Docket No. 50-341

The Detroit Edison Company
ATTN: B. Ralph Sylvia
Senior Vice President
Nuclear Operations
6400 North Dixie Highway
Newport, MI 48166

Gentlemen:

We have received the enclosed Federal Emergency Management Agency (FEMA) letter and associated final exercise evaluations of the Fermi 2 joint offsite emergency preparedness exercise conducted on May 18, 1988. This was an exercise to demonstrate the ability of the State of Michigan, and local area governments, to implement their Radiological Emergency Plans. The final FEMA exercise evaluation lists areas which required corrective actions regarding the offsite emergency response plans for the area around the Fermi 2 Nuclear Generating Plant.

Based on the performance of the offsite agencies during the exercise, FEMA identified five deficiencies which could potentially affect the public health and safety in the event of an accident at the Fermi 2 site. These deficiencies were corrected and demonstrated during a remedial exercise conducted on November 3, 1988. As a result, the approval of offsite emergency preparedness under FEMA Rule 44 CFR 350 will remain in effect.

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

Sincerely.

L. Robert Greger, Chief Reactor Programs Branch

Enclosure: As stated

See Attached Distribution

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Federal Emergency Management Agency

Washington, D.C. 20472

AUG 3 1989

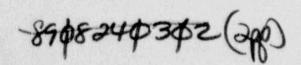
Mr. Frank J. Congel
Director, Division of Radiation Protection
and Emergency Preparedness
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Congel:

Enclosed is a copy of the final report for the May 18, 1988, exercise of the offsite radiological emergency response plans for the Fermi II Nuclear Power Plant. The State of Michigan partially participated in the exercise. The Counties of Monroe and Wayne fully participated in the exercise, as well as the Detroit Edison Company. In addition, the Province of Ontario, Canada, participated in the exercise. The report, dated November 30, 1988, with a final revision on July 27, 1989, was prepared by the Federal Emergency Management Agency (FEMA) Region V staff.

There were five deficiencies observed during the May 18, 1938, exercise. A remedial exercise, which corrected the five deficiencies, was conducted November 3, 1988. The results of the remedial exercise are included in the enclosed report. There were sixteen Areas Requiring Corrective Action identified during the May 18, 1988, exercise. The FEMA Region V staff has reviewed the schedule of corrective actions provided by the State of Michigan in response to the exercise weaknesses identified, incorporated them into the report and has forwarded a copy of this report to the State. Additional verification of corrective actions will be provided by FEMA Region V during the next exercise for the Fermi II Nuclear Power Plant, now scheduled for February 14, 1990.

Based on our review of the final exercise report and schedule of corrective actions, FEMA considers that offsite radiological emergency preparedness is adequate to provide reasonable assurance that appropriate offsite measures can be taken to protect the health and safety of the public living in the vicinity of the Fermi II Nuclear Power Plant, in the event of a radiological emergency occurring at that site. Therefore, the approval of the offsite plans for the Fermi II Nuclear Power Plant granted under 44 CFR 350 on March 9, 1987, continues to be in effect.



If you have any questions, please feel free to contact me on 646-2871.

Sincerely,

Dennis H. Kwiatkowski Assistant Associate Director Office of Natural and Technological Hazards

Enclosure

JOINT EXERCISE REPORT ENRICO FERMI II NUCLEAR POWER PLANT DETROIT EDISON COMPANY

Located in the State of Michigan, Monroe Location of the Plant:

County, Frenchtown Township, near the City of Monroe.

May 18, 1988 Date of Exercise:

August 17, 1988 Date of Draft Report:

November 30, 1988 Date of Final Report:

July 27, 1989 Revised Final Report:

The State of Michigan (partial), Monroe participants Included:

County (full) Wayne County (full), Detroit Edison Company and The Province

of Ontario, Canada.

PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, REGION V NATURAL AND TECHNOLOGICAL HAZARDS DIVISION TECHNOLOGICAL HAZARDS BRANCH 175 WEST JACKSON BOULEVARD CHICAGO, ILLINOIS 68684

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EXECUTIVE SUMMARY

State Emergency Operations Center

The State Emergency Operations Center (EOC), located in Lansing, Michigan, was staffed with State agency operations personnel who effectively responded to the simulated radiological emergency. The EOC staff effectively and efficiently functioned, making good decisions and coordinated emergency activities in a timely manner.

The facilities occupied by the Michigan Department of State Police/Emergency Management Division are appropriately furnished with displays and supporting materials to effectively carry out emergency response activities.

As the emergency classifications elevated it became necessary for the Governor to declare a "State of Disaster" to initiate certain emergency responses. This declaration, each Emergency Classification Level (ECL) upgrade and Protective Actions (PA) were transmitted to the Counties and the Joint Public Information Center (JPIC) in a timely manner.

Emergency communications are initially received at the Michigan State Police Command Headquarters located on Harrison Road, East Lansing. Although no problems were noted, it is recommended that training be provided for new communications operators due to the recent promotions and reassignments.

Once the State EOC in downtown Lansing is staffed, the communications function is transferred to the communications room within the EOC facility. During the initial phase and the following operational phases of the emergency response, communications were effectively executed. It is important that all messages read and written begin with the identification indicating that the message is for "Test" or "Drill" purposes. Some of the messages generated in the State EOC did not have that heading, but they were corrected before going out over the network. In that this exercise was partial participation for the State, it is recognized that much of the communications was limited in scope. That which was necessary to carry forth the exercise demonstration was done well.

Present in the State EOC were representatives of the Michigan Department of Health who collaborated with the utility's Emergency Operations Facility (EOF) and the Technical Support Center (TSC) to compare data pertaining to offsite radiation releases. Using a computer and a software program specific to the Fermi plant, the Department of Health personnel in the EOC were able to project dosage to the public via plume exposure, based on all available simulated data, and determine the appropriate protective measures such as shelter, evacuate, etc.,

including time projections. The Senior Radiation Health person continuously conveyed information to the State EOC Operations Chief in the EOC.

The State demonstrated the ability to coordinate the alerting of the public, within the 15 minute time frame in the 10 mile Emergency Planning Zone (EPZ). The formulation and distribution of appropriate instruction to the public was initiated by the State EOC. Appropriate boundary descriptions were formulated in the State EOC and data faxed in a timely manner to the Counties.

The Public Health representatives in the State EOC coordinated the information for determining the need to issue and administer potassium iodide (KI) to emergency workers and institutionally confined persons. Once the determination was made the appropriate messages were prepared, presented to the EOC Operations Chief and transmitted to the emergency response organizations.

Midway in the exercise the State Emergency Management Group determined the need for Federal assistance and prepared a request for same and transmitted it to the Federal Emergency Management Agency, Region V.

After the utility had the reactor stabilized, the State EOC staff discussed the needs and requirements to reestablish the population and commerce back to a normal condition and institute a program of recovery actions. The discussion included, but was not limited to, public health and safety issues, resumption of business and industry, reinstatement of public services, medical needs, etc. Following the discussion, the appropriate messages were prepared and sent out to the appropriate emergency response organizations.

Monroe County

Monroe County staff mobilization began when the County was notified of the "Alert" classification. The call up originated from central dispatch in downtown Monroe. The EOC executive group was fully staffed and the operations rooms and Radiological/Damage Assessment Group were staffed and operational.

A 24-hour operational capability was demonstrated by a shift change. The shift change was not complete. The shift change by the executive group was essentially all at once and caused confusion in the processing and release of protective action recommendations. The shift change should be conducted in a manner which will not disrupt the implementation of protective actions.

Emergency operations were conducted from several rooms. The

various department heads were located in a centrally located room. The executive group and the Radiological/Damage Assessment Group were in satellite rooms. The County declared a "State of Emergency". Emergency action levels were posted in the EOC in view of all participants. Members of the County Board were in charge of emergency operations. Information was exchanged through staff briefings, announcements, and messages. The lack of an efficient message handling procedure resulted in the delay of written material necessary for the preparation of Emergency Broadcast System (EBS) messages. This impacts on the ability to protect the health and safety of the population. A different and more efficient message handling procedure is required.

The Monroe County EOC is on South Raisinville Road outside the 10 mile EPZ. The County Emergency Management facility was designed for the conduct of emergency operations. It is equipped with tables, chairs, maps and status boards and other necessary furnishings. The specialized status boards for the posting of weather conditions, radiological data, and sheltering were kept current. The Board intended to hold information relating to plant conditions and the general status board were not fully utilized, e.g., mobility impaired information, reentry information, school evacuations, bus availability etc. and some information was never updated.

The County EOC had telephones available for all essential personnel at the EOC. In addition, radio communications capability exists with the Marine Channel, City and County police, fire department, Emergency Medical Service, public works, MEPS, and Radio Amateur Citizens Emergency Service (RACES). A direct line to the EBS station WJR (AM), was also available.

The supplemental route alerting demonstration was simulated at a predetermined time, and did not necessarily correspond to the scenario of events. The Monroe City Fire Department deployed two vehicles to perform the route alerting exercise. Possession of required maps, prescripted messages, dosimeters and proficiency in which personnel demonstrated the driving of the alerting route indicated prior training, planning and preparation. The route was driven at a reasonably slow speed in areas where the population resides so the message could have been understood by those in the area, and the procedure was completed within 45 minutes.

The notice of General Emergency and recommended protective actions were received from the State. The communications center operator was directed to activate the siren system. The communications center operator was provided with the text of an EBS message. It was transmitted to WJR radio station (simulated). The message was incomplete. The second EBS message was similarly incomplete. It did not contain the description of the area required to take protective actions.

The County EOC staff activated relocation centers and shelters, controlled access points and provided orderly evacuation procedures. As changes in protective action recommendations occurred access control points were changed. Training for law enforcement personnel in access control operations is recommended; uncertainty was apparent when establishing controlled access points.

Monroe County EOC staff had the capability to deal with impediments and obstructions to evacuation routes through public works resources and fire and police personnel and equipment. This activity was procedurally demonstrated in the EOC.

Traffic and access control was demonstrated by Monroe County at the intersection of I-75 and Nadeau Road by a County police deputy. He had all the proper dosimetry, dosimeter report forms and had received some training. He displayed sufficient knowledge in worker exposure control to protect his health. He also displayed his police training, his background in, and understanding of traffic control techniques and general overall knowledge of emergency response. It is recommended that traffic and access control personnel routinely be provided with emergency information in the field. Communications with the County central dispatcher was also demonstrated. A previous Area Requiring Corrective Action has been corrected in demonstrating this objective.

Monroe County EOC staff demonstrated the ability to identify special needs populations and effect an orderly evacuation of the population through the combined efforts of EMS/Transportation (operations and field), Health Services (operations), Monroe County's list of home-bound or transportation dependent personnel, and fire personnel (operations and field).

Monroe County EOC staff demonstrated the ability to effectively evacuate schools. Schools in the Plume EPZ were identified, protective actions for students were issued, including relocation/evacuation, or in-place sheltering. Transportation for students was addressed at the Site Area Emergency classification.

During the exercise interviews were conducted with five representatives of the Jefferson School District. The individuals interviewed were the Jefferson School District Superintendent, the Hurd Road Elementary School Principal, a teacher from Hurd Road Elementary School, the Jefferson School District Transportation Supervisor and a bus driver. The interviews were independent of the concurrent exercise and did not involve any exercise play.

All parties interviewed were knowledgeable of the process by

which emergency instructions and information would be disseminated from the County EOC throughout the Jefferson School District. Telephone and radio are the established means of communication within the School District. Bus drivers would be contacted by telephone fan out notification if they were at their residence and by bus radio if they were on duty. The Transportation Supervisor indicated that the telephone fan out notification procedure has been used without incident during weather related emergencies.

The School District Superintendent explained the process by which emergency information such as school closings or cancellation of evening activities would be disseminated to the public. This is the same process currently used for other types of emergencies. He was aware of the need to coordinate any such announcements with the School Services Officer in the County EOC.

The Jefferson School District consists of four schools: a high school, an intermediate school and two elementary schools. The School District Superintendent also coordinates the emergency activities for St. Charles School, a private school. Copies of plans and procedures for the schools and buses were available and the school orficials and the Transportation Supervisor had recently reviewed their procedures during meetings. It is recommended that this type of meeting be conducted for each school in Monroe County within the Fermi-2 EPZ.

Each official interviewed was familiar with the number of buses needed to conduct a total evacuation of the five schools located within the district. The procedures call for the dispatch of buses to the closest school first (St. Charles) and proceeding radially outward. The Transportation Supervisor and the bus driver knew the location of the reception schools and the appropriate evacuation routes and alternate routes. However, it was noted that there is a discrepancy in the designated reception school for St. Charles School. All of the school officials interviewed stated that the Jefferson School District would maintain responsibility for the students after arrival at the reception school.

At the public decontamination center the objective to demonstrate the ability to continuously monitor and control emergency worker exposure was met and TLDs were issued along with two dosimeters. Instructions and record keeping cards were also issued. Emergency worker maximum exposure levels were known.

Monroe County EOC staff demonstrated the ability to continuously monitor and control emergency worker exposure. From the EOC the Radiological Officer monitored field resources/conditions, updated the EOC staff as necessary and provided information regarding the location of measuring instruments for field personnel as well as notifying the EOC staff which departments in

the field had received their monitoring equipment. Minimum exposure levels were in error throughout the first shift at the EOC, and this situation continued into the second shift until corrected by the Radiological Officer at the EOC. Prior to the correction the lowest exposure level was set at a maximum of 25 REM with notification to supervisor at "15 millirem". Notification to the supervisor was to have been made at a level of 15 REM.

The Jefferson School District Transportation Supervisor and one bus driver were interviewed as part of the school demonstration. Both had received training approximately one year prior to the exercise which included dosimetry and exposure control information. During the interviews, it was noted that these individuals had some familiarity with these subjects but would have to rely on the instructions they would receive along with the dosimetry equipment at the County dosimetry distribution point. For example, they knew they would receive two dosimeters, a permanent record badge and recording card but were unfamiliar with the specific ranges of the dosimeters and the exact frequency of readings. However, the Transportation Supervisor and the bus driver knew the proper communication chain for the distribution of exposure control information and instructions from the County EOC and the process for reporting to or obtaining guidance from the School Superintendent and County EOC as necessary. It is recommended that dosimetry and exposure control activities be emphasized during the next annual training conducted for bus drivers. Copies of the written dosimetry instructions should be provided to the bus drivers during the training session which they can refer to throughout the year and during in-service training.

Each emergency worker assigned to the decontamination station in the Animal Control Shelter parking lot was equipped with a TLD and two self-reading dosimeters. The two dosimeters were a CDV-742 (0-200R) and a CDV-138 (0-20R). A dosimeter charger was available and the dosimeters were zeroed when they were issued. Monroe Township Fire Department personnel brought some of their own dosimetry to the decontamination site which was supplemented by the dosimetry maintained by the Monroe County Health Department. The emergency workers had recently received training and were quite familiar with their dosimetry and its usage. The dosimeters were read every 30 minutes and the readings were maintained on a log. Although the decontamination station is not located in the 10-mile EPZ and significant exposures are not expected, the official in charge was knowledgeable of exposure limits and indicated that the maximum exposure permitted at this site was 20 rem.

The dosimetry demonstration at the Monroe County Health Department facility was sufficient to show that the County has the resources and trained personnel to continuously monitor and

control emergency worker exposure. The Monroe County Health Department is the central storage location for County dosimetry, but does not distribute the dosimetry. It is the responsibility of the various agencies to obtain their individual needs in dosimetry. Some dosimetry is pre-positioned at several fire stations for pick up.

while not exercise objectives, the use of potassium iodide for emergency workers and the home-bound that could not be evacuated was directed by the State and implemented by the County. The potassium iodide was to be distributed from the Frenchtown Township Number 1 Fire Station. A public health nurse was sent to the fire station to handle the distribution.

No media briefings were conducted at the EOC. A County spokesperson was dispatched by the Operations Officer from the Monroe County EOC to the JPIC. This activity corrects a previously demonstrated weakness. The PIO in the County EOC was in continuous contact with the County spokesperson in the JPIC to coordinate the release of information. This corrects a previously demonstrated weakness.

The objective to demonstrate the adequacy of procedures, facilities, equipment and personnal for the registration and radiological monitoring of evacuees was met. Staffing and activation was not scenario dependent. Evacuees were registered while being surveyed for radiation. Red Cross personnel used their standard form to register the evacuees prior to entering the congregate care facility. Monitoring and congregate care ware collocated. Adequate facilities and amenities were available for decontamination of evacuees. The Radiological Officer reminded all EOC staff to direct their field forces to report to the decontamination center when they were released.

The reception center demonstration was simulated at a predetermined time and did not necessarily correspond to the exercise scenario of events. The Monroe County reception site was located in a parking lot in the City of Dundee. Staff included representatives from Monroe County Human Services, Monroe County Health Department, and the Michigan State Police. The lack of screening and registration for people, the failure to segregate contaminated vehicles and persons from those which were uncontaminated, suggest a need for more coordination and planning for the reception center.

The objective to demonstrate the adequacy of facilities, equipment, and personnel for congregate care of evacuees was met. Red Cross personnel, including Red Cross nurses, adequately staffed the congregate care center. RACES provided communications with the Monroe County EOC. This particular location did not have facilities suitable for handling handicapped individuals.

An emergency worker decontamination station was established at the Monroe County Animal Control Shelter. This location was utilized because the primary location was undergoing remodeling and was not available. If the Animal Control Shelter is to be utilized as an alternate facility, it must be identified as such in the plan.

The facility staff demonstrated the equipment and procedures for monitoring vehicles and personnel. While monitoring procedures were generally adequate some problems with monitoring techniques were noted. The annual training conducted for personnel staffing the decontamination station should emphasis proper monitoring techniques. The decontamination station procedures should include a provision for the review of proper monitoring techniques at the start of each new shift. A step ladder would facilitate vehicle monitoring. Monroe County should consider an amendment to the decontamination station procedures to include a survey of emergency workers' hands and feet as he disembarks from the vehicle.

Whenever monitoring indicated a need for decontamination measures a record sheet would be filled out. This is consistent with the plan. The personnel at the facility displayed a working knowledge of decontamination procedures including maintanence of a contamination log, the collection and disposal of contaminated clothing, impoundment of contaminated vehicles and equipment, and the referral of individuals for necessary medical treatment. Monroe ty should consider a change in their plan to include the light of vehicles, equipment and personnel which are process through the emergency worker decontamination station and for the be uncontaminated.

Decontamination procedures were explained for both vehicles and personnel. These procedures were adequate and consistent with the plan. The decontamination procedures do not address the preservation of emergency worker dosimetry during the decontamination process.

Detroit Edison Company conducted a medical drill on May 19, 1988. FEMA was not informed of the time and date of the medical drill in advance and therefore, did not evaluate it. However, the NRC did evaluate the drill and incorporated the evaluation into its exercise report. Credit will be given to Monroe County for this demonstration based on NRC's favorable evaluation of the medical drill. However, corrective action must be taken by the County to ensure that pre-exercise planning is consistent with GM EX-3.

Monroe County EOC staff demonstrated limited ability to determine and implement appropriate measures for controlled recovery and reentry. The Radiological Officer received continued updates of EPZ radiation levels and notified County EOC staff of these

levels. The Radiological Officer also notified County EOC operations staff to have their field personnel return the dosimeters etc., which they had received to have them checked for radiation exposurs. The Agriculture Operations Representative did receive information from the State EOC which allowed for the reentry of farm workers in the EPZ as areas were released from evacuation status. The Agricultur Operations Representative did not notify other EOC personnel of this change in status. In addition, some confusion occurred in the reentry procedures because the State's oral message was not fully recorded or understood by the person receiving the message. This situation was corrected by a State representative in the County EOC.

Wayne County

The Wayne County staff at the EOC, the school evacuation demonstration, the decontamination/reception/congregate center, and one PIO (second shift) at the JPIC were pre-positioned. correct a past Area Requiring Corrective Action the Wayne County first shift PIO at the JPIC was actually activated and mobilized Suring the Unusual Event classification of the exercise. reported to the Wayne County EOC to pick up her dosimetry and according to the Wayne County plan she was to report to the Monroe County EOC until the JPIC was activated. The first shift PIO instead went directly to the JPIC and arrived shortly after the JPIC was activated. The second shift PIO, pre-positioned at the JPIC, participated in the initial JPIC media briefings rather than waiting for the arrival of the first shift Wayne County PIO to arrive at the JPIC. Consequently this Area Requiring Corrective Action concerning the activation and mobilization of the Wayne County PIO at the JPIC will be continued in this The Wayne County EOC was staffed according to exercise report. the revised Wayne County plan, e.g. representatives from Brownstown Township, Flat Rock, and Rockwood were located in the Wayne County EOC.

Wayne County demonstrated its ability to maintain staffing on a 24 hour basis over an extended period of time through double staffing or a shift change. Incoming staff were briefed by their outgoing counterparts. The second shift demonstrated appropriate knowledge and capabilities of their roles and functions. Individual staff members were trained and morale was excellent. (It should also be noted that Wayne County actually demonstrated their capability to operate on a twenty-four hour a day basis over an extended period of time when the Northwest jet crashed killing two people on the ground and everyone (154 people) on board the plane except 1 child. Wayne County conducted operations for approximately one week.)

The Chief Executive Officer of Wayne County, according to the plan, is in charge of Wayne County operations. He did visit the EOC for a period of time, but the Director of the Wayne County

Emergency Management Agency working with the Assistant to the County Executive Officer was in charge of operations on behalf of the County Executive Cfficer. The County declared a "State of Emergency". Status briefings were conducted on a frequent basis to keep the EOC staff fully informed. The emergency classification levels were brought to the attention of the staff immediately and posted on the status board. The EOC staff was also aware of the activities taken by Wayne County since they were part of the decision making process. Protective action decisions and implementation of these decisions were coordinated effectively with the appropriate organization.

The Wayne County EOC is located on the grounds of the Detroit Metropolitan Airport. Noise from aircraft taking off and landing and people in the EOC became disruptive at times. The EOC Operations room is a small room that is crowded when fully staffed. It is recommended that Wayne County continue to study ways to reduce the noise level and to determine if the operations room could be enlarged. All required maps and displays were available and used by the staff. The EPZ wall display depicting the shelter and evacuation areas were somewhat difficult to read.

Wayne County demonstrated the ability to communicate with all appropriate locations, organizations, and field personnel. Several communications systems are available in the EOC, e.g. the Law Enforcement Information Network (LEIN), commercial phone, and fax capability with Monroe County, the State EOC in Lansing, the EOF, the JPIC and WJR radio/TV which is the EBS station. Establishment of a backup means of communication between the County and the JPIC corrects an Area Requiring Corrective Action from the previous sercise. A new and innovative system called the Amateur portage e radio has also been established between Wayne County, the JPIC, and various field locations. This radio/teletype system is another backup communication system between the County and the JPIC.

The initial sheltering protective action ordered by the State only affected Monroe County. Wayne County did not activate the sirens and EBS in Wayne County when Monroe County activated the sirens and EBS in Monroe County. It is recommended that Wayne County activate sirens and EBS when Monroe County does, even if Wayne County is not affected, so Wayne County residents know what is happening. Wayne County demonstrated the ability to alert the public within its portion of the 10 mile EPZ and to disseminate an initial instructional message within 15 minutes once the State revised its sheltering protective action which affected Wayne County. However, insufficient information was released in the EBS messages pertaining to ad hoc respiratory protection.

Wayne County demonstrated advance coordination of information to be released. This corrects an Area Requiring Corrective Action from the previous exercise. Media releases and EBS messages identified the affected area in terms of road boundaries understandable to the public. It was discovered through this exercise that the emergency public information pamphlet reflects the Woodhaven and Trenton School Districts as schools to be evacuated. This was also reflected in JPIC news releated and the school districts are outside the 10-mile EPZ. Wayne county will have to resolve why these school districts are included in the emergency public information pamphlet as school districts to be evacuated.

During the "General Emergency" portion of the exercise Wayne County provided Monroe County with information concerning access control, the status of evacuation routes, reception and congregate care centers, etc. to assist Monroe County in their simulated evacuation.

Wayne County demonstrated capabilities for dealing with impediments to evacuation, e.g. construction on Will-Carlton Road and an over-turned car on Wick-Telegraph that had to be removed. The legal component of the mutual aid task force has a resource list of private tow trucks and the Wayne County ghway department has resource lists of staff and resources owned by the department.

The Wayne County Departments of Social Service and Health have recently updated lists of mobility impaired individuals. Twenty-four independent living individuals are identified and 14 adult foster care homes are identified. The Wayne County Department of Health used the mental health twenty-four hour telephone number to contact these individuals and assure they were in in-place shelter. In the event of an evacuation transportation would be provided by private van/bus companies, school vans/buses and private ambulance companies. The Wayne County plan provides for ambulatory people without cars to walk to a school and receive transportation. This was demonstrated in the school evacuation drill by having 10 senior citizens from Gibraltar participate. Anyone unable to walk to a school can arrange to be picked up at their home by calling a publicized telephone number.

Wayne County actually manned three access/traffic control points with personnel and equipment, e.g. I-75 & Southfield, I-75 & Telegraph Road, and Telegraph & Wick Road. Information provided to the Federal evaluation team prior to the exercise indicated that Wayne County would not actually man any access/traffic control points during this exercise. It was indicated that Wayne County would only simulate access/traffic control procedurally in the EOC using map displays. Therefore, the Federal evaluation team did not make any plans to allow for the evaluation of these access/traffic control points that were actually demonstrated. It is recommended that future exercise planning and guidance be complete and accurate to enable the Federal evaluation team to

make plans prior to the exercise to evaluate activities that will be demonstrated by Wayne County. The procedural demonstration of access/traffic control in the EOC was complete.

The objective to demonstrate the organizational ability necessary to effect an orderly evacuation of schools was met when nine of the EPZ schools participated in the school evacuation demonstration. The Wayne County School Transportation Coordinator participated in the EOC. Selected students, principals, a school superintendent, two school board members and ten senior citizens were evacuated from nine schools in six buses to the reception center at Woodhaven High School. It is recommended that the EPZ school principals, trashers and bus drivers should be included in the annual emergency response training.

The objective to demonstrate the ability to continuously monitor and control emergency worker control was not met. Sach emergency worker at the reception center was issued a TLD, but only one pencil dosimeter was issued to each worker and the dowimeters' ranges varied. Record keeping cards were not issued. Periodic reading of the dosimeters was not requested by the radiological protection officer in the EOC nor were any observed being taken in the field. The school bus drivers were not equipped with dosimetry and indicated that they had not received training. Since prior arrangements for evaluation of an access control point was not made the corrective action for the previous ARCA regarding dosimetry at traffic and access control points was not observed. This ARCA will be carried over to the next exercise. Additional training on exposure controlfor the County Radiological Protection personnel and emergency workers, including bus drivers, is needed. Kits containing two dosimeters of varying levels, TLDs, exposure record cards, KI information and written instructions should be developed and positioned.

The objective to demonstrate the adequacy of procedures, facilities, equipment and personnel for the registration, radiological monitoring and decontamination of evacuees was partially met. Mobilization of staff and facility activation were not demonstrated. American Red Cross personnel, nurses, RACES operators, County Welfare and County emergency personnel staffed the reception center. Adequate space and facilities were available for the radiological monitoring, decontamination and registration of evacuees.

The objective to provide adequate facilities, equipment and personnel for the congregate care of evacuees was simulated at the Woodhaven High School. Normally evacuees would be transferred to other facilities which were not opened for this exercise. The Woodhaven High School did have sufficient amenities and had handicapped facilities. The American Red Cross conducted the registration of evacuees on ARC forms prior to

housing them in the simulated congregate care center.

The objective to demonstrate the adequacy of facilities, equipment, supplies, procedures and personnel for decontamination of emergency workers, equipment and vehicles was partially met. The County plan does designate a separate emergency worker decontamination station. Emergency workers with suspected contamination were processed at the Woodhaven High School. The monitoring process for both personnel and vehicles was acceptable. Proper monitoring instruments (according to the plan) and action levels for initiating decontamination procedures were used by the staff on the individuals processed at the facility.

Woodhaven High School is not listed in the Wayne County Plan as a reception center for evacuees, nor a congregate care center, nor an emergency worker decontamination station. In future exercises the facilities exercised should be those identified in the plan.

Additionally, the consolidation of these three activities into a single demonstration made it very difficult to differentiate among the various capabilities being demonstrated. These three activities should be demonstrated separately at the appropriate facility.

The ability to determine and implement appropriate measures for controlled recovery and reentry was procedurally demonstrated in the Wayne County EOC during the final start briefing. Each department discussed the necessary actions needed to implement the cancellation of protective actions, close congregate care facilities, initiate reentry, establish traffic control and restore operations to a non-emergency status.

Joint Public Information Center

The Joint Public Information Center (JPIC) staff demonstrated the ability to monitor, understand, and use Emergency Classification Levels (ECLs) in providing information to the media. Mobilization and activation of some JPIC staff was demonstrated. The JPIC operations were coordinated by the Michigan State Police/Emergency Management Division (MSP/EMD) who ensured the staff was regularly briefed and involved in the decision making process. Shift changes were demonstrated by each County's PIOs and the rumor control staff. All four County PIOs took part in at least two media briefings.

Communications with the State EGC, County EOCs and Detroit Edison Company Emergency Operations Facility (EOF) were satisfactory and commercial telephones were available for media representatives. Back up communications were available by RACES and MSP radio. Facilities, equipment, displays and other materials necessary to support the operation of the JPIC were available. However, use

of EPZ plume, evacuation route and relocation center maps would have enhanced the JPIC briefings and could have reduced some of the confusion during briefings. While the formulation and dissemination of information to the media was effectively coordinated, the lag time between the broadcast of an Emergency Broadcast System (EBS) message to the public and the announcement of such action to the media, was excessive. At times the incident was in an advanced emergency classification level while the media was being briefed on a lesser ECL. In all there were five media briefings conducted during the course of the exercise. Three news releases were given and media information kits were distributed.

A rumor control system was activated with a staff of seven from utility and County sources, using five talephone lines. The staff was provided with up to date information to use in responding to callers. The rumor control staff effectively handled simulated calls.

The JPIC briefing team provided the media with information relating to reentry including the need for the ninety-six hour Jelay before reentry into the 2-mile radius Emergency Planning Zone (EPZ) and for additional radiological monitoring.

EXERCISE REPORT

Introduction

Exercise Background

This was the forth joint exercise for the State of Michigan, Monroe and Wayne Counties, based on a simulated accident at the Enrico Fermi Nuclear Power Plant. Previous exercises were conducted on February 1-2, 1982; June 26-27, 1984 and October 22, 1986.

2. Participating and Non-Participating State and Local Governments

The 10-mile plume exposure EPZ of the Enrico Fermi Nuclear Power Plant impacts primarily on Monroe County and to a lesser extent on Wayne County. The State of Michigan, Monroe and Wayne Counties, the utility, Detroit Edison Company, and the Province of Ontario, Canada; participated in the exercise. A Canadian representative from Ontario was present in the Michigan EOC, Lansing.

In the past, Brownstown Township, a political entity in Wayne County, participated in offsite exercises. Recently the Township has implemented a different emergency operations procedure and therefore are accounted for in the Wayne County plan. The plan

and other official documents authorizing the transfer of radiological emergency functions was submitted to FEMA Region V for evaluation and approval approximetely thirty days prior to the exercise. The documents were sent to members of the Regional Advisory Committee for comment. There has been no significant comments in the review which would reflect difficulties in the transfer of responsibilities.

3. List of Evaluators

For this exercise there was a total of thirteen Federal Evaluators observing offsite exercise activities. Onsite activities were evaluated by a team from the Nuclear Regulatory Commission (NRC).

Six members of the team, including the offsite Exercise Director, were Federal Emergency Management Agency (FEMA), Region V staff; four team members were from the Argonne National Laboratory (ANL); two team members were from FEMA Headquarters and one team member was from the Center for Planning and Research (CPR).

The evaluator assignments were as follows:

Offsite Exercise Director

State of Michigan

Monroe County

Wayne County

Joint Public Information Cntr.

Wallace J. Weaver, FEMA

Gordon L. Wenger, FEMA

Ray S. Kellogg, Jr, FEMA Janet Quissell, FEMA Mark Madove, ANL Ronnie Screen, FEMA HQ Thomas Hirt, FEMA HQ

Danny B. Bement, FEMA Paul Fudacz, FEMA Bill Knoerzer, ANL Jerry Staroba, ANL

William Small, CPR Jonathan Elias, ANL

4. Evaluation Criteria

The criteria used to evaluate this exercise were developed using the "Criteria for Proparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants" (NUREG 0654/FEMA REP-1, Revision 1). The evaluation modules used for evaluating the exercise are the new evaluation forms. The objectives were the 35 objectives from Tab "M".

5. Exercise Objectives

Objectives for the exercise were selected from among the FEMA thirty-five standard objectives listed in Tab "M" of the "Modular Format for Uniformity of Radiological Emergency Preparedness Exercise Objectives and Evaluations", dated June 1983. The objective numbers listed below correlate to Tab "M".

The State and Counties selected the objectives indicated by Yes to be demonstrated during the exercise:

		Monroe	Wayne	State
1.	Demonstrate ability to mobilize staff and activate facilities promptly.	Yes	Yes	No
2.	Demonstrate ability to fully staff facilities and maintain staffing around the clock.	Yes	Yes	No
3.	Demonstrate ability to make decisions and to coordinate emergency activities.	Yes	Yes	Yes
4.	Demonstrate adequacy of facil- ities and displays to support emergency operations.	Yes	Yes	Yes
5.	Demonstrate ability to commun- icate with all appropriate locations, organizations, and field personnel.	Yes	Yes	Yes
6.	Demonstrate ability to mobilize and deploy field monitoring teams in a timely fashion.	No	No	No
7.	Demonstrate appropriate equip- ment and procedures for deter- mining ambient radiation levels.	No	No	No
8.	Demonstrate appropriate equip- ment and procedures for measure- ment of airborne radioiodine concentrations as low as 10-7 uCi/CC in the presence of noble gases.	No	No	No
9.	Demonstrate appropriate equip- ment and procedures for collec-	No	No	No

	tion, transport and analysis of samples of soil, vegetation, snow, water, and milk.			
10.	Demonstrate ability to project dosage to the public via plume exposure based on PAG's, available shelter, evacuation time estimates, and all other appropriate factors.	No	No	Yes
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.	No	No	No
12.	Demonstrate ability to implement protective actions for ingestion pathway hazards.	No	No	No
13.	Demonstrate ability to alert the public within the 10 mile EPZ, and disseminate an initial instructional message, within 15 minutes.	Yes	Yes	Yes
14.	Demonstrate ability to formulate and distribute appropriate instructions to the public, in a timely fashion.	Yes	Yes	Yes
15.	Demonstrate the organizational ability and resources necessary to manage an orderly evacuation of all or part of the plume EPZ.	Yes	Yes	No
16.	Demonstrate the organizational ability and resources necessary to deal with impediments to evacuation, such as inclement weather or traffic obstructions.	Yes	Yes	No
17.	Demonstrate the organizational ability and resources necessary to control access to an evacuated area.	Yes	Yes	No
18.	Demonstrate the organizational ability and resources necessary	Yes	Yes	No

	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.	Yes	Yes	No
20.	Demonstrate ability to contin- uously monitor and control emergency worker exposure.	Yes	Yes	No
21.	Demonstrate the ability to make the decision, based on pre- determined criteria, whether to issue KI to emergency workers and/or the general population.	No	No	Yes
22.	Demonstrate the ability to supply and administer KI, once the decision has been made to do so.	No	No	No
23.	Demonstrate ability to effect an orderly evacuation of onsite personnel.	No	No	No
24.	Demonstrate ability to brief the media in a clear, accurate and timely manner.	Yes	Yes	Yes
25.	Demonstrate ability to provide advance coordination of information released.	Yes	Yes	Yes
26.	Demonstrate ability to estab- lish and operate rumor control in a coordinated fashion.	Yes	Yes	No
27.	Demonstrate adequacy of procedures for registration and radio-logical monitoring of evacuees.	Yes	Yes	No
28	Demonstrate adequacy of facil- ities for mass care of evacuees.	Yes	Yes	No
29	Demonstrate adequate equipment and procedures for decontamination of emergency workers, equipment and vehicles.	Yes	Yes	No

30.	Demonstrate adequacy of ambulance facilities and procedures for handling contaminated individuals.	No	No	No
31.	Demonstrate adequacy of hospital facilities and procedures for handling contaminated individuals.	1,0	No	No
32.	Demonstrate ability to identify need for, request, and obtain Federal assistance.	No	No	Yes
33.	Demonstrate ability to relocate to and operate the alternate EOF/EOC.	No	No	No
34.	Demonstrate ability to estimate total population exposure.	No	No	No
35.	Demonstrate ability to determine and implement appropriate measures for controlled recovery and reentry.	Yes See	Yes Footnote	Yes

Objective 35 - Recovery operations were limited to a deescalation of plant emergency status, and mercage play between the State ECC, Monroe County ECC, Wayne County ECC and the JPIC to close out emergency operations and provide appropriate instructions to the public.

6. Summary Of Scenario

See Attachment 1.

7. State and Local Resources Planned To Be Uswi In The Exercise

The State of Michigan planned to partially staff the State EOC at Lansing, and the Joint Public Information Center (JPIC), Monroe County Community College, for the State's partial participation in the exercise.

Monroe County planned to demonstrate it's EOC and to staff the JPIC, a decontamination/reception/congregate care center, and to man an access control location. The County also chose to demonstrate medical support in the County; it's capability to activate the Alert and Notification System (ANS) (simulated) and activation of the Emergency Broadcast System (EBS) (simulated).

Wayne County planned to demonstrate their EOC, staff the JPIC and a decontamination/reception/congregate care center, and man access control locations in the County.

8. Exercise Findings In Past Exercises

This was the forth exercise for the Enrico Fermi Nuclear Power Plant. During the previous exercises outstanding weaknesses were satisfactorily cleared. The last, most recent exercise demonstration cited the following weaknesses.

State of Michigan

No deficiencies or Areas Requiring Corrective Actions observed.

Monroe County

Area Requiring Corrective Action: (NUREG 0654, Planning Standard E, Element 2). The County did not demonstrate a capability to mobilize staff for the JPIC in a timely fashion.

Area Requiring Corrective Action: (NUREG 0654, Planning Standard G, Element 4c). Monroe County personnel acting in the rumor control positions require extensive training in the rumor control function.

Area Requiring Corrective Action: (NUREG 0654, Planning Standard G, Element 4b). The County did not fully demonstrate ability to provide advance coordination of information released.

Area Requiring Corrective Action: (NUREG-0654, Planning Standard K, Elements 3a and 3b). The continuous monitoring and control of emergency worker exposure was only partially demonstrated, because dosimetry was not distributed to field personnel of the Monroe County Sheriff's Department that were manning access and traffic control at the entrance/exit ramps of I-75 and Nadeau Road.

Each of these Areas Requiring Corrective Action were corrected and demonstrated successfully during this exercise.

Wayne County

Area Requiring Corrective Action: (NUREG 0654, Planning Standard

F, Element 1.b). Wayne County did not demonstrate a back-up means of communications between the County and the JPIC.

Area Requiring-Corrective Action: (NUREG 0654, Planning Standard G, Element 4b). The County did not fully demonstrate the ability to provide advance coordination of information to be released.

The above two Areas Requiring Corrective Action were corrected and successfully demonstrated during this exercise.

Area Requiring Corrective Action: (NUREG 0654, Planning Standard E, Element 2). Wayne County did not demonstrate a capability to mobilize staff for the JPIC in a timely fashion.

Area Requiring Corrective Action: (NUREG 0654, Planning Standard K, Element 3b and Planning Standard O, Element 4d). Deputies of the County Sheriff's Department, manning traffic and access control points, need training that include dosimetry and its' use; familiarization with emergency evacuation routes, and the planned locations for reception/congregate care centers and decontamination centers.

The above two Areas Requiring Corrective Action were not successfully demonstrated during this exercise.

9. Exercise Objectives Still To Be Effectively Achieved

This exercise is the first conducted during the second six year exercise cycle for the Fermi-2 site. An unannounced and off hours exercise was conducted during the first six year cycle. Neither has been conducted as yet during the second six year cycle.

Due to the deficiencies identified during this exercise, Monroe and Wayne Counties will be required to conduct a remedial demonstration of their emergency response capabilities. Monroe County will be required to demonstrate the protective actions by EOC staff. Wayne County will be required to demonstrate radiological exposure control activities in the field and coordination with selected EOC staff.

The Areas Requiring Corrective Action identified during this exercise will require a schedule of corrective action and a demonstration of capability either during the remedial exercise or the next scheduled biennial exercise.

Narrative

1. State of Michigan

Objective #3 Direction and Control

The person in charge in the State EOC was the EOC Operations Chief, Michigan State Police/Emergency Management Division which is consistent with the plan. He held periodic briefings which included the organizations represented in the EOC. In addition to the State's involvement, a representative of the Canadian Government (Canadian Liaison) was assigned a position at the operations table. He was in constant contact with his government; coordinating information and the recommendations for protective actions. The Operations Chief held periodic briefings which involved the EOC staff. From this kind of exchange decisions were reached and implemented.

The State and County governments plans for responding to radiological emergencies were in the operations room on a book case shelf which was accessible to those in the EOC. Messages were received, logged, reproduced and distributed within the EOC. The system used is efficient and prompt in its function. File copies were maintained and internal message logs were kept. From the message traffic, protective action decisions and the implementation of these decisions were coordinated and effectively implemented. The functions and activities implemented during the exercise were consistent with the State's emergency plan and procedures.

The State EOC used the Emergency Classification Levels (ECLs) to take actions and reach decisions. The State EOC was notified of the ECLs as they changed through out the exercise. They were provided by the Detroit Edison Company, the utility.

The following ECLs were established at the noted time and verified:

Notification of Unusual Event	0845
Alert	1000
Governor's State of Emergency	1015
Site Area Emergency	1048
General Emergency	1122

The ECL's were prominently displayed at the front of the operations room where the staff could recognize the current classification. When the level was posted it was also announced by the EOC Operations Chief. The functions and activities implemented resulting from the ECLs were consistent with the emergency plan and SOPs.

Objective #4 Facilities, Equipment and Displays

The State EOC is well furnished, lighted and ventilated. It is conducive to emergency operations over a protracted period. Backup generator power exists in the lower level of the building. It was not required to be tested during the exercise. Equipment available to the EOC is the same equipment available on a day to day operation. Typewriters, computer/word processors and copiers are in office spaces and work stations. A kitchen is within the facility for use daily or in an emergency operations period. Cots and bunking could be improvised but, due to the location of the facility, sufficient space for long period lodging is available in the nearby community. Most of the operations personnel live nearby and would most likely lodge at their residence and work a regular shift; so they would commute to work A food supply is in storage in the sub basement of the building and has been placed their with the intention of use for long term emergency.

Access to the EOC was controlled at the entrance to the facility. The following maps were posted and plotted in the operations room:

Plume EPZ adequately labeled Plume EPZ population by area Radiological Monitoring points State map with adjoining States Evacuation Routes Relocation Centers Ingestion EPZ

Status boards were placed at the front of the room and properly positioned for good viewing by all EOC staff. Information posted on the boards was ELCs, protective action decisions, weather data, conditions and status of protective measures, etc. All information was updated and added to as events transpired. All of the above activities were implemented in a manner consistent with the plans and its procedures.

Objective #5: Communications

Initially, communications for radiological emergency response is received at the Michigan State Police Command Headquarters, located on Harrison Road in East Lansing. Once the State EOC is staffed and operations established the communications function is transferred to the State EOC at the Knapp Centre in downtown Lansing. Some of the messages generated in the State EOC did not have a "Test" or "Drill" heading, but they were corrected before going out over the network.

AREA RECOMMENDED FOR IMPROVEMENT: Although no problems were noted, it is recommended that training be provided for new communications operators at the State Police Command Headquarters due to the recent promotions and reassignments.

AREA RECOMMENDED FOR IMPROVEMENT: It is recommended that personnel be reminded of the importance of exercise messages read and written beginning with the identification indicating that the message is for "Test" or "Drill" purposes.

Throughout the exercise the State EOC used dedicated telephone between the State EOC and Monroe County, Wayne County and the Joint Public Information Center. Three dedicated lines are in place in the State EOC and each is staffed with a full time assigned operator. The line, once established, is constantly maintained open. Other telephones in the EOC are stationed at each position for use by the agencies assigned to the EOC. There is a total of twelve telephones in the operations room of the State EOC. They have conferencing capability on demand. Radio systems in the communications room are State Police radio and FEMA Radio systems. Space is available and set up for RACES.

A computer/word processor is available to communications operators. Facsimile is operable between the State EOC and the Emergency Operations Facility (EOF), Technical Support Center (TSC), JPIC, Monroe County, and Wayne County. The State EOC has other communications connections with: Department of Health, Department of Natural Resources, Department of Transportation, Department of Agriculture and the Province of Ontario, Canada. Also, through the State Police communications systems, radio contact is maintained with other adjoining States, and Michigan State Police Posts throughout the State.

The communications systems activated for the partial participation exercise were sufficient to handle the communications flow without delays. Established hotlines to the Counties presented no delay. There were no breakdowns in the communications systems. Contact with field locations was through use of primary and backup systems (radio, telephone and FAX). The entire communications function was operated consistent with the plan.

Objective #10 Plyme Dose Projection

Due to the planned limited participation by the State the radation health team relied on computer assisted information for comparison with field data and data from the utility to make dose projections. The utility made periodic and timely reports to the radiation health team in the State EOC. They maintained dedicated telephone contact between the State EOC and the utility's EOF and later the TSC. No dose projections were made from true field monitoring data. The data was simulated.

New dose projections were made as the plant status changed. The projected plume was plotted and displayed on a board at the front of the EOC. Plume definition was derived from a simulated field data collection. The scenario did provide for a radical wind

shift which the radiation health staff took into consideration in making their projections and the projections were well founded. All functions carried out by the radiation health staff were consistent with the emergency plan and procedures.

Objective #13 Initial Alert and Notification Objective #14 Public Instructions

The State EMD provided the necessary information to support the Counties and the JPIC in their response to a simulated radiological emergency. They disseminated instructions to the Counties in a timely manner which were consistent with the plan. Prescripted messages were recommended. Message logs were maintained and copies of messages were kept on file of releases disseminated to the County EOCs and the JPIC.

Objective #21 KI Decision-making

The objective was limited to the decision on whether or not to recommend the use of KI by emergency workers and the institutionalized populations. The State did coordinate the recommendation for the use of KI and that recommendation was forwarded to the Counties and the JPIC for implementation. The distribution of KI to State personnel was not an exercise objective.

Objective #32 Supplementary Assistance

The State requested Federal assistance of FEMA. The request was for the relay of the notification to the Environmental Protection Agency and the U.S. Coast Guard. The nature of the request was for resources and assistance in combating the effects of the potential radiological release. This was the extent of the exercise play which was due to the limited level of participation by the State.

Objective #35 Recovery and Reentry

Due to the limited participation by the State, this objective was demonstrated for the purpose of driving the scenario for the Counties and the JPIC. At 1435, the reactor being stable, the emergency classification was downgraded to Alert. The Operations Chief and the Senior Radiation Health representative conversed to coordinate a plan to allow reentry into the evacuated areas with the exception of the Ø to 2 mile area. This area was to remain evacuated for further evaluation with the intent to open it after ninety-six hours.

The coordinated decision-making dealt with human safety factors, the reestablishment of business and industry, public services, medical needs, etc. Once discussions had taken place and decisions had been reached, the Operations Chief contacted the

utility to inform them and get their concurrence. With the utility's concurrence the information was put out over the hot line and faxed to the Counties and the JPIC.

2. Monroe County

Objective #1 Mobilization and Activation

Staff mobilization began when Monroe County was notified of the Alert classification. Staff call up was carried out by personnel at the central dispatch center in downtown Monroe.

Objective #2 24 Hour Staffing

The County's 24 hour operational capability was demonstrated by a shift change. The shift change by the executive group was all at once and did contribute to the problem in the processing of emergency actions recommendations and implementing information to the public via the EBS. A shift change was not demonstrated by the communications officer or the RACES operator.

DEFICIENCY: (NUREG 0654, Planning Standard A, Element 4) A complete shift change at one time by the entire executive group contributed to the confusion in the processing of protective action recommendations to the public.

RECOMMENDATION: Shift changes must be phased in such a manner so as not to disrupt the flow of information and have a negative impact on the implementation of protective actions.

AREA REQUIRING CORRECTIVE ACTION: (NUREG 0654, Planning Standard A, Element 4) A full shift change was not demonstrated as designed in the objectives and scenario.

RECOMMENDATION: A shift change of all EOC staff must be demonstrated at the next exercise.

Objective #3 Direction and Control

The Monroe County emergency operations were conducted under the supervision of the County Board Chairman or a member of the County Board. Periodic briefings were conducted for the staff and by the staff about every half hour throughout the exercise. Staff were involved in decision making. Copies of the plan and SOPs were available.

Message handling procedures are not adequate for prompt distribution of information to the appropriate emergency response individuals. During the exercise this resulted in materials necessary for EBS messages to be delayed with the result that messages were incomplete, delayed or both.

DEFICIENCY: (NUREG 0654, Planning Standard A, Element 2.a) The mishandling of messages resulted in the failure to provide recommended protective actions to the population in the risk area.

RECOMMENDATION: A senior staff member should be designated as the message controller to expedite message handling.

The County received notification of the Unusual Event at 0856. This was followed by the Alert notification at 1000, the Site Area Emergency at 1048 and the General Emergency at 1122. As the ECLs were received the changes were announced to the EOC staff over the public address system. The internally lighted display was used to keep the staff continuously aware of the status of the emergency. The ECLs were also written on a status board located at the end of the room.

Objective #4 Facilities, Equipment and Displays

The EOC facility on South Raisinville Road is in the day-to-day office area of the Civil Preparedness staff. There is a central operations room that housed the various department representatives, a communications room, a conference room used by the executive group, a room used by the radiological and damage assessment group, and several offices that were not assigned. The necessary maps, status boards and other displays are permanently mounted on the walls of the operations room and the adjacent specialty rooms. The normal operations room set up is that necessary for emergency operations. The specialized status boards for weather information, radiological and sheltering were kept current. The boards containing plant data were not fully utilized and some data was never updated. The board used for general information had five entries during the exercise. related to the ECLs. No entries were made concerning protective actions taken by the State and County.

AREA RECOMMENDED FOR IMPROVEMENT: The professional staff assigned to the EOC should identify information to be posted on the status boards and either post it themselves or provide the necessary information in written form for someone else to post.

Objective #5 Communications

The Monroe County EOC had a communications room with various types of equipment that allowed for transmission/reception with marine channel, City and County police, fire department, EMS, public works, MEPS, and RACES. A direct line to EBS station WJR was also available. They had a datafax machine and phones for all essential EOC personnel.

Objective #13 Initial Alert and Notification Objective #14 Public Instructions

The Communications Officer was directed by the executive group to activate the sirens at 1125. The siren activation (simulated) was begun at 1125. The communications officer indicated that he would have to alert each fire district independently and that this process would take at least five minutes. At first he indicated that the process, including confirmation of the message receipt, would take ten minutes or longer. He did not know whether the sirens could all be activated at once. Sirens were to be sounded every five minutes until further notice.

The communications officer was given the initial EBS message for relay to radio station WJR for broadcast. The message timed at 1125 indicated the General Emergency was declared at 1122. The activation of the EBS was simulated. The message directing sheltering was not read by the communications officer. Had he simulated reading the message to the radio station he might have realized that the message did not contain the road boundary description of the area recommended for protective action. The EBS message as released was incomplete.

EBS message #2 directing evacuation was released without complete date time group. The message indicated that the General Emergency was declared at 1235 rather than 1122. This message directed evacuation but did not contain the road boundary description for the area recommended for protective action. The message gave a law enforcement telephone number for use by persons needing assistance in evacuation. An exercise participant indicated this activity was a function of the fire, EMS/transportation services and therefore the wrong telephone number was given out.

EBS message #3 directed evacuation in all sectors to two miles and to five miles in sectors M, N, P, R, A and B. This message was released at 1237 and indicated that the General Emergency was declared at 1126. This message contained the road boundary description for the 2-5 mile area, sectors M, N, P and R, A and B to five miles but did not include sector Q. The telephone number for assistance was not changed.

EBS message #4 released at 1255 directed sheltering in all sectors out to two miles an out to five miles in sectors N, P, Q, R, A and B. This message showed the time of General Emergency to be 1126. Message #3 had already directed evacuation for some of the same area.

DEFICIENCY: (NUREG 0654, Planning Standard E, Element 6) The first EBS message giving protective actions was not complete. It did not contain the physical boundary descriptions of the area requiring protective action.

RECOMMENDATION: A senior staff member of the EOC be placed in responsibility for the preparation and documentation of the EBS messages. This person should be responsible for placing the call to the radio station and reading the message to the station.

DEFICIENCY: (NUREG 0654, Planning Standard E, Element 7) The subsequent EBS messages giving protective actions and other emergency information were incomplete or inaccurate. Specifically, the second EBS message also did not contain the the physical boundary descriptions of the area requiring protective action.

RECOMMENDATION: A senior staff member of the EOC be placed in responsibility for the preparation and documentation of the EBS messages. This person should be responsible for placing the call to the radio station and reading the message to the station.

The route alert demonstration was simulated at a pre-determined time and did not necessarily correspond to the exercise scenario of events. Monroe County's route alert procedure serves as backup to a stationary siren alert system which is maintained throughout the County, and has the ability to alert all sectors of Monroe County. The Monroe City Fire Department began the demonstration at approximately 1330 and concluded approximately 1445. The route alerting demonstration was driven by a simulated failed siren (#38). The demonstration called for the fire station to dispatch one vehicle from the central station and a second vehicle from station house #2 for the purpose of route Two vehicles actually travelled the prescribed route. On board each vehicle was a route map, the prescripted message, dosimeters for on board personnel and CDV-700. Vehicle speed was between 10-15 miles per hour. An adequate public address message was simulated.

Objective #15 EPZ Evacuation

Objective #16 Impediments to Evacuation Objective #17 Traffic and Access Control

The Monroe County planners for EOC operation established predetermined access control points. These were designated for two, five and ten mile radii and could be localized for specific areas of operation. Communications for access control point location was initiated from the EOC by law enforcement supervisor and transmitted to law enforcement (field) supervisors who coordinated placement of vehicles/staff. Public works has the responsibility and capability to deliver resources necessary to handle impediments to evacuation routes. Their efforts could be supplemented with fire equipment and personnel as necessary.

One Monroe County deputy arrived for the traffic/access control point demonstration at the intersection of I-75 and Nadeau Road at 1045. He was in a fully equipped County police car and had

good communication with the police dispatcher at the EOC. The officer had all the proper dosimetry and record keeping forms. He had recently received basic instruction in radiological monitoring and could apply the basic principles. A previous area requiring corrective action in this area has been corrected.

No simulated impediments to evacuation were conducted in the field but the officer displayed knowledge and experience as to traffic control and redirection techniques and principles. He stated that additional manpower an heavy equipment and barricades could be requested and received and placed properly if needed.

The officer did not know evacuation routes, locations of reception/relocation and decontamination centers and specifics about planning areas and protective actions for radiological emergency response efforts. The emergency preparedness booklet, printed by Detroit Edison, has most of this information and could be issued. The deputy did know that the information could be obtained by contacting the EOC through his dispatcher.

AREA RECOMMENDED FOR IMPROVEMENT: Routinely provide emergency information concerning ongoing radiological emergency response actions and furnish maps or information of important public service locations and routes to personnel assigned to traffic and access control duties.

Objective #15 EPZ Evacuation Objective #18 Mobility-Impaired

Monroe County EOC staff demonstrated the ability to identify special needs persons and plan for relocation of these people. EMS/Transportation, Health Services and Fire Operations personnel in the EOC coordinated their activities to identify special needs people in affected areas. Health Services staff had a comprehensive list from various sources that identified at-risk persons. During the exercise operations staff did identify and contact at-risk persons but did not provide actual transportation services as the at-risk population did have their own transportation. They said they did have the capability to transport these people.

Objective #15 EPZ Evacuation Objective #19 Schools

The school supervisor in the EOC had a plan for response to emergencies and followed it with respect to notification and update of conditions to field personnel. Posted relocation centers to be used that were school system property their location and how many people were using a facility. Communications was from school representative to school superintendent, superintendent to field personnel including bus dispatcher, teachers etc.

As noted earlier in this report, status boards were not effectively utilized in the EOC. The school representative could identify on a status or update board which schools were affected what their status was i.e. in-place sheltering or evacuation, the time of protective action implementation, relocation schools, mode of transportation, and how many buses available for other and field use (if applicable).

During the exercise interviews were conducted with five representatives of the Jefferson School District. The individuals interviewed were the Jefferson School District Superintendent, the Hurd Road Elementary School Principal, a teacher from Hurd Road Elementary School, the Jefferson School District Transportation Supervisor and a bus driver. These interviews were independent of the concurrent exercise and did not involve any exercise play.

All parties interviewed were knowledgeable of the process by which emergency instructions and information would be disseminated from the County EOC throughout the Jefferson School District. Telephone and radio are the established means of communication within the School District. Bus drivers would be contacted by telephone fan out notification if at home and by bus radio if on duty. The Transportation Supervisor indicated that the telephone fan out notification procedure has been used without incident during weather related emergencies.

The School District Superintendent explained the process by which emergency information such as school closings or cancellation of evening activities would be disseminated to the public. This is the same process currently used for other types of emergencies. He was aware of the need to coordinate any such announcements with the School Services Officer in the County EOC.

The Jefferson School District consists of four schools: a high school, an intermediate school and two elementary schools. The School District Superintendent also coordinates the emergency activities for St. Charles School. Copies of plans and procedures for the schools and buses were available and the school officials and the Transportation Supervisor had recently reviewed their procedures during meetings.

AREA RECOMMENDED FOR IMPROVEMENT: The meetings within the School District to review emergency response procedures should be conducted on a continuing basis. These types of meetings should also be conducted within the other two Monroe County School Districts which could be impacted by Fermi-2.

Each official interviewed was familiar with the number of buses needed to conduct a complete evacuation of the five schools located within the district. The procedures call for the

dispatch of buses to the closest school first (St. Charles) and proceeding outward. The Transportation Supervisor and the bus driver knew the location of the reception schools and the appropriate evacuation routes and alternate routes. It was noted that there is a discrepancy in the designated reception school for St. Charles School. All of the school officials interviewed stated that the Jefferson School District would maintain responsibility for the students after arrival at the reception school.

AREA REQUIRING CORRECTIVE ACTION: (NUREG 0654, Planning Standard G, Element 1 and Planning Standard J, Element 10.g) The bus driver and the public information brochure indicate that St. Charles School would relocate to St. Stevens School in New Boston while the Monroe County plan indicates that the reception school would be the Mason Senior High School which is the reception school for the four schools in the Jefferson School District.

RECOMMENDATION: The disparity between the Monroe County plan and the Public Information Brochure must be corrected.

Objective #20 Emergency Worker Exposure Control

The Radiological Officer in the EOC indicated that exposure limits were established for personnel working in the EPZ. The Radiological Officer of the first shift informed the evaluator that 15 millirem was the first safety notification level. The second shift officer informed the EOC staff of the same level, but then caught and corrected the mistake. The level should have been 15 rem.

The emergency workers are reminded of the exposure limits at the time that they are issued dosimetry. They are also briefed on dosimeter use, care and where to return them as well as how to check them. At the conclusion of a shift dosimeters would be returned, the number of the dosimeter checked to identify the person who received it, and the exposure recorded. After they are collected the TLDs would be sent to Detroit Edison Company for reading.

AREA REQUIRING CORRECTIVE ACTION: (NUREG 0654, Planning Standard K, Element 4) The Radiological Officer on the first shift provided incorrect information as to the exposure limit which required notification by field personnel.

Recommendation: There was a mistake made in the recommendation of exposure level. Thorough familiarization of appropriate levels of exposure as documented in the plan should be implemented by all radiological staff.

The Monroe County dosimetry distribution demonstration was given at the County Health Department building. The Health Department

is the central distribution point for the various agencies to obtain their dosimetry from the Health Department. The staff had recently received radiological monitoring and exposure control training and were knowledgeable.

There was an adequate supply of dosimeters (two types), TLDs, forms and KI (dated 6/88) on hand in storage for emergency workers. Low and high range dosimeters (about 100) were all zeroed, TLDs are in date and renewed every three months. A number of survey meters were put in operation and checked with check sources. The instruments are checked every six months for operability by the staff but, no tags are affixed for verification purposes. The staff was also knowledgeable as to the maximum permissible worker dosage limits and frequency of dosimeter reading and recording.

Each emergency worker assigned to the decontamination station was equipped with a TLD and two self-reading dosimeters. The two dosimeters were a CDV-742 (0-200R) and a CDV-138 (0-20R). A dosimeter charger was available and the dosimeters were zeroed as they were issued. Monroe Township Fire Department personnel brought some of their own dosimetry which was supplemented by the dosimetry maintained by the Monroe County Health Department. The emergency workers had recently received training and were quite familiar with their dosimetry and its proper usage. The dosimeters were read every thirty minutes and the readings maintained on a log. Although the decontamination center is not located in the 10-mile EPZ and significant exposures are not expected, the official in charge was knowledgeable about exposure limits and indicated that the maximum exposure permitted at this facility was 20 rem.

The Jefferson School District Transportation Supervisor and one bus driver were interviewed as part of the school demonstration. Both had received training approximately one year ago which included dosimetry and exposure control information. During the interviews, it was noted that these individuals had some familiarity with these subjects but would have to rely on the instructions they would receive along with the dosimetry equipment at the County dosimetry distribution point. For example, they knew they would receive two dosimeters, a permanent record badge and recording card but were unfamiliar with the specific ranges of the dosimeters and the exact frequency of readings. However, the Transportation Supervisor and the bus driver knew the proper communication chain for the distribution of exposure control information and instructions from the County EOC and the process for reporting to or obtaining guidance from the School Superintendent and County EOC as necessary.

AREA RECOMMENDED FOR IMPROVEMENT: Dosimetry and exposure control activities should be emphasized during the next annual training conducted for bus drivers. Copies of the written desimetry

instructions should be provided to the bus drivers during the training session which they can refer to throughout the year and during in-service training.

Objective #27 Reception Center Objective #28 Mass Care

The reception center demonstration was simulated at a predetermined time and did not necessarily correspond to the exercise scenario. The Monroe County reception site was located in Dundee, west of Monroe, in a parking lot of a supermarket. There were four emergency workers present: a health representative, two human services representatives and a State Police Officer.

Vehicles entered the parking lot for contamination screening then proceeded to the congregate care center. The registration of the evacuees and vehicles was not conducted at this location. The registration procedure was not planned for at the reception center.

Equipment used in the demonstration included six dosimeters and two CDV3 700s. The proper procedures use in screening vehicles was demonstrated. A meaningful purpose and function of the reception center could not be identified. The reception center process was designed for vehicles (not individuals) to be screened for contamination, but regardless of the result of contamination screening all vehicles and evacuees would proceed to the congregate care center without being identified or segregated.

AREA REQUIRING CORRECTIVE ACTION: (NUREG 0654, Planning Standard J, Element 12) The registration and radiological monitoring conducted at the reception center was not coordinated with similar activities being conducted at the mass care facility. RECOMMENDATION: Information obtained during the radiological monitoring conducted at the reception center should be recorded and provided to the mass care facility.

Staffing and activation of the mass care facility were not scenario dependent. Radiological monitoring was conducted at the mass care facility. Evacuees were registered while being surveyed for radiation. Red Cross personnel used their standard form to register the evacuees prior to entering the congregate care facility. Adequate facilities and amenities were available for decontamination of evacuees. The Radiological Officer in the EOC reminded all EOC staff to direct their field forces to report to the decontamination center when they were released.

The objective to demonstrate the adequacy of facilities, equipment, and personnel for congregate care of evacuees was met. Red Cross personnel, including Red Cross nurses, adequately

staffed the congregate care center. KACIS provided communications with the Monroe County EOC. This particular location did not have facilities suitable for handling handicapped individuals, but other facilities which can are available.

Objective #29 . Emergency Worker Decontamination

An emergency worker decontamination station was established at the Monroe County Animal Control Shelter. This location was utilized because the primary location was undergoing remodeling and was not available. The Animal Control Shelter is not identified in the plan as an alternate location for an emergency worker decontamination station.

AREA REQUIRING CORRECTIVE ACTION: (NUREG 0654, Planning Standard K, Element 5.b) The emergency worker decontamination station was not established at a location identified in the plan.

RECOMMENDATION: The emergency worker decontamination station should be established at the primary or an alternate location as identified in the Monroe County Plan. If the Animal Control Shelter is to be utilized as an alternate facility, it must be identified as such in the plan.

The facility staff demonstrated the equipment and procedures for monitoring vehicles and personnel. They were familiar with the action levels for the initiation of decontamination measure. Background readings, both inside and outside of the building were established and checked every thirty minutes. While monitoring procedures were generally adequate some problems were noted. The personnel conducting vehicle monitoring placed equipment (survey meter and sunglasses) on the potentially contaminated vehicle. In an attempting to open the vehicle engine hood, one monitor made extensive contact with the vehicle prior to conducting the external survey. The monitor conducting the thyroid scan utilized a questionable technique but was immediately corrected by the official in charge of the facility.

AREA REQUIRING CORRECTIVE ACTION: (NUREG 0654, Planning Standard K, Elemnt 5.b and Planning Standard O, Element 4.c) Personnel conducting radiological monitoring at the emergency worker decontamination station utilized some improper techniques.

RECOMMENDATION: The annual training conducted for personnel staffing the decontamination station should emphasis proper monitoring techniques. The decontamination station procedures should include a provision for the review of proper monitoring techniques at the start of each new shift.

AREA RECOMMENDED FOR IMPROVEMENT: A step ladder would facilitate vehicle monitoring in that the monitor should use it to minimize

his contact with the vehicle and to reach areas generally inaccessible while standing on the ground. This would be particularly useful for buses and other large emergency vehicles.

AREA RECOMMENDED FOR IMPROVEMENT: Monroe County should consider an amendment to the decontamination station procedures to include a survey of emergency workers' hands and feet as he disembarks from the vehicle. This survey would provide an early indication of vehicle interior contamination and assist in containing the spread of contamination as the emergency worker moved within the facility.

Whenever monitoring indicated a need for decontamination measures a record sheet would be filled out. This is consistent with the plan. The personnel at the facility displayed a working knowledge of decontamination procedures including the collection and disposal of contaminated clothing, impoundment of contaminated vehicles and equipment, and the referral of individuals for necessary medical treatment.

Decontamination procedures were explained for both vehicles and personnel. These procedures were adequate and consistent with the plan. However, the plan and procedures do not address the means by which the emergency worker's dosimetry would be preserved during the decontamination process. If necessary, there would be two attempts to decontaminate emergency workers. If following the second attempt, contamination is still present, the emergency worker would be transported to the a local medical facility for additional treatment, All the contaminated clothing would be collected, bagged an stored at the facility pending disposal instructions from the Michigan Department of Health.

AREA REQUIRING CORRECTIVE ACTION: (NUREG 0654, Planning Standard K, 3.b) The decontamination procedures do not address the preservation of emergency worker dosimetry during the decontamination process.

RECOMMENDATION: The decontamination facility procedures should identify the process by which a contaminated emergency worker's dosimetry is to be recovered and preserved while the worker undergoes decontamination.

AREA RECOMMENDED FOR IMPROVEMENT: Monroe County should consider a change in their plan to include the logging of vehicles, equipment and personnel which are processed through the emergency worker decontamination station and found to be uncontaminated. This record might be useful to the County following a radiological emergency.

Objective #30 Ambulance Facilities and Procedures
Objective #31 Hospital Facilities and Procedures

Detroit Edison Company conducted a medical drill on May 19, 1988. FEMA was not informed of the time and date of the medical drill in advance and therefore, did not evaluate it.

AREA REQUIRING CORRECTIVE ACTION: (NUREG 0654, Planning Standard N, Elements 2.c, 3.b and 3.f) FEMA was not informed in advance as to the date and time of the medical drill. (Note: The time and location of the school and emergency worker decontamination demonstrations were not finalized until just prior to and during the exercise respectively.)

RECOMMENDATION: All information with respect to the conduct of exercises and drills must be provided to FEMA in accordance with the criteria established in GM EX-3.

Objective #35 Recovery and Reentry

Recovery and reentry activities were limited to deescalation of emergency status and message play between the State EOC, Wayne County EOC, Monroe County EOC and the JPIC. There was some uncertainty in the County EOC as to extent of reentry authorized by the State. Confusion with this message was clarified by a requesting a second message from the State restating the reentry criteria. Problems with message handling are documented at an earlier point in this report. The Radiological Officer did remind EOC operations staff to notify their field personnel to return dosimeters and have them checked.

The State also removed restrictions on animals, feed and water. The Agriculture Officer at Monroe County EOC received and acted on information from the State EOC regarding the reduction of live tock restrictions. This information was not presented to the EOC staff. It was noted earlier in this report that the status boards in the EOC could have been used for this type of information.

3. Wayne County

Objective #1 Mobilization and Activation

The Wayne County staff at the County FOC, the emergency worker decontamination center, the reception and congregate care center, partial JPIC staff and the staff for the school evacuation demonstration were pre-positioned. To correct a past area requiring corrective action the Wayne County PIO spokesperson at the JPIC was activated via telephone at \$952 to report to the Monroe County FOC Intil the JPIC was activated. The Wayne County PIO spokesperson was then to go to the JPIC. This would have

corrected the area requiring corrective action from the last exercise except that the pre-positioned second shift PIO at the JPIC participated in initial media briefings prior to the full activation of the JPIC.

A EQUIRING CORRECTIVE ACTION: (NUREG 0654 Planning Standard E tement 2) Pre-exercise material submitted by the State indicated the first shift JPIC staff would be activated and mobilized correcting the area requiring corrective action from the previous exercise. The pre-positioned second shift Wayne County PIO at the JPIC in actuality participated in the initial JPIC media briefings until the first shift PIO arrived at the JPIC.

RECOMMENDATION: Wayne County JPIC staff assigned to the JPIC be activated and mobilized during the next exercise rather than being pre-positioned.

The Wayne County EOC was staffed according to the revisions to the Wayne County plan that includes representatives from Brownstown Township, Flatrock and Rockwood City. Relevant functions and activities were implemented in a manner consistent with the Wayne County plan and procedures.

Objective #2 24 Hour Staffing

Wayne County demonstrated the ability to maintain staffing on a 24 hour basis over an extended period of time through a combination of double staffing and shift changes of selected personnel. The shift change of selected personnel took place at approximately noon so the second shift participated for approximately 2 1/2 to 3 hours. Replacement staff were briefed by the individuals they replaced.

The second shift demonstrated knowledge of their emergency response roles and function. Relevant functions and activities were implemented in a manner consistent with the Wayne County plan and procedures. Wayne County actually demonstrated their ability to operate on a 24 hour basis over an extended period when the Northwest airliner crashed on take off from Detroit's Metropolitan Airport in 1987 killing 156 people. Wayne County conducted operations for approximately one week at that time.

Objective #3 Direction and Control

Wayne County used the appropriate emergency classification levels in carrying out the emergency response. The County EOC staff were immediately notified of the appropriate emergency classification levels at the following times: Unusual Event, 0845; Alert, 0957; Site Area Emergency, 1048; General Emergency, 1122. The initial protective action taken by the State to shelter all sectors 0-2 miles and 2-5 miles down wind in sectors

N, P & Q was updated by the State at 1140 to evacuate all sectors 0-2 miles and to evacuate 2-5 miles sectors N, P, Q, R, A and B and to shelter 2-5 miles sectors C, D, E, F, G, H, J, K, L & M. Sector C was added to the evacuation area 2-5 miles by the State at 1150. The State again updated the protective action to shelter in place 5-10 miles sectors N, P, Q, R, A, B & C at 1208. The Wayne County Executive Officer declared a "State of Emergency" during the Unusual Event classification at 0846. The Governor declared a "State of Disaster" during the Alert classification at 1015.

The Wayne County Chief Executive Officer, according to the plan, is the official in charge of operations. He was in the EOC for a period of time, but the Director of the Wayne County Emergency Management Agency, working with the assistants to the Chief Executive Officer was effectively in charge of operations. Periodic briefings were held to update the staff and the staff were involved in decision making. Message logs were kept of all incoming and outgoing messages. Messages were copied and distributed as appropriate. The internal message handling system worked well. A record was kept of internal messages, through logs and/or file copies, by the message center and each department in the EOC. Protective action decisions and implementation of the decisions were coordinated effectively with the appropriate organizations.

Objective #4 Facilities, Equipment and Displays

The Wayne County EOC had adequate facilities for operations. The operations room is a small room that is crowded when fully staffed and is noisy at times.

AREA RECOMMENDED FOR IMPORVEMENT: Wayne County should continue to study ways to reduce noise levels and to determine if the operations room can be enlarged.

Furniture, restrooms, lighting, space and ventