350, dated September 28, 1983. It was evaluated commensurate with the August 5, 1983 memorandum "Procedural Policy on Radiological Emergency Preparedness Plan Reviews, Exercise Observations and Evaluations, Interim Findings," and with the criteria established in "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). For the purpose of evaluating this exercise, all evaluators utilized the "Modular Format for Uniformity of Radiological Emergency Preparedness Exercise Observations and Evaluations," dated June 1983.

6. Summary of Exercise Objectives:

The exercise objectives were developed as a result of coordination between FEMA Region V, the State of Michigan's Emergency Management Division of Government and the Detroit Edison Company. They were selected from the list of thirty-five (35) exercise objectives contained in Tab M of the Modular Format for Uniformity of Radiological Emergency Preparedness Exercise Observations and Evaluations, dated June 1983. There were twenty-four (24) objectives selected for the State of Michigan, who participated in a full scale mode; there were eighteen (18) each selected for Monroe and Wayne Counties, and seventeen (17) for Brownstown Township. The two counties and Brownstown Township also participated in a full scale mode during the exercise. The exercise objectives were developed into an exercise scenario designed to test major emergency response procedures described by the radiological emergency response plans. The objectives necessitated the State to demonstrate staffing capabilities; provide dose assessment, dispatch the radiological Health Mobile Laboratory, as well as provide State representatives to the utility's Emergency Operations Facility (EOF) and the Joint Press Information Center (JPIC). Objectives for the two Counties and Brownstown Township enabled demonstrations of their capabilities for organizational control; emergency actions; notification methods and procedures; emergency communications; Public information; emergency facilities and equipment; protective response; radiological exposure control, and Recovery and Reentry post-accident operations. A complete list of the State, counties, and township objectives evaluated during this exercise, and as numerically listed in the thirty-five (35) exercise objectives of the Modular Format for Uniformity of Radiological Emergency Preparedness Exercise Observations and Evaluations, dated June 1983, are as follows:

A. State Objectives

2. Demonstrate the ability to fully staff facilities and maintain staffing around the clock (staffing will be with a shift change or double staffing in some positions as identified in the exercise manual).
3. Demonstrate the ability to make decisions and to coordinate emergency activities (command and control functions at/between EOC's).
4. Demonstrate the adequacy of facilities and displays to support emergency operations (EOC, OSFOC, JPIC, and ancillary facilities).
5. Demonstrate the ability to communicate with all appropriate locations, organizations, and field personnel (using appropriate communication channels such as primary (phone), and secondary (LEIN) to fixed facilities, and MSP radio to field personnel).
6. Demonstrate the ability to deploy field monitoring teams in a timely fashion. (Teams will be prestaged in the area as will all staff forces.)
7. Demonstrate appropriate equipment and procedures for determining ambient radiation levels.
8. Demonstrate appropriate equipment and procedures for measurement of airborne radioiodine concentrations as low as 10^{-7} uCi/CC in the presence of noble gases.
9. Demonstrate appropriate equipment and procedures for collection, transport, and analysis of samples of soil, vegetation, and water.
10. Demonstrate ability to project dosage to the public via plume exposure, based on plant and field data, and to determine appropriate protective measures, based on PAG's, available shelter, evacuation time estimates, and all other appropriate factors.
11. Demonstrate ability to project dosage to the public via ingestion pathway exposure, based on field data, and to determine appropriate protective measures, based on PAG's and other relevant factors.
13. Demonstrate ability to alert the public within the 10 mile EPZ and disseminate an initial instructional message within 15 minutes. (Contact with EBS will be made by county EOC's with initial contact message that this is a test. Sirens will not be sounded.)

14. Demonstrate ability to formulate appropriate instructions to the public in a timely fashion. (via the JPIC and simulated EBS contact.)
15. Demonstrate the organizational ability necessary to manage an orderly evacuation of all or part of the plume EPZ.
16. Demonstrate the organizational ability necessary to deal with impediments to evacuation such as inclement weather or traffic obstructions (via simulated message play).
17. Demonstrate the organizational ability necessary to control access to an evacuated area.
20. Demonstrate ability to continuously monitor and control emergency worker exposure.
21. Demonstrate the ability to make the decision based on predetermined criteria whether to issue KI to emergency workers and/or the general population.
22. Demonstrate the ability to supply and administer KI once the decision has been made to do so.
24. Demonstrate ability to brief the media in a clear, accurate, and timely manner at the JPIC.
25. Demonstrate ability to provide advance coordination of information released (at the EOC's and JPIC).
29. Demonstrate adequate procedures for decontamination of emergency workers, equipment, and vehicles in support of county operations at decontamination facility.
32. Demonstrate ability to identify need for, request, and obtain federal assistance.
34. Demonstrate ability to estimate total population exposure.
35. Demonstrate ability to determine appropriate measures for controlled recovery and reentry. (Actions in this area include close out of reception/congregate care/decontamination facilities, public information releases (including measures to be taken upon reentry), decision making at EOC's, and pickup/close out of access control/traffic control points. More details will be provided in the scenario.)

B. Wayne County

2. Demonstrate the ability to fully staff facilities and maintain staffing around the clock (staffing will be with a shift change or double staffing in some positions as identified in the exercise manual).

3. Demonstrate the ability to make decisions and to coordinate emergency activities (command and control functions at/between the EOC's).
4. Demonstrate the adequacy of facilities and displays to support emergency operations (County EOC and ancillary facilities).
5. Demonstrate the ability to communicate with all appropriate locations, organizations (using appropriate communication channels as primary and secondary systems).
13. Demonstrate ability to alert the public within the 10 mile EPZ and disseminate an initial instructional message within 15 minutes. (Contact with EBS will be made by the County EOC with an initial message that this is a test. Sirens will not be sounded.)
14. Demonstrate ability to formulate appropriate instructions to the public in a timely fashion. (Via the JPIC and simulated EBS contact.)
15. Demonstrate the organizational ability necessary to manage an orderly evacuation of all or part of the plume EPZ (with demonstration of a limited number of persons).
16. Demonstrate the organizational ability necessary to deal with impediments to evacuation such as inclement weather or traffic obstructions (via simulated message play).
17. Demonstrate the organizational ability necessary to control access to an evacuated area (with demonstration of limited manned control points using sheriff and/or road commission personnel and vehicles).
18. Demonstrate the organizational ability necessary to effect an orderly evacuation of mobility-impaired individuals within the plume EPZ (with a limited demonstration of resources).
20. Demonstrate ability to continuously monitor and control emergency worker exposure.
22. Demonstrate the ability to supply and administer KI once the decision has been made to do so.
24. Demonstrate ability to brief the media in a clear, accurate and timely manner at the JPIC.
25. Demonstrate ability to provide advance coordination of information released (at the EOC's and JPIC).

27. Demonstrate adequacy of procedures for registration and radiological monitoring of evacuees (using a limited number of persons and simulating use of actual decontamination).
28. Demonstrate adequacy of facilities for mass care of evacuees (by establishing one facility).
29. Demonstrate adequate equipment and procedures for decontamination of emergency workers, equipment, and vehicles at a reception/decontamination center.)
35. Demonstrate ability to determine appropriate measures for controlled recovery and reentry. (Actions in this area include close out of reception/congregate care/decontamination facilities, public information releases (including measures to be taken upon reentry), decision making at EOC's, and pickup/close out of access control/traffic control points. More details will be provided in the scenario.)

C. Brownstown Township

2. Demonstrate the ability to fully staff facilities and maintain staffing around the clock (staffing will be with a shift change or double staffing in some positions as identified in the exercise manual).
3. Demonstrate the ability to make decisions and to coordinate emergency activities (command and control functions at/between EOC's).
4. Demonstrate the adequacy of facilities and displays to support emergency operations (Brownstown Township EOC and ancillary facilities).
5. Demonstrate the ability to communicate with all appropriate locations, organizations (using appropriate communications channels as primary and secondary systems).
13. Demonstrate ability to alert the public within the 10 mile EPZ and disseminate an initial instructional message within 15 minutes. (Contact with EBS will be made by the EOC with an initial message that this is a test. Sirens will not be sounded.)
14. Demonstrate ability to formulate appropriate instructions to the public in a timely fashion. (via the JPIC and simulated EBS contact.)
15. Demonstrate the organizational ability necessary to manage an orderly evacuation of all or part of the plume EPZ (with a demonstration of a limited number of persons).

16. Demonstrate the organizational ability necessary to deal with impediments to evacuation such as inclement weather or traffic obstructions (via simulated message play).
17. Demonstrate the organizational ability necessary to control access to an evacuated area (with a demonstration of limited manned control points using police and/or Department of Public Works personnel and vehicles).
18. Demonstrate the organizational ability and resources necessary to effect an orderly evacuation of mobility-impaired individuals within the plume EPZ (with a limited demonstration).
20. Demonstrate ability to continuously monitor and control emergency worker exposure.
22. Demonstrate the ability to supply and administer KI once the decision has been made to do so.
24. Demonstrate ability to brief the media in a clear, accurate, and timely manner at the JPIC.
25. Demonstrate ability to provide advance coordination of information released (at the EOC's and JPIC).
27. Demonstrate adequacy of procedures for registration and radiological monitoring of evacuees (using a limited number of persons and simulating use of actual decontamination).
29. Demonstrate adequate equipment and procedures for decontamination of emergency workers, equipment, and vehicles.
35. Demonstrate ability to determine appropriate measures for controlled recovery and reentry. (Actions in this area include close out of reception/congregate care/decontamination facilities, public information releases (including measures to be taken upon reentry), decision making at EOC's, and pick-up/close-out of access control/traffic control points. More details will be provided in the scenario.)

D. Monroe County

2. Demonstrate the ability to fully staff facilities and maintain staffing around the clock (staffing will be with a shift change or double staffing in some positions as identified in the exercise manual).
3. Demonstrate the ability to make decisions and to coordinate emergency activities (command and control functions at/between EOC's).

4. Demonstrate the adequacy of facilities and displays to support emergency operations (Monroe County EOC and ancillary facilities).
5. Demonstrate the ability to communicate with all appropriate locations, organizations (using appropriate communication channels as primary and secondary systems).
13. Demonstrate ability to alert the public within the 10 mile EPZ and disseminate an initial instructional message within 15 minutes. (Contact with EBS will be made by the County EOC with an initial message that this is a test. Sirens will not be sounded.)
14. Demonstrate ability to formulate appropriate instructions to the public in a timely fashion. (via the JPIC and simulated EBS contact).
15. Demonstrate the organizational ability necessary to manage an orderly evacuation of all or part of the plume EPZ (with a demonstration of a limited evacuation).
16. Demonstrate the organizational ability necessary to deal with impediments to evacuation such as inclement weather or traffic obstructions (via simulated message play).
17. Demonstrate the organizational ability necessary to control access to an evacuated area (with a limited demonstration of access control using sheriff and/or road commission personnel and vehicles).
20. Demonstrate ability to continuously monitor and control emergency worker exposure.
22. Demonstrate the ability to supply and administer KI once the decision has been made to do so.
24. Demonstrate ability to brief the media in a clear, accurate, and timely manner at the JPIC.
25. Demonstrate ability to provide advance coordination of information released (at the EOC's and JPIC).
26. Demonstrate ability to establish and operate rumor control in a coordinated fashion at the JPIC.
27. Demonstrate adequacy of procedures for registration and radiological monitoring of evacuees (using a limited number of persons and simulating use of actual decontaminations).
28. Demonstrate adequacy of facilities for mass care of evacuees (by establishing one facility).

29. Demonstrate adequate equipment and procedures for decontamination of emergency workers, equipment, and vehicles.
35. Demonstrate ability to determine and implement appropriate measures for controlled recovery and reentry. (Actions in this area include close out of reception/congregate care/decontamination facilities, public information releases (including measures to be taken upon reentry), decision making at EOC's, and pickup/close out of access control/traffic control points. More details will be provided in the scenario.)

7. Summary of Exercise Scenario Events

The Enrico Fermi 2 exercise was scheduled to occur between the hours of 1:00 p.m. and 5:00 p.m. on Tuesday June 26, 1984 for the utilities on-site exercise (day one), and 7:30 a.m. and 3:00 p.m. on Wednesday, June 27, 1984 for the off-site portion of the exercise (day two). The facilities to be activated included the State EOC (Lansing), the State OSEOC (Monroe County), the Monroe County EOC, Wayne County EOC, Brownstown Township EOC, the Joint Public Information Center (Monroe) and reception/decontamination and congregate care facilities.

All EOC's were to be fully staffed with a shift change or double staffing. Radiological health field teams and a mobile radiological laboratory were to be activated for the off-site exercise from the OSEOC (day two). All weather conditions were to be simulated and provided by the utility. The prompt alert notification system was not to be activated for the exercise.

All events were to occur in real time with no time compressions. Times listed in the scenario were for sequencing purposes only. This was due to an expressed need to allow flexibility in play, real time decision making, communications, interpretation and analysis. The times were not to be considered as absolutes. Additionally, Monroe County and Brownstown Township were to demonstrate the actions and/or events of EBS contact; processing evacuees through the reception/decontamination/congregate care facility and access control.

The scenario provided for certain actions to be demonstrated and others to be simulated. Demonstrated actions were indicated by an (A) in the scenario and simulated actions by an (S) as follows:

Day One (June 26, 1984) (Note: Day one offsite involvement was limited to receipt and retransmission of exercise messages only. All other mobilization actions and support was simulated).

Day Two (June 27, 1984

Events/Actions

State and local emergency workers report for operations at 8:00 A.M. Initial briefing on conditions at the plant and status of emergency response are held between 0800 and 0830. Offsite actions will begin at that time (0830). All facilities will be staffed and operational, with the OSEOC assuming operational control and communications opened between all facilities.

UTILITY: Reestablish conditions from Day One.

UTILITY: Re-commence exercise.

OFFSITE AUTHORITIES: Staff up facilities and conduct initial briefing.

Reactor SCRAMS due to main steam line high radiation and Main Steam Line Valves close.

Reactor shuts down.

Some control rods fail to fully insert due to core obstructions.

Group isolation occurs.

Main steam line drain line inboard isolation valve does not close due to blown fuses.

Containment high range radiation monitors readings begin to increase.

High Pressure Core Injection System (HPCI) initiates due to water shrinkage.

HPCI lube oil system catches fire - causes HPCI to trip.

Fire suppression system fails to operate. Offsite assistance required to put out fire.

Site Area Emergency

Emergency director declares a SITE AREA EMERGENCY based on major fire compromising functioning of safety system.

- UTILITY: 1. Emergency Operations Facility (EOF) is activated. (A)
2. Offsite authorities notified of SITE AREA EMERGENCY. (State, Lansing) (A)

- STATE:
1. OSEOC notified via hotline of SITE AREA EMERGENCY. State concurs and notifies counties, SEOC, Canadian Team, and JPIC. (A)
 2. OSEOC recommends protective actions for livestock in area and other protective actions (lake clearing, close parks, if necessary). (A)
 3. SEOC notifies FEMA and neighboring states and counties within 50 mile EPZ. (A)
 4. Protective actions, if any, passed on from OSEOC to counties/township, JPIC, SEOC, and Canadians. (A)

- MONROE:
1. Monroe County EOC notified by OSEOC of SITE AREA EMERGENCY via hotline phone. (A)
 2. Monroe personnel mobilized or put on stand by, Reception/congregate care facilities put on standby. (S)

NOTE: Monroe County will demonstrate the operation of a reception/congregate care/decontamination facility for the exercise. It will not be activated in accordance with the scenario sequence.

3. Monroe EOC exchanges status updates with OSEOC. (A)
4. EOC initiates contact to EBS. (S)

- WAYNE:
1. Wayne County EOC notified of SITE AREA EMERGENCY via hotline. (A)
 2. Wayne County EOC notifies Brownstown Township EOC of SITE AREA EMERGENCY. (A)
 3. Wayne County personnel mobilized or put on standby. Local reception/congregate care facilities put on standby. (S)
 4. Wayne County EOC exchanges status updates with OSEOC. (A)

BROWNSTOWN TOWNSHIP:

1. Township EOC receives notice of SITE AREA EMERGENCY from Wayne County EOC. (A)
2. All township personnel mobilized or put on standby. (S)
3. Reception/decontamination/congregate care facility opened or put on standby. (S)

NOTE: Brownstown Township will open a reception/decontamination/congregate care facility for the exercise, but this will not be done in sequence with the scenario.

4. Exchange status updates with Wayne County EOC. (A)
- JPIC:
1. JPIC staffed and operational about 8:30 A.M. (A)
 2. Initial briefing on Day One events about 8:30 A.M. (A)
 3. OSEOC notifies JPIC of SITE AREA EMERGENCY and protective actions. (A)
 4. County/township and utility actions also relayed to JPIC. (A)
 5. Regular press briefings held at the JPIC. (A)

Leak develops on main steam line drain line in the steam tunnel between the dry well penetration and main steam line drain line outboard isolation valve.

Steam tunnel high temperature readings and radiation monitor (600 mR/hr).

GENERAL EMERGENCY

Emergency director declares GENERAL EMERGENCY based on loss of two fission product barriers with potential loss of third.

EOE director notifies OSEOC of GENERAL EMERGENCY and makes protective action recommendations. (A)

- STATE:
1. OSEOC notified of GENERAL EMERGENCY. State concurs with utility and Governor orders appropriate protective actions based on State Radiological Health recommendations. (A)
 2. OSEOC notifies counties and township, JPIC, and Canadian Team of GENERAL EMERGENCY and protective actions. (A)
 3. SEOC notifies FIMA, neighboring states, and counties within 50 mile EPZ. (A)
 4. Other protective actions, as appropriate, ordered by state. (A)
 5. OSEOC informs EOF of offsite actions. (A)

- MONROE:
1. County notified of GENERAL EMERGENCY and protective actions ordered by Governor. (A)
 2. County activates prompt alert notification system (S) and notifies EBS. (S)

NOTE: Contact with EBS will be limited to a call from the EOC that this is a test contact. No information regarding the exercise will be passed.

3. County implements protective actions ordered by Governor. (S)
4. County EOC dispatches sheriffs and road commission vehicles to access control points.(A)

NOTE: This will be a limited demonstration involving several vehicles. Details will be provided prior to the exercise.

5. Reception/decontamination/congregate care facilities opened, if not already. (S)

NOTE: Monroe County will activate one facility but not in sequence with the scenario.

6. County EOC notifies OSEOC of geographic boundaries of protective actions and access control points. (A)
7. County demonstrates movement of a limited number of "evacuees" through the decontamination/reception/congregate care facility. (A)

- WAYNE:
1. County notified of GENERAL EMERGENCY and protective actions ordered by Governor. (A)
 2. County notifies EBS as per EOP and EBS plan. (S)

NOTE: Contact to EBS will be limited to a call from the EOC that this is a test contact.

3. County implements protective actions as ordered by Governor. (S)
4. County opens, if not already done, reception/decontamination/congregate care facilities. (S)

NOTE: The demonstration of a reception/decontamination/congregate care facility, access control, and evacuation of persons will be conducted in Brownstown Township as a joint demonstration.

5. County notifies OSEOC of actions and status reports on a regular basis. (A)
6. County notifies Brownstown Township of GENERAL EMERGENCY and protective actions. (A)

BROWNSTOWN TOWNSHIP:

1. Township notified of GENERAL EMERGENCY and protective actions. (A)
2. Township implements protective actions. (S)

3. Township notifies EBS as per district EBS plan. (S)

NOTE: This will be a test message only.

4. Township opens, if not already, reception/decontamination/congregate care facility. (S)
5. Township dispatches police and DPW vehicles to access control points. (A)
6. Township processes limited number of "evacuees" through reception/decontamination/congregate care facilities. (A)
7. Township keeps Wayne County EOC informed of protective actions. (A)

- JPIC:
1. Informed of GENERAL EMERGENCY and protective actions. (A)
 2. Provide information to media on offsite and onsite response. (A)

Area radiation monitor readings begin to increase in reactor building.

High radiation sensed in reactor building. Ventilation exhaust - results in isolation of building and auto start of standby gas treatment system. Various reactor building area radiation monitors begin to alarm. General radiation levels on first floor are increasing.

Release Begins:

Standby gas treatment system radiation monitors readings increase.

Onsite radiological emergency teams dispatched to track and monitor plume.

UTILITY: Informs OSEOC of release and recommends protective actions. (A)

1. OSEOC informed of release. (A)
2. Radiological Health Teams track release. (A)
3. SEOC, counties and township, JPIC informed of release and protective actions. (A)
4. Dose/accident assessment ongoing at OSEOC. (A)
5. State informs EOF of offsite actions. (A)

- MONROE:
1. County informed by OSEOC of release and protective actions as ordered by Governor. (A)
 2. County implements protective actions. (S)
 3. County provides status reports to OSEOC. (A)

- WAYNE:
1. County informed by OSEOC release and protective actions as ordered by Governor. (A)
 2. County implements protective actions. (S)
 3. County provides status reports to OSEOC. (A)

BROWNSTOWN TOWNSHIP:

1. Township informed by Wayne County EOC of release and protective actions as ordered by Governor. (A)
2. Township implements protective actions. (S)
3. Township provides status reports to Wayne County for pass through to OSEOC. (A)

- JPIC:
1. Received information from EOF/OSEOC/ counties/township on release and protective actions ordered and implemented. (A)
 2. JPIC provides briefings to media on emergency response. (A)

- UTILITY:
1. EOF functional. Utility notifies OSEOC. (A)
 2. Emergency officer makes recommendations for protective actions to OSEOC. (A)

- STATE:
1. OSEOC notified of utility recommended protection actions. (A)
 2. State issues protective actions as needed, to counties, JPIC, and utility. (A)

COUNTIES/TOWNSHIP:

1. Notified of protective actions (A) and implements protective actions as needed. (S)

Release Terminated

Fuses for main steam line drain line valve replaced and valve is closed - reestablishing primary containment. Release terminated. Preparations made for shutdown cooling.

- UTILITY:
1. EOF notifies OSEOC of termination of release. (A)

- STATE:
1. OSEOC notifies SEOC/counties/township/and JPIC of release termination. (A)

2. SEOC notifies FEMA and neighboring states. (S)

Wind direction changes from 178 degrees to 163 degrees.

Wind speed increases from 0.58 m/s to 3.28 m/s. Stability class = B.

EOF Director includes Sector Q in protective action recommendation to state. (A)

- STATE:
1. Changes made in protective actions based on wind shift. (A)
 2. OSEOC notifies SEOC/JPIC/counties and township of changes in protective actions. (A)

COUNTIES/TOWNSHIP:

1. Make changes in protective actions as directed by OSEOC. (A)

Standby gas treatment system readings falling.

Offsite radiological team readings falling.

Site boundary radiation readings at background level.

General radiation readings in reactor building decreasing.

De-Escalation

All offsite radiation readings in ten mile EPZ at background level.

EOF coordinator discusses down grading emergency with

OSEOC Director. Agree to de-escalate.

- STATE:
1. Upon concurrence with utility, de-escalates emergency action level. Notifies SEOC/JPIC/counties and township. (A)
 2. SEOC notifies FEMA and neighboring states of deescalation. (A)

COUNTIES/TOWNSHIP:

1. Informed of de-escalation. (A)
2. Continue protective actions. (A)

RE-ENTRY & RECOVERY

On and offsite reentry and recovery organizations established. All offsite authorities notified.

- UTILITY:
1. Establish recovery organization. (S)
 2. Notify state of actions. Coordinate operations with offsite authorities. (S)

- STATE:
1. OSEOC informs offsite authorities to maintain operations until close out of emergency. (A)
 2. SEOC informs Governor. Based on State Radiological Health recommendations, Governor rescinds evacuation order as appropriate. (S)
 3. SEOC advises FEMA, neighboring states, and 50 mile EPZ counties. (A)
 4. Information provided to JPIC on activities by OSEOC. (A)
 5. OSEOC issues protective action guides for recovery activities. Gets progress reports from county. (A)
 6. Discussions at OSEOC and SEOC regarding close out steps, long term radiological monitoring and environmental sampling, coordination of resources and operations, and support to counties/township. (A)

MONROE: OSEOC instructs county to begin reentry and recovery operations.

County begins reentry and recovery:

1. Notification of public and workers. (A)
2. Security in evacuated areas. (S)
3. Maintain traffic control points, remove barricades. (S)
4. Continue use of JPIC to make periodic announcements of status and any necessary protective action guides (i.e., washing fresh vegetables, etc.) (A)
5. Monitoring of returning population. (S)
6. Provide transportation for transportation dependent population from congregate care facilities. (S)
7. Close out congregate care, reception centers, and decontamination facilities. (S)
8. Close out of EOC upon instructions from OSEOC. (A)

WAYNE: OSEOC instructs county to begin reentry and recovery operations.

County begins reentry and recovery:

1. Notification of public and workers. (A)
2. Security in evacuated areas. (S)

3. Maintain traffic control points, remove barricades. (S)
4. Continue use of JPIC to make periodic announcements of status and any necessary protective actions guides (i.e., washing fresh vegetables, etc.) (A)
5. Monitoring of returning population. (S)
6. Provide transportation for transportation dependent population from congregate care facilities. (S)
7. Close out congregate care, reception centers, and decontamination facilities. (S)
8. Close out of EOC upon instructions from OSEOC. (A)

BROWNSTOWN TOWNSHIP:

OSEOC instructs township to begin reentry and recovery operations.

Township begins reentry and recovery:

1. Notification of public and workers. (A)
2. Security in evacuated areas. (S)
3. Maintain traffic control points, remove barricades. (S)
4. Continue use of JPIC to make periodic announcements of status and any necessary protective action guides (i.e., washing fresh vegetables, etc.). (A)
5. Monitoring of returning population. (S)
6. Provide transportation for transportation dependent population from congregate care facilities. (S)
7. Close out congregate care, reception centers, and decontamination facilities. (S)
8. Close out EOC. (A)

8. State County and Local Resources Used In The Exercise

The State Emergency Operations Center in Lansing; the State On-Scene Emergency Operations Center, located at the Michigan National Guard Armory, Monroe; the Nuclear Operations Facility on Dixie Highway, Newport; the Joint Public Information Center at Monroe Community College, Monroe; Wayne County Emergency Operations Center at Flatrock; Monroe County Emergency Operations Center, Monroe; the Monroe City/County Joint Communications Center, Monroe; Brownstown Township Emergency Operations Center, located at the Municipal Building, Trenton.

Individuals representing the American Red Cross Monroe and Wayne Counties Chapters and the Monroe County Radio Communications Association were active in the Reception/Congregate Care Centers at the Wood Haven High School, Trenton, and Mason High School, Erie.

Radiological Monitoring and decontamination teams at the two locations were from the respective County Health Departments. The Brownstown volunteer school bus driver at Brownstown, participated in limited evacuation, went through registration, radiological monitoring, an decontamination at the jointly manned Brownstown and Wayne County Reception/Congregate Care and Decontamination Center at the Wood Haven High School. Individuals from the Departments of Social Services of Wayne and Monroe Counties coordinated the manning of the two (2) centers.

9. Deficiencies Noted in Past Exercises Which Persist:

(a) State of Michigan

None

(b) Monroe County

None

(c) Wayne County

None

(d) Brownstown Township

None (Brownstown Township's participation in the exercise was their first independent effort)

10. Exercise Objectives Still to be Effectively Achieved

All Exercise objectives for the State of Michigan were effectively achieved. The two counties and the Township did not effectively demonstrate exercise objectives as follows:

Monroe County

(1) Exercise objective #14 (Reference NUREG-0654, criteria E.5) - disseminating to the public appropriate information contained in initial and follow-up messages received from the licensee including the appropriate notification to appropriate broadcast media, e.g., the Emergency Broadcast System.

In the initial EBS message the County did not identify the affected areas in terms of landmarks that would be understandable to the general public. The description provided in the EBS message was by emergency planning sectors (i.e., sectors R-A-B-C).

(2) Exercise objective #17 (Reference NUREG-0654, criteria J.10.j) - Control of access to evacuated areas and organization responsibilities for such control.

The County did not dispatch sheriff and/or road commission personnel and vehicles for a limited demonstration per the exercise manual.

(3) Exercise objective #20 (Reference NUREG-0654, criteria K.3.a) - "...Each organization shall make provisions for distribution of dosimeters, both self-reading and permanent record devices."

Because there was no demonstrated field activities the county did not issue TLDs or other permanent record devices.

(4) Exercise objective #29 (Reference NUREG-0654, criteria K.5.b) - Establish the means for radiological decontamination of emergency personnel.

The decontamination team at the reception/Congregate Care Center did not demonstrate simulation of decontamination of an evacuee or emergency worker as reflected in the exercise manual.

(5) Exercise Objective #27 (Reference NUREG-0654, Criteria 0.1.b., 0.4.c. and 0.5...) "Radiological Emergency Response training is provided to those who may be called on to assist in an emergency...(a) where mutual aid agreements exist between local agencies...(b) the specialized initial training and periodic retraining programs shall be provided for...radiological monitoring teams...(c) each organization shall provide for the initial and annual retraining of personnel with emergency response responsibilities.

Individuals conducting radiological monitoring of evacuees need to be properly trained.

(b) Wayne County

Exercise Objective #20 (Reference NUREG 0654 Criteria K.3.a)-
"... Each organization shall make provisions for distribution of dosimeters, both self-reading and permanent record devices."

The county does not have a supply of permanent record devices for distribution to emergency workers.

(c) Brownstown Township

- (1) Exercise objective #4 (Reference NUREG 0654 Criteria items J.10.a and J.10.b):

"The organization's plans to implement protective measures for the plume exposure pathway shall include (a) maps showing evacuation routes, evacuation areas, preselected radiological sampling and monitoring points, relocation centers in host areas and shelter areas.... (b) maps showing population distribution around the nuclear facility. This shall be by evacuation areas (licensees shall also present the information in a sector format)."

Maps in the County EOC did not show locations of reception/congregate care centers, decontamination stations, and other information on population distribution, etc.

- (2) Exercise objective #20 (Reference NUREG 0654 Criteria K.3.a)". Each organization shall make provisions for distribution of dosimeters, both self-reading and permanent record devices."

The Township does not have a supply of permanent record devices for distribution to emergency workers.

11. Exercise Objectives That Were Not Planned For This Exercise:

The following list of objectives were not a part of the exercise and should be considered for demonstration in a future exercise, per Tab M of the Modular Format for Uniformity of Radiological Emergency Preparedness Exercise Observations and Evaluation, dated June 1983: (These objectives are in addition to those objectives not fully demonstrated during the exercise):

a. State of Michigan

1. Demonstrate ability to mobilize staff and activate facilities promptly
12. Demonstrate ability to implement protective actions for ingestion pathway hazards.

18. Demonstrate the organizational ability and resources necessary to effect an orderly evacuation of mobility-impaired individuals within the plume EPZ.
19. Demonstrate the organizational ability and resources necessary to effect an orderly evacuation of schools within the plume EPZ.
23. Demonstrate ability to effect an orderly evacuation of onsite personnel.
26. Demonstrate ability to establish and operate rumor control in a coordinated fashion.
27. Demonstrate adequacy of procedures for registration and radiological monitoring of evacuees.
28. Demonstrate adequacy of facilities for mass care of evacuees.
30. Demonstrate adequacy of ambulance facilities and procedures for handling contaminated individuals.
31. Demonstrate adequacy of hospital facilities and procedures for handling contaminated individuals.
33. Demonstrate ability to estimate total population exposure.

b. Monroe County

1. Demonstrate ability to mobilize staff and activate facilities promptly.
6. Demonstrate ability to mobilize and deploy field monitoring teams in a timely fashion. (State responsibility)
7. Demonstrate appropriate equipment and procedures for determining ambient radiation levels. (State responsibility)
8. Demonstrate appropriate equipment and procedures for measurement of airborne radioiodine concentrations as low as 10^{-7} uCi/CC in the presence of noble gases. (State responsibility)
9. Demonstrate appropriate equipment and procedures for collection, transport and analysis of samples of soil, vegetation, snow, water, and milk. (State responsibility)
10. Demonstrate ability to project dosage to the public via plume exposure, based on plant and field data, and to determine appropriate protective measures, based on PAG's, available shelter, evacuation time estimates, and all other appropriate factors. (Primarily State Responsibility)

11. Demonstrate ability to project dosage to the public via ingestion pathway exposure, based on field data, and to determine appropriate protective measures, based on PAGs and other relevant factors. (Primarily State Responsibility)
12. Demonstrate ability to implement protective actions for ingestion pathway hazards.
18. Demonstrate the organizational ability and resources necessary to effect an orderly evacuation of mobility-impaired individuals within the plume EPZ.
19. Demonstrate the organizational ability and resources necessary to effect an orderly evacuation of schools within the plume EPZ.
21. Demonstrate the ability to make the decision, based on predetermined criteria, whether to issue IT to emergency workers and/or the general population. (State decision County implements)
23. Demonstrate ability to effect an orderly evacuation of onsite personnel.
30. Demonstrate adequacy of ambulance facilities and procedures for handling contaminated individuals.
31. Demonstrate adequacy of hospital facilities and procedures for handling contaminated individuals.
32. Demonstrate ability to identify need for, request, and obtain Federal assistance. (State Responsibility)
33. Demonstrate ability to relocate to and operate the alternate EOF/EOC.
34. Demonstrate ability to estimate total population exposure. (State responsibility)

c. Wayne County

1. Demonstrate ability to mobilize staff and activate facilities promptly.
6. Demonstrate ability to mobilize and deploy field monitoring teams in a timely fashion. (State Responsibility)
7. Demonstrate appropriate equipment and procedures for determining ambient radiation levels. (State Responsibility)

8. Demonstrate appropriate equipment and procedures for measurement of airborne radioiodine concentrations as low as 10^{-7} uCi/cc in the presence of noble gases. (State Responsibility)
9. Demonstrate appropriate equipment and procedures for collection, transport and analysis of samples of soil, vegetation, snow, water, and milk. (State Responsibility)
10. Demonstrate ability to project dosage to the public via plume exposure, based on plant and field data, and to determine appropriate protective measures, based on PAG's, available shelter, evacuation time estimates, and all other appropriate factors. (Primarily State Responsibility)
11. Demonstrate ability to project dosage to the public via ingestion pathway exposure, based on field data, and to determine appropriate protective measures, based on PAGs and other relevant factors. (Primarily State Responsibility)
12. Demonstrate ability to implement protective actions for ingestion pathway hazards.
19. Demonstrate the organizational ability and resources necessary to effect an orderly evacuation of schools within the plume EPZ.
21. Demonstrate the ability to make the decision, based on predetermined criteria, whether to issue KI to emergency workers and/or the general population. (State decision, County implements)
23. Demonstrate ability to effect an orderly evacuation of onsite personnel.
26. Demonstrate ability to establish and operate rumor control in a coordinated fashion.
30. Demonstrate adequacy of ambulance facilities and procedures for handling contaminated individuals.
31. Demonstrate adequacy of hospital facilities and procedures for handling contaminated individuals.
32. Demonstrate ability to identify need for, request, and obtain Federal assistance. (State Responsibility)
33. Demonstrate ability to relocate to and operate the alternate EOF/EOC.
34. Demonstrate ability to estimate total population exposure. (State responsibility)

d. Brownstown Township

1. Demonstrate ability to mobilize staff and activate facilities promptly.
6. Demonstrate ability to mobilize and deploy field monitoring teams in a timely fashion. (State Responsibility)
7. Demonstrate appropriate equipment and procedures for determining ambient radiation levels. (State Responsibility)
8. Demonstrate appropriate equipment and procedures for measurement of airborne radioiodine concentrations as low as 10^{-7} uCi/CC in the presence of noble gases. (State Responsibility)
9. Demonstrate appropriate equipment and procedures for collection, transport and analysis of samples of soil, vegetation, snow, water, and milk. (State Responsibility)
10. Demonstrate ability to project dosage to the public via plume exposure, based on plant and field data, and to determine appropriate protective measures, based on PAG's, available shelter, evacuation time estimates, and all other appropriate factors. (Primary State Responsibility)
11. Demonstrate ability to project dosage to the public via ingestion pathway exposure, based on field data, and to determine appropriate protective measures, based on PAGs and other relevant factors.
12. Demonstrate ability to implement protective actions for ingestion pathway hazards.
19. Demonstrate the organizational ability and resources necessary to effect an orderly evacuation of schools within the plume EPZ.
21. Demonstrate the ability to make the decision, based on predetermined criteria, whether to issue KI to emergency workers and/or the general population. (State decision, County implements)
23. Demonstrate ability to effect an orderly evacuation of onsite personnel.
26. Demonstrate ability to establish and operate rumor control in a coordinated fashion.
28. Demonstrate adequacy of facilities for mass care of evacuees.

30. Demonstrate adequacy of ambulance facilities and procedures for handling contaminated individuals.
31. Demonstrate adequacy of hospital facilities and procedures for handling contaminated individuals.
32. Demonstrate ability to identify need for, request, and obtain Federal assistance. (State Responsibility)
33. Demonstrate ability to relocate to and operate the alternate EOF/EOC.
34. Demonstrate ability to estimate total population exposure. (State responsibility)

B. Narrative

1. State of Michigan (Lansing)
 - a. Emergency Operating Center (Lansing)
 - (1) Activation & Staffing

The scenario called for State and local offsite authorities to fully activate all facilities during the afternoon & evening of June 26, 1984 which was the utility onsite part of the exercise (day one). State and local emergency workers were to report for operations at 8:00 AM on June 27, 1984 (day two). Initial briefings on conditions at the plant and the status of emergency response was held and offsite activities started.

The State Emergency Operations Center at Lansing was activated and staffed according to the scenario, with all agencies present as reflected in the exercise manual, (i.e., Departments of state Police, Public Health, Social Services, Transportation, Agriculture, Commerce, Military Affairs and Natural Resources). A direct communications link exists between the State EOC and the utility and is monitored around the clock seven days a week. When a call is received from the plant notifying the State of an incident at the utility it is verified by a call back procedure as reflected in the State plan. The capability for around the clock staffing was demonstrated through a personnel shift change within the SEOC, with individuals on both shifts demonstrating training and knowledge of their respective responsibilities.

The mobilization of staff procedures were not an objective in the exercise. There are written procedures for the call up of staff at any time 24 hours per day. These procedures have been successfully demonstrated in previous exercises within the State of Michigan.

(2) Emergency Operations Management

The Deputy State Director of Emergency Management was in charge of the State EOC. Briefings were held as necessary and all participants were involved in these briefings. A message log was kept and all messages were distributed to the appropriate personnel. Federal Assistance was requested by the SEOC. The State EOC was notified by the on-scene State EOC of all changing events.

(3) Facilities

Facilities at the State EOC were suitable for the exercise. A status board was present and was kept up to date on significant events. The SEOC has backup power, sufficient furniture, space, lighting, telephones and all the necessary equipment to support extended operations. All the necessary maps depicting the EPZ sectors, evacuation routes, relocation centers, access control points, radiological monitoring points and population by evacuation areas were of high quality. The deficiency relating to maps at the last exercise was corrected at this exercise.

(4) Communications

There are primary and backup communications available in the SEOC for communications with all local EOC's, contiguous states, the licensee, FEMA and other organizations. Hardcopy message capability is also available.

The primary communications to all EOC's is via the Law Enforcement Information Network (LEIN), with dedicated telephones as a backup system; Primary communications to contiguous States is via FTS landlines with CDNATS/Civil Defense National Teletypewriter System as a backup system; Primary communications with the licensee is via hot-line with the State Police Radio Network as a backup system; primary communications with FEMA is via FTS landlines with the CDNATS/Civil Defense National Teletypewriter System as a backup system. Use of the foregoing systems were demonstrated during the exercise.

(5) Dose Assessment and Protective Action Recommendations

The SEOC did not have primary responsibility for decisions and actions on dose assessment and protective action recommendations for recovery and reentry. These actions were carried out at the State on-scene EOC, therefore the SEOC Personnel acted as a liaison group with State Officials.

(6) Public Alerting and Instruction

Public Alerting and Instruction is primarily a County responsibility. The State SEOC according to plan, ensured that sufficient information was provided to the county and that they implemented appropriate procedures to alert and inform the public of protective measures.

(7) Protective Actions

Evacuation procedures are primarily a County responsibility; therefore it is evaluated at that level.

b. State On-Scene Emergency Operations Center (Monroe)

(1) Activation and Staffing

The activation of staff was not an objective during the exercise. The State On-Scene Emergency Operations Center (OSEOC) was operational and fully staffed in accordance with the Exercise Manual, at 8:14 a.m. at the new location in the Michigan Army National Guard Armory.

There was a demonstration of 24 hour staffing capability through a complete shift change of staff during the exercise. The participating staff on both shifts were knowledgeable of their responsibilities. There are two direct communications links between the utility and the State OSEOC. The second line is designated for use by the Radiological Health Assessment group within the OSEOC.

(2) Emergency Operations Management

The state Director of Emergency Management Representatives were in charge of the State OSEOC operation. Briefings were held as necessary to update staff on the situation and all participants were involved in the briefings. Message handling was efficient and timely. A message log was kept and all messages were reproduced and distributed to the appropriate personnel. Federal Assistance was requested by the OSEOC through the State EOC Lansing per the State Plan.

(3) Facilities

The new location for the OSEOC provided ample space for easy movement of participants which was a minor deficiency in the previous exercise. There is also sufficient furniture, adequate lighting and noise abatement and telephones for staff needs. The facility is adequate to support extended operations with feeding sleeping and showering capabilities. A clearly displayed status board with auxilliary boards was present and were kept up to date on classification levels and significant events. The necessary maps were posted depicting the

plume EPZ, evacuation routes, relocation centers, access control points, radiological monitoring points and population by evacuation area.

(4) Communications

The communications system within the State OSEOC included primary and backup systems of radios in mobile vehicles, telefax machines and the Law Enforcement Information Network (LEIN). The foregoing communications systems were effectively demonstrated throughout the exercise in contacts with the Mobile Radiological Health Unit, other State facilities, local governments, Federal agencies and the utility.

(5) Dose Assessment and Protective Action Recommendations

The State Radiological Health Coordinator and staff were capable of making rapid independent dose projections based on radioactivity release rates and meteorological data. Their ability in obtaining this information was accelerated by maintaining direct telephone communications with the plant plus the support of the three utility representatives in the OSEOC. The telephone communications were supported by hardcopy transmission capability. Protective action recommendations were made based upon well accepted PAG's and the plant status. The State demonstrated their independent judgment by modifying utility recommendations based on field measurements, wind speed and time constraints in carrying out specific operations.

Adequate supplies of Radioprotective drugs (KI) was available for emergency workers but because of the minimal release of iodine the issuance & use was not applicable for this exercise.

(6) Public Alerting and Instruction

Public Alerting and Instruction is primarily a County responsibility. The State according to plan, ensured that sufficient information was provided to the County and that they implemented appropriate procedures to alert and inform the public of protective measures.

(7) Protective Actions

Protective Action recommendations were based on protective action guides, the plant status and weather conditions and were defined according to developing changes that occurred. Although no off-site evacuations were recommended appropriate preparations were made and put on standby when levels appeared to be progressing towards the potential need for evacuation.

Reception/Decontamination/Congregate Care Centers were opened, equipment and personnel from supporting service organizations were placed on standby, simulated traffic control points were set-up air traffic rerouted, water & rail traffic stopped and access control was demonstrated. A county mutual aid pact was activated and placed on standby. Information on the location of dairy farms, food processing plants and water supply intake points was available, as well as detailed maps showing crop information. Food and Dairy plant staff were on standby to assist agricultural communities and agribusiness. The Department of Agriculture recommended sheltering and placing dairy cows on stored feed prior to any release from the plant. This precautionary recommendation was based upon the plant status and the iodine included in the plant's radioactive inventory.

(8) Media Relations

The State assigns a Public Information Officer to the Joint Public Information Center (JPIC) and the evaluation of this facility is reported in a separate module. A public information representative was present in the State EOC during this exercise to ensure proper coordination was maintained between that function and the JPIC.

c. Field Activities

(1) Field Monitoring

Field Radiological Monitoring teams were prepositioned per the scenario, therefore mobilization could not be evaluated. Team members are available for activation on a twenty-four (24) hour basis, seven days a week. The response teams are situated in Detroit, Lansing and other parts of the State. The team situated in Detroit because of their close proximity to the plant would serve as the initial response team with teams in other regions of the State responding to support and/or as additional teams.

The actions of the field teams were in concert with the scenario. The scenario allowed for only the release of noble gases. The actions and sampling was in agreement with a release of noble gases. There was no significant release of radioiodine offsite in the scenario. The measurements made by the field teams recognized that noble gases were the only significant radioactivity. However, the field teams were prepared and properly equipped to detect and measure other isotopes such as radioiodine and particulates.

Communications between the field teams and the controller was good. Messages were broadcast with little or no problem. Field personnel were equipped with personnel monitoring devices of the self reading type and of the permanent recording type. They were able to read the self reading dosimeter periodically and be aware of the radiation dose they were acquiring and to assure that excessive radiation exposure was not being received. Respiratory protection was provided for team members.

(2) Radiological Laboratory

The mobile laboratory is a well equipped van operated by an experienced radio chemist. Since the mobile laboratory is routinely used in the State's environmental surveillance program, the analytical systems are maintained daily including use of calibration check sources. The State also participates in the EPA quality assurance program for radionuclide laboratories.

Although the operations conducted within the scope of the scenario did not require analysis of a wide variety of samples, the radio chemist was prepared to demonstrate their analytical procedures. These procedures have been demonstrated in other exercises.

d. Joint Public Information Center

(1) Activation and Staffing

The Prompt Activation of the JPIC was not an exercise objective. Participants at the JPIC were prepositioned and set-up to operate prior to the start of the offsite activities per the scenario.

Organizations represented at the JPIC by Public Information Officers (PIOs) were as follows: State of Michigan; Michigan State Police; Wayne County; Brownstown Township; Monroe county; Ontario, Canada; and Detroit Edison. Overall, the PIO's exhibited a general knowledge of the JPIC and appeared trained in their duties.

(2) Facilities

The JPIC facility is located in the administration building of the Monroe Community College. A stage with a podium and public address system is set up in the cafeteria, which is utilized as the media briefing room, with the capability to accommodate 150 or more media personnel. Maps, illustrations, and displays were posted for easy viewing by the press.

The Joint Public Information Team (JPIT) members had private rooms available down the hallway from the media room. Although privacy is provided to the PIO's they are located in close enough proximity to each other, as well as to the operations room and communications center, to allow rapid interactions and conferencing capabilities.

The media briefing room was equipped with approximately 25 telephones for use by the press. Additional phones and lines are stored at the JPIC to increase the number of phones to 500.

Provisions for back-up electrical power are not maintained at the JPIC. Detroit Edison has, at its disposal, mobile generating equipment which could be dispatched if needed. In the event of the total unavailability of power the JPIC could be relocated to the media facility in the EOF or to the utility's headquarters in Detroit.

(3) Communications

The central communications room of the JPIC is the point where information is received from the EOF; with minimal communications from the State's two EOC's. It is staffed and managed by utility personnel until the General Emergency status when the State takes control. The primary communications system with the EOF, the On-Scene EOC, the EOC in Lansing, and the utility's main office in Detroit are two facs machines over dedicated phone lines. The back-up system is via additional dedicated lines and commercial phones.

Wayne County, Monroe County and Brownstown Township PIO's used verbal communications over dedicated lines to receive messages from their EOC's. Back-up is via commercial telephones. The State of Michigan, Wayne County, and Monroe County are equipped with speaker phones in their PIO's conference rooms. Brownstown Township did not have this capability.

(4) Informational Functions

Six formal media briefings were conducted during the course of the exercise. The briefings were informative, concise, and well managed. Technical jargon was avoided but if its use was necessary the terminology was well defined and put into layman's terms. Maps and displays were used frequently and kept current with the emergency data. Information flow between the PIO's was good. Prior to each media briefing they would meet in the operations room, discuss the upcoming briefing and all agree on its content. Hard copies of the news releases were available and distributed during the briefings. For

the benefit of any press representatives that may have arrived while a briefing was in progress - the utility video taped the proceedings and made them available following each briefing.

The EBS messages were not monitored at the JPIC. It was reported that radios and T.V.'s. are viewed at the utility's headquarters in Detroit and if any erroneous information were to be broadcast the utility would notify the JPIC, which would initiate appropriate actions to rectify it.

(5) Public Information

Press releases were drafted in the operations center at the JPIC, by Detroit Edison personnel. Pertinent data from the EOF and EOC's was included and agreed upon by all JPIT members, ensuring informative and well written press releases. In one instance data was excluded from a press release - this occurred in the shelter-in-place message which neglected to include the recommended procedures to follow (e.g. close windows, turn off ventilation systems, etc.) and providing instructions to any transients without shelter. Verbal instructions on sheltering procedures were given during press releases but were not included in hard copy.

Protective action areas were described verbally using familiar boundaries and landmarks as well as the EPZ sector designations. This information also should have been included in a hard copy press release.

(6) Rumor Control

Rumor control was an objective only for Monroe County. Three operators from the County clerical pool were available to answer the six telephones in the area designated for rumor control. The operators demonstrated a shift change during the exercise. They were kept informed of the exercise status and instructed to relay the information contained in the hard copy press releases provided. The rumor control phone numbers were written in the press releases as well as repeated numerous times during the press briefings.

(7) Scenario

The scenario provided for the activation of all the functions of the JPIC. Due to the time constraints of the exercise the JPIT was prepositioned and the JPIC facility fully set up prior to the start of the exercise.

It is recommended that a future scenario include a "real life" activation and initial notification of the facility and staff to further test the response capabilities.

(8) Recovery and Reentry

Recovery and Reentry actions were instituted when action levels were reduced to an alert status. These included: 1. Public Sheltering terminated, 2. Sheltering of dairy cows rescinded, 3. Transportation barriers removed (air, water, rail and automobile traffic), 4. Water restraints lifted, 5. Congregate care and reception centers closed, 6. Milk sampling continued at 12 hour intervals for a 48 hour period, 7 No precautions deemed necessary for fruits and vegetables.

2. Monroe County

a. Emergency Operations Center (EOC)

(1) Activation and Staffing

The direct communications link for the Monroe County EOC from the utility is located in the County Sheriff's Office, which also serve as the warning entry point for the County. The Sheriff's Office is located in the City/County Joint Communications Center which is a separate building than that where the EOC is situated.

Messages for the EOC received from the utility and/or the State via the dedicated telephone lines are relayed from the Sheriff's Office via messenger or telephone call(s) to the EOC. The City/County Joint Communications Center is located next door and in close proximity to the EOC (which is situated in the lower level of the County Courthouse). The County Director of Civil Preparedness explained that construction of a new EOC is in progress at another location and will have dedicated telephone lines to the utility, State, Wayne County and Brownstown Township.

Staffing of the EOC, had begun prior to 7:50 a.m. and personnel were still in the process of signing in through EOC security staff from the County Sheriff's Office. At approximately 8:00 a.m. the County Civil Defense Director announced the activation of the EOC. The EOC was fully staffed at approximately 8:50 a.m. The EOC staff in general was knowledgeable about their respective responsibilities. A personnel shift change was activated and completed at approximately 11:30 a.m. Personnel from all agencies except four (4) of the sixteen staff members effected a change of staff during the shift change. The RADEF Officer explained that there was no replacement individual planned for his role during the exercise. There was no explanation sought from the three (3) others in that they, as was the RADEF Officer, were being assisted by a second person which gave the appearance of being double staffed. The double staffing of the four

(4) organizations/representatives coincided with the number of organizations/representatives listed for the EOC (12) in the exercise manual.

There was a demonstration and an explanation of a plan, by the RADEF Officer, for monitoring the incoming second shift personnel for potential contamination upon their arrival at the EOC, if a situation warranted it (the EOC is presently located within the 10 mile EPZ of the utility).

Organizations represented in the EOC was in accordance with the County plan and the exercise manual. In addition to the executive and clerical groups the organizations represented were Fire Services, Transportation, Health and Medical Services, Emergency Medical Services, County Agriculture, Social Services, the Department of Schools, Public Works, County Law Enforcement, County Damage Assessment and RADEF.

Individuals representing organizations in the EOC had copies of rosters of individuals by name, address and telephone numbers, and/or stated their respective organizations maintain listings of individuals that are on call for alerting and/or activation.

(2) Emergency Operations Management

The Monroe County Plan designates the Office of Civil Preparedness Director to act as Chief of Staff for the Chairperson of the County Board of Commissioners and to coordinate the emergency activities of all County EOC staff, officers and support personnel assigned emergency duties at the EOC. Through the combined coordination of the director, OCP and the Operations Officers for the two shifts, agencies manning the EOC received briefings on the progress of the exercise play. They were given opportunities for sharing information on their respective organizations involvement and progress as part of the exercise, and were included in decision making which pertained to their respective organizations and/or roles. A number of the EOC participants had copies of the County plan annexes, pertaining to their respective responsibilities, and there were copies of the plan available for others. The message board was situated where it could be easily viewed by everyone in the working operations group. The board was kept current by individuals from the clerical group that had been assigned that responsibility.

In addition to the message board, status reports were typed and reproduced by clerical staff and distributed to selected representatives of the working group. The EOC

security was provided by deputies from the Sheriff's Office. Individuals were required to provide identification in addition to being listed on a roster(s) of individuals to be allowed access within the emergency operations center.

(3) Facilities

The Emergency Operations Center is located in the lower level of the Monroe County Court House. The facility, although small and slightly crowded was functional. The emergency classification levels were posted on the status board along with other pertinent information regarding the progress of the exercise. The board was situated so that it was visible to the working group within the room. Because of the small size and the design of the present EOC space, part of the EOC working group had to be situated in three other rooms that are adjacent to the main work room area. This division of the staff posed no noticeable problems with hearing announcements, briefings, etc., but did pose the problem of staff being unable to see the status board without having to leave their seats. According to the Director, OCP this problem will not exist in the new EOC.

The required maps, illustrations, etc., were posted on the walls of the EOC. They included maps showing the plume EPZ with sectors labeled, evacuation routes, relocation/congregate care centers, access control points, radiological monitoring points, and population by evacuation areas.

(4) Communications

Communications by the EOC to all facilities, except the County Sheriff's Department was via commercial telephones. The County Sheriff's Office could additionally be contacted via a two-way radio located in the EOC. The EOC is supported by a dedicated telephone communications link to the EOF and State, which exists in the City/County Joint Communications Center. Messages intended for the EOC are relayed in hardcopy by messenger or telephone calls. The City/County Joint Communications Center is operated by the Monroe County Sheriff's Department. All CCJCC exercise participants were full time personnel except for eight (8) Explorer Scouts that were used to deliver the hardcopy messages from the Sheriff's Office to the EOC. The communications center is operated on a twenty-four hour basis, seven (7) days a week. It is the warning entry point for the county. Communications systems available at the center include commercial telephones, dedicated telephone lines to the State and utility, the Sheriff's radio net and the Law Enforcement Information Net (LEIN). Staffing at the

center included six (6) telephone operators, a communications officer and a shift sergeant. The area was secure and required an escort from the Sheriff's staff and a picture identification card for entry.

(5) Dose Assessment and Protective Action Recommendations

These activities were State level responsibilities and were not exercise objectives for Monroe County.

(6) Public Alerting and Instructions

The Emergency Operations Center initiated the initial EBS message at 9:51 a.m. recommending in-place sheltering out to two (2) miles for all sectors, and out to five (5) miles in sectors R-A-B and C, upon receiving confirmation of a minimum release of noble gases into the atmosphere. The timing of the EBS message was within fifteen (15) minutes of receipt of the message from the State as required and was coordinated with the public alerting process (simulated sounding of sirens). The two EBS messages (initial and subsequent expanded in place sheltering) was accomplished through the use of prescribed messages which included guidance on sheltering methods (e.g., close windows, put cloth over mouth when outside, etc.) and instructions for transients without shelter.

Although the initial message did not identify the affected areas in terms of political boundaries or familiar landmarks that would be understandable to the general public the message had been initiated on a timely basis and included the required protective actions (as stated above) for dissemination to transients and persons living and/or working in the affected areas. It also included information on the need to keep pets inside and to the extent possible bring farm animals under covered facilities. Concurrent with the EBS announcement the same message, including political boundaries or familiar landmarks that would be understandable to the public, was verbally described to the media at the Joint Public Information Center (JPIC).

Deficiency: The omission of information in the EBS message which identifies affected areas in terms of landmarks that are understandable to the general public.

Recommendation: It is recommended future EBS announcements drafted at the Monroe County EOC and released at the JPIC, use political boundaries or familiar landmarks to describe the affected area rather than use letter designations.

(7) Protective Actions

The objective (#17) of demonstrating the organizational ability to control access was partly met by the EOC staff. There was simulation of the deployment of law enforcement personnel for traffic control points. The points selected on the maps in the EOC were not those identified in the plan in a number of instances. It is recommended the plan be reviewed to determine if it should be revised or if the changes were due to some temporary condition existing at the time of the exercise. The simulated roadblocks were later adjusted to prevent traffic ingress to the area being sheltered and to coincide with the changes in the wind directions. It was determined by the evaluators that the planned deployment of personnel by the County Sheriff's Department to demonstrate the manning of traffic control points and setting-up roadblocks was hampered by requests for police assistance at two (2) strike locations within the County (the Fermi 2 site and the Dundee Cement Plant). The objective of demonstrating the organizational ability to deal with impediments to evacuation was met, through simulated message play, by the Monroe County EOC staff and within the limits of the scenario. Although no evacuation was required discussions with law enforcement and public works personnel revealed extensive experience with handling impediments during adverse weather conditions, etc. Organizational representatives within the EOC from the Monroe County Departments of fire, health, emergency medical, schools and transportation were prepared to assist the homebound, school children, and individuals without vehicles.

(8) Radiological Exposure Control

The County RADEF Officer was very knowledgeable about worker exposure control and the plan for administering radioprotective drugs (KI). He was prepared to coordinate the distribution of KI if it became necessary. He was very effective in explaining to the EOC staff where the plume was traveling, how to minimize the dose for emergency workers, and the necessity of dosimetry distribution and record-keeping.

It is recommended the State of Michigan develop a scenario for the exercise that will enable Monroe County to demonstrate, more completely, their capability concerning emergency worker exposure control and decision-making concerning the administering of KI.

(9) Media Relations

Press releases were drafted at the Monroe County EOC for reporters, as per the plan. The releases were read over the telephone by the Monroe County Public Information

Officer (PIO) to the County's PIO at the JPIC. The initial prompt alert and notification message, developed by the Monroe County EOC staff, was provided to EBS within 15 minutes of the State's decision to shelter sectors R-A-B-C. It also included protective actions. It did not, describe the affected shelter area by using political boundaries or commonly known landmarks. It is recommended announcements of this type use either political boundaries or commonly known landmarks so the public can quickly determine if they are within the affected area.

(10) Recovery and Reentry

The objective of demonstrating the organizational ability for recovery and reentry was met within the scope of the exercise. Since there was no evacuation and only the sheltering of people and animals, recovery and reentry actions were limited to and accomplished by the EOC staff as follows:

- announcing that sheltering recommendations were lifted;
- giving instructions (simulation) to remove roadblocks;
- instructing EOC organizations with personnel on standby to have them demobilize.

(11) Scenario

The rapid degradation of the plant created sustained pressure on the EOC staff, which allowed them to demonstrate their extensive knowledge of the plan. However, the fact that the release from the plant did not necessitate an evacuation made the late morning and afternoon quite slow for the staff.

The scenario as developed and submitted would have driven an evacuation off-site affecting Monroe and Wayne Counties. The time of the release on-site began at 8:50 a.m. but the readings were too low to have any affect off-site until 9:37 a.m. when the release rate had increased to a point when a general emergency was declared and offsite protective action recommendations were appropriate. When the general emergency was declared evacuation recommendations and boundaries were developed by the State. There was a wind shift at approximately 10:00 a.m. which impacted on the area of the release so that the State had to develop three different sets of evacuation boundaries. During this period of time the release coming out of the stack was terminated at approximately 10:15-10:20 a.m. Consequently the evacuation recommendation was changed to an in-place shelter recommendation. It is recommended

the State of Michigan take corrective action with the Detroit Edison Company to ensure State and utility scenario writers for the next exercise, allow sufficient amounts of off-site release and long enough duration of the release to enable the State and counties to have sufficient time to provide for an evacuation.

b. Media Center

(1) Joint Public Information Office

The Monroe County Public Information Officers (PIO) and rumor control operators at the JPIC were well trained and knowledgeable in their duties. A shift change of personnel was demonstrated by the first and second shift PIO officers, and the three per shift rumor control operators. In one situation information intended for inclusion in a hard copy press release, concerning protective action quadrants as described by boundaries and familiar landmarks, was never developed. However, the information was provided verbally at the JPIC during media briefings in addition to being marked on an EPZ quadrant map at the same relative time as the EBS announcement.

(2) Scenario

The scenario drove the exercise objectives for the JPIC at the Monroe Community College and enabled the exercise participants at the JPIC to demonstrate their capabilities.

c. Field Activities

(1) Evacuation and Access Control

There was no deployment of personnel from the County Sheriff and Road Commission Offices to demonstrate access control to the sheltered area as described in the exercise manual. The deployment of personnel was simulated by the movement of push pins on a map at the County Sheriff's Office and the EOC. It was determined by evaluators that the planned deployment of personnel by the County Sheriff's Office was hampered by a shortage of staff due to actual labor strikes occurring within Monroe County at the time of the exercise. The department had reportedly dispatched personnel to two strike locations within the county after receiving requests for police assistance. The strike locations were at the Fermi 2 Nuclear Power Plant and the Dundee Cement Plant.

According to discussion with a person in the Sheriff's Office rank-n-file personnel of that office have not had any training in procedures relating to evacuation, access and traffic control and dosimetry as they pertain to the Fermi 2 Nuclear Power Plant. Other exercise participants

in the County Sheriff's Office explained that Department Personnel assigned to access control points, evacuation corridors, etc. would routinely depend on centrally controlled dispatching and the experience of key personnel, who organize the cordons, for assignments, guidance, and information in the event of an incident at the Fermi 2 plant.

Discussion with a representative of the Michigan Division of Emergency Management revealed that the State in conjunction with utility operators have provided training to Monroe County Personnel of all organizations participating in Radiological Emergency Response, in March 1984, including the County Sheriff's Department. It was explained that the Sheriff's Department had possibly, for reasons unknown, over looked some individuals of the department for training or the Department' training representatives had failed to insure training for those individuals as reflected in this report.

Deficiency: There was no deployment of law enforcement and/or Road Commission personnel and vehicles to demonstrate the organizational ability necessary to control access to the evacuated/sheltered area as described in the Exercise Manual and as required by NUREG-0654/FEMA REP-1, Revision 1, criteria item J.10.j.

(2) Special Evacuation Problems

There was no evacuation involving the movement of people from within the affected sectors. The only movement of people during the exercise occurred as part of the operation of the Reception/Congregate Care Center as reflected in that section of this report.

(3) Route Alerting

Route alerting was not an exercise objective and did not occur.

(4) Worker Exposure Control

Worker exposure control did not become necessary for Monroe County because deployment of personnel from the County Sheriff's and Road Commission's Offices did not occur (see "Evacuation and Access Control" section of this report).

There was discussion within the EOC and an explanation by the RADEF Officer on how to minimize the dose for emergency workers, the necessity of dosimetry distribution and record keeping and the issuance of KI, if it became necessary.

Deficiency: Because there were no field activities, Monroe County did not demonstrate the issuance of TLDs or other permanent record devices as required by NUREG 0654/FEMA REP-1, criteria item K.3.a. (Exercise objective #20).

It is recommended that worker exposure control be demonstrated during the next exercise of the Fermi 2 Nuclear Power Plant.

(5) Scenario

Since the County did not deploy personnel to access control points, it was difficult if not impossible to access the adequacy of the scenario.

d. Relocation Center

(1) Activation and staffing

The relocation/decontamination center was located at the Mason High School and was staff by thirty (30) workers from the organizations as follows:

- County Health Department (5 representatives)
- County Health and Welfare (2 representatives)
- Department of Mental Health (1 representative)
- American Red Cross (15 representatives, including two (2) nurses)
- County Radio Communications Association (3 representatives)
- County Volunteer Fire Department (4 representatives)

The activation of the facility was not an exercise objective however, the facility was fully staffed as aforesaid within thirty (30) minutes after the first staff arrivals. There was a plan for a shift change of personnel by the organizations represented. A number of the organizations had been double staffed to demonstrate the shift change and others had copies of their respective organization's personnel availability lists. The staff was familiar with their respective organization's responsibilities and their roles within the center. A number of the staff had copies of the section of the County plan regarding their responsibilities.

(2) Registration and Monitoring of Evacuees

There was a limited demonstration of an evacuation of twelve (12) Explorer Scouts from the Custer Elementary School, Monroe to the Mason High School Relocation Center.

The scouts were transported on a school bus which arrived at the relocation center at approximately 11:20 a.m. The evacuees were monitored for potential contamination by a team of two (2) radiological monitorers from the fire department as part of the exercise demonstration of radiological monitoring of evacuees.

All evacuees were monitored for contamination prior to entering the center where they were registered by a team as they entered the center. Registration was accomplished by use of a multi-copy form that contained pertinent information on the evacuee, his family, personal health and health needs. It was explained to the evaluator that evacuees found to register readings of contamination on the geiger counters that were used for monitoring were to be segregated from the rest of the center's population. They were to be escorted by the two persons decontamination team of nurses, through defined corridors to the shower facilities in the school for decontamination.

The decontamination evacuees or workers would be provided a change of clothing after being remonitored for contamination and found to be clean. There was no actual demonstration of the decontamination of evacuees. The foregoing is an explanation of planned procedures as explained by the monitoring team and decontamination teams because the shower room where the demonstration was to occur was in use by females utilizing the swimming pool.

Deficiency: There was no demonstration of decontamination of emergency workers and/or evacuees as described in the exercise manual (objective #15 & 17) and required by NUREG-0654/FEMA REP-1, Revision 1, criteria item K.5.b.

(3) Congregate Care of Evacuees

The Mason High School relocation/congregate care center can accommodate approximately fifteen hundred (1500) persons. The center manager explained that if an evacuation need exceeds the capacity at Mason High other schools that are nearby are pre-designated for use. The facilities of the school have capabilities for sheltering, feeding, showering, recreation, etc. Planning for evacuee needs are addressed by organizations represented in the operation of the center (ie., Red Cross-provision of cots and blankets, initial feeding, etc.).

The Red Cross canteen trucks were reportedly immediately available for snacks and coffee. The school cafeteria would be available for serving hot meals within twenty-four (24) hours.

There was a three (3) member team of the Monroe County Radio Communications Association for receiving and handling messages for the center, in addition to the school's routine telephone system and several commercial pay telephones.

(4) Scenario

The scenario drove the exercise objectives intended for the Congregate Care Center to the extent the participants at the center performed. However, there was no simulation of decontamination at the center as reflected in the exercise manual.

e. Decontamination

- (1) In addition to the radiological monitoring team at the Mason High school Relocation Center, there was a two member monitoring team, with a fire truck, hoses and other apparatus situated on the roadway leading to the school parking lot. The team was assigned the responsibility of monitoring incoming vehicles. They explained that vehicles entering the area and found to have readings indicating contamination, after being monitored, would be impounded in an adjacent parking lot and decontaminated later.

The operators of the impounded vehicles and passengers would be directed to the nearby reception center for monitoring for contamination and processing through the center.

The radiological monitoring teams at the reception center and those on the roadway leading to the center were equipped with geiger counters with probe attachments. There was no simulation of decontamination intended for the incoming vehicle monitoring location.

Discussion and observations of the monitoring teams revealed that some have received no training on the proper reading and use of the monitoring equipment, while others stated they had received a basic course in dosimetry approximately eighteen (18) months ago.

Deficiency: The Individuals conducting radiological monitoring of evacuees is lacking in training as required by NUREG-0654/FEMA REP-1, Revision 1, criteria items 0.1.b, 0.4.c. and 0.5.

3. Wayne County

a. Emergency Operations Center

(1) Activation and Staffing

Activation of staff was not an exercise objective. The Wayne County Emergency Operations Center (EOC), located in the Flat Rock Municipal Building was fully staffed by 7:00 a.m. The County demonstrated 24 hour staffing capability by a shift change and in some cases the double staffing of personnel. Both shifts displayed training and knowledge in County emergency procedures. Coordination between the State, Monroe County and Brownstown Township was maintained throughout the exercise. There were clarifications of the plant conditions and status reports by the representative of Detroit Edison.

(2) Emergency Operations Management

The EOC staff was managed by the County Chief Executive (1st shift) and the acting Chief Executive (2nd shift) in accordance with the County plan. Periodic briefings were held, with staff members providing updates within their respective areas of responsibility. The staff was active in decision making with final decisions on major matters being made by the Chief Executive. The staff members had checklists and/or portions of the plan which pertained to their respective sections for guidance. There was several copies of the State and County plans available in the EOC.

Messages were received by phone or Law Enforcement Information Network computer (LEIN). The LEIN messages were dispatched to the message control center where they were logged, copied and distribution made to appropriate persons. Access to the EOC was strictly controlled by volunteers from the Civil Air Patrol.

Important messages were read to the full staff. Recommendations of actions to be taken were discussed by the staff.

(3) Facilities

The facility, although small and slightly crowded was functional. Telephone lines were individually available for the EOC Staff. The operations room is the converted firing range area of the Flat Rock Municipal Building. The room was completely sound proofed, therefore the noise level remained low and controlled. Emergency power is available in the Municipal Building.

Maps displaying the Plume EPZ, Evacuation Routes, Relocation Centers, Access Control Points, Monitoring Points and Population by Sector Areas were posted and easily accessible to staff organization personnel.

The Incident Status Log was maintained on a transparency and projected on a large screen where it was easily read by the staff. The Emergency Classification Levels was posted in a prominent position at the entrance to the EOC. All staff members were aware of classification. Any one entering the EOC was immediately aware of the Emergency Level.

(4) Communications

Numerous communications systems were available in the EOC and communications center, for contact with all required agencies. All systems have a primary and at least one back-up system. The LEIN was efficient for communication with the OSEOC & SEOC but did not provide for direct hard copy capability to the JPIC.

(5) Dose Assessment and Protective Action Recommendation

These activities were State level responsibilities and were not exercise objectives for Wayne County.

(6) Public Alerting & Instruction

The Wayne County EOC has the responsibility to alert the public within the 10 mile EPZ and disseminate an instructional message over the EBS within 15 minutes. This process started with a confirmed call from the State EOC declaring a General Emergency at 9:41 a.m. Monroe County activated sirens at 9:55 a.m. The EBS was activated at 10:05. Simulated calls were made to schools and factories at this time.

Emergency Public instructions were drafted in the Wayne County EOC. The information in these messages were clear and appropriate. Prescribed messages were used in describing Protective Action areas in terms of familiar roads, boundaries and landmarks. The initial EBS announcement gave instructions to take shelter. This was followed by a later EBS instruction including guidance on sheltering methods.

Instructions regarding Protective Actions for people were distributed through the EBS and by simulated calls to schools, factories & other large institutions. The timing of instructions was coordinated with the public alerting process.

Protective Actions regarding sheltering of livestock and placing them on stored feed was discussed and information was confirmed with the JPIC for media release, however instructions regarding this Protective Action were not drafted or simulated and placed on the EBS by Wayne County.

(7) Protective Actions

Activation of traffic control points was promptly ordered. The County Road Department and law enforcement Representative discussed routes and traffic volume. The County Engineer discussed the availability of equipment to remove impediments to evacuation routes. Since it is summer and no evacuation was ordered these resources were not activated. Roadblocks were jointly manned by Wayne County and Brownstown Township.

Simulated requests were made via the State to Air Traffic Control, the Coast Guard, rail lines and the Ford Motor Company plant in that area to advise of the situation and reduce traffic to a minimum. According to the EOC staff sufficient materials and personnel are available to cover all traffic and access control functions simultaneously, even without assistance from Brownstown Township.

Reception Centers were activated in a timely fashion. The County Health Department is responsible for evacuation of mobility impaired persons. A list of these persons is maintained by the department showing impairment and the location of these individuals.

(8) Radiological Exposure Control

Low range and high range dosimeters were available and issued to emergency workers, however permanent record dosimeters were not available.

Deficiency: Wayne County does not have TLDs or other permanent record devices as required by NUREG-0654/FEMA, REP-1, Revision 1, criteria items K.3.a. (Exercise objective #20).

Personnel were briefed and provided written instructions for dosimetry equipment. KI was available for issue but was not required. The EOC was within the plume. Measures were taken to protect personnel from exposure.

(9) Media Relations

Media Representatives appearing at the County EOC and/or telephone inquiries were referred to the JPIC and/or rumor control.

(10) Recovery & Reentry

Based on recommendations of the Department of Public Health the Emergency classification level was downgraded to the "Alert" level at 1:47 p.m. The Department of Public Health, Department of Natural Resources, Department of Agriculture continued long-term sampling. Radiation levels were at normal background levels. The EOC remained in operation while the utility began recovery. Sheltering of dairy animals was rescinded at 1:45 p.m. At 2:00 p.m. the sheltering order was terminated.

Milk and Water supply sampling remained in effect. No special precautions with fruits & vegetables were ordered. Samples taken at this time had no levels above background radiation.

At 2:10 p.m. airspace, rail service, and waterways were re-opened to normal use. Long term sampling will continue until no longer necessary. The EOC was deactivated to standby conditions.

(11) Scenario

The scenario was realistic and drove the exercise objectives with the exception of evacuation, which did not occur.

b. Media Center

- (1) Press releases were drafted at the Wayne County EOC and released at the JPIC. The releases were read over the telephone by the Wayne County PIO at the EOC to the PIO at the JPIC.

4. Brownstown Township

a. Emergency Operations Center

- (1) Activation and Staffing

Brownstown Township EOC was fully staffed at 8:00 a.m. when the exercise activity resumed. The Township Supervisor was in charge and the Emergency Services Coordinator served as Chief of Operations. A shift change of all staff was demonstrated through individual replacement one at a time. This permitted briefing of the incoming person without disruption of on-going activities. Brownstown Central Dispatch serves as the warning entry point and is manned 24-hours per day. They have a direct telephone line from the utility. Written call lists for key personnel are maintained for alerting purposes.

(2) Emergency Operations Management

Messages received in Central Dispatch were hand carried to the Operations Room where they were logged in. Delivery time was two to three minutes. After messages were logged, they were given to the Township Supervisor, who marked action staff member on the message, briefed the Assistant PIO and had messenger give the message to the appropriate staff member. Another copy of the message was routed to the other EOC staff members. This eliminated need for recurring briefings on status, yet each EOC staff member was informed of the on-going activities. Periodic announcements were made as events were posted on the status board. The operations room door was locked from the inside and persons wishing admittance were either personally recognized or required to show identification. It is suggested a manned sign-in station could be established outside the operations room to improve security. The initial protective action ordered (sheltering to 5 miles) did not affect the Township, but was recognized as a potential threat and possible follow-on events and actions were reviewed. The reception center was activated prior to need as pre-arranged in the scenario to permit a limited demonstration of evacuation using volunteer Boy Scouts and a volunteer bus-driver. Activities were coordinated with Wayne County and, through a county representative, at the State EOC.

(3) Facilities

The EOC is a ground floor portion of the Municipal Building. The Operations Room is large, well-lighted, carpeted and acoustically tiled. Desks or table space and telephones were available for each EOC staff member.

The Executive Group (Township Supervisor, Public Information & Emergency Services Coordinator) had a partitioned office on one side of the Operations Room. Back-up power and kitchen facilities are available. The emergency classification level was posted on the status board, which was a large chalkboard on one wall of the room. Large laminated maps, with the Township area highlighted, depicted the EPZ and street names and landmarks were easily identifiable. One map was used to plot plume data.

DEFICIENCY: The maps did not show the locations of reception/care centers, decontamination stations, and other information such as population distribution required by NUREG-0654/FEMA REP-1, Revision 1, criteria items J.10.a and J.10.b.(Exercise objective #4).

Recommendation: The required information be superimposed on the maps.

(4) Communications

The Communication Center was located in the Police radio room. Phone lines were the main communications link, an AM/FM radio was available for monitoring EBS reports. The police radio was used to receive some updated info. A weather station radio and a radio contact with the Water Department were available. There are no hospitals or convalescent homes in Brownstown Township. EBS and county contact was maintained through a County Representative in the JPIC. The Michigan State Police LEIN network link was in operation. Hard copy service, between EOC and JPIC, was not available.

(5) Dose Assessment & Protective Action Recommendation

These activities were State level responsibilities and were not exercise objectives for Brownstown Township.

(6) Public Alerting and Instruction

Contact with the EBS was made at 10:05, initially through Monroe County by commercial telephone. An Assistant PIO was using prescribed messages. At 10:10, when the State OSEOC directed sheltering, a message was simulated to the EBS. It contained instructions to the public and reflected recognizable geographic boundaries. Route alerting was simulated, using two police cars, at 10:26 a.m. Exercise objectives were exceeded by a limited demonstration of evacuation using volunteer Boy Scouts, a volunteer bus driver and lift-equipped school bus. The Scouts were moved from a school to the decontamination and reception center. Public alerting was complimented by capability from the Township Supervisor's office to input printed advisories on cable television.

(7) Protective Action

The capability to set up a traffic access control point was observed. EOC staff indicated lists of emergency equipment was reportedly current (towing & heavy equipment). Emergency Operation Center (EOC) staff indicated adequate resources in both vehicles and manower to cover traffic and access control functions simultaneously. The EOC has lists and requirements of mobility-impaired individuals.

(8) Radiological Exposure Control

See "Worker Exposure Control" under "Evacuation and Access Control" below.

(9) Media Relations

All media contact was provided at the JPIC. A Brownstown PIO was at the JPIC. Alternate PIOs were available at the Brownstown EOC.

(10) Recovery & Reentry

The recovery and reentry portion of the Brownstown scenario was for the most part simulated. The elapsed time between a simulated announcement rescinding house shelter requirement to exercise conclusion was 35-45 minutes. During this time Brownstown township EOC staff rescinded animal sheltering, removed roadblocks, and closed decontamination and reception centers.

(11) Scenario

The scenario was realistic and drove the exercise objectives.

b. Media Center

- (1) Brownstown Township was represented at the JPIC by the township PIO: there were no assistants, back-up personnel, or clerical help. The PIO displayed a need for additional training concerning procedures and responsibilities. A shift change was not demonstrated because of prearrangement to give the primary representative as much experience as possible.

Recommend: Additional personnel should be trained to assist in the JPIC.

c. Reception, Congregate Care & Decontamination

(1) Activation and Staffing

The level of staffing, the organizations represented, and the training of the individuals enabled this facility to perform its function smoothly and efficiently. Trained back-up personnel are available to provide 24-hour staffing capability.

(2) Registration and Monitoring of Evacuees

A limited demonstration of evacuation was held at this facility by the processing of 13 individuals including one who portrayed a mobility impaired individual. All evacuees were monitored for contamination immediately upon arrival and channeled through appropriate means for further processing. Contaminated evacuees were sent to a decontamination area located at the reception center (in the high school locker rooms) before registration.

Registration procedures included recording routine personal information, such as name, address, age, phone number, etc., as well as checking to see if evacuees had special medication or dietary requirements.

(3) Congregate Care of Evacuees

The facility exercised was intended to be a staging area which would process evacuees before sending them to shelters 5 miles beyond the plume EPZ. On a short-term basis, though, this facility can provide food and temporary shelter for arriving evacuees. A nursing station is available and this reception center has access to an ambulance to take any evacuees to a hospital for further assistance, if necessary. This reception center is also fully accessible to handicapped individuals. Communications exist with the State EOC and Township EOC in order to keep evacuees informed of conditions in the affected area.

(4) Decontamination (Relocation Center)

The facility was used to decontaminate both vehicles and arriving evacuees. Exercise objectives were exceeded because the fire department actually demonstrated decontamination procedures on the two school buses that brought evacuees to the facility. Evacuees needing decontamination simulated use of the shower facilities at the reception center.

d. Field Activities

(1) Traffic and Access Control

One traffic and access control point was observed. Both the police escort and the water department employee arrived at the designated intersection at the same time. Barricades were visible on the truck. A Water Department employee indicated his instructions were to arrive at the intersection but simulate setting up an actual road block.

(2) Worker Exposure Control

One dosimeter distribution control point was manned. The evaluator received a 0-200 mr dosimeter before proceeding to the traffic access control intersection. Players seemed knowledgeable in handling, recharging and reading dosimeters. KI was available at the dosimeter distribution control point. No TLDs were available.

Deficiency: The Township does not have TLDs or other permanent records devices as required by NUREG-0654 criteria item K.3.a. (exercise objective #20).

Summary Listing of Deficiencies

UTILITY: Enrico Fermi II Nuclear Power Station

Summary Listing of Deficiencies

June 27, 1984
(Date)

Michigan
(State)

A. Deficiencies Affecting Public Health & Safety

Michigan
(Community)

<u>NUREG</u> <u>Item</u>	<u>Narrative Statement</u> <u>of Deficiency</u>	<u>Corrective Action</u> <u>Proposed</u>	<u>Scheduled</u> <u>Date</u>	<u>Actual</u> <u>Date</u>
	None			

UTILITY: Enrico Fermi II Nuclear Power Station

Summary Listing of Deficiencies

June 27, 1984
(Date)

Michigan
(State)

B. Other Deficiencies

Michigan
(Community)

<u>NUREG</u> <u>Item</u>	<u>Narrative Statement</u> <u>of Deficiency</u>	<u>Corrective Action</u> <u>Proposed</u>	<u>Scheduled</u> <u>Date</u>	<u>Actual</u> <u>Date</u>
	None			

UTILITY: Enrico Fermi II Nuclear Power Station

Summary Listing of Deficiencies

June 27, 1984
(Date)

Michigan
(State)

A. Deficiencies Affecting Public Health & Safety

Monroe County
(Community)

<u>NUREG</u> <u>Item</u>	<u>Narrative Statement</u> <u>of Deficiency</u>	<u>Corrective Action</u> <u>Proposed</u>	<u>Scheduled</u> <u>Date</u>	<u>Actual</u> <u>Date</u>
	None			

UTILITY: Enrico Fermi II Nuclear Power Station

Summary Listing of Deficiencies

June 27, 1984
(Date)

B. Other Deficiencies

Michigan
(State)

Monroe County
(Community)

<u>NUREG Item</u>	<u>Narrative Statement of Deficiency</u>	<u>Corrective Action Proposed</u>	<u>Scheduled Date</u>	<u>Actual Date</u>
J.10.j	Failure to demonstrate capability to control access to sheltered/evacuated areas.			
E.5.	Did not identify the affected areas in terms of political boundaries and landmarks that would be understandable to the general public.			
K.3.a.	Did not demonstrate the issuance of TLDs or other permanent record devices.			
K.5.b.	Failure to demonstrate simulation of decontamination of evacuees and/or emergency workers.			

NUREG Item	Narrative Statement of Deficiency	Corrective Action Proposed	Scheduled Date	Actual Date
0.1.b. 0.4.c. 0.5	Individuals conducting radiological monitoring of evacuees need to be properly trained.			

UTILITY: Enrico Fermi II Nuclear Power Station

Michigan
(State)

Summary Listing of Deficiencies

June 27, 1984
(Date)

Wayne County
(Community)

A. Deficiencies Affecting Public Health & Safety

<u>NUREG Item</u>	<u>Narrative Statement of Deficiency</u>	<u>Corrective Action Proposed</u>	<u>Scheduled Date</u>	<u>Actual Date</u>
	None			

UTILITY: Enrico Fermi II Nuclear Power Station

Michigan
(State)

Summary Listing of Deficiencies

June 27, 1984
(Date)

Wayne County
(Community)

B. Other Deficiencies

<u>NUREG Item</u>	<u>Narrative Statement of Deficiency</u>	<u>Corrective Action Proposed</u>	<u>Scheduled Date</u>	<u>Actual Date</u>
K.3.a	The County does not have TLDs or other permanent record devices for issuance to emergency workers and/or volunteers.			

UTILITY: Enrico Fermi II Nuclear Power Station

Summary Listing of Deficiencies

June 27, 1984
(Date)

Michigan
(State)

A. Deficiencies Affecting Public Health & Safety

Brownstown Township
(Community)

<u>NUREG</u> <u>Item</u>	<u>Narrative Statement</u> <u>of Deficiency</u>	<u>Corrective Action</u> <u>Proposed</u>	<u>Scheduled</u> <u>Date</u>	<u>Actual</u> <u>Date</u>
	None			

UTILITY: Enrico Fermi II Nuclear Power Station

Michigan
(State)

Summary Listing of Deficiencies

June 27, 1984
(Date)

Brownstown Township
(Community)

B. Other Deficiencies

<u>NUREG Item</u>	<u>Narrative Statement of Deficiency</u>	<u>Corrective Action Proposed</u>	<u>Scheduled Date</u>	<u>Actual Date</u>
J.10.a J.10.b	Failure to exhibit/provide maps showing relocation centers in host areas, and shelter areas; decontamination stations and population distribution around the nuclear facility.			
K.3.a	The township does not have TLDs or other permanent record devices for issuance to emergency workers and/or volunteers.			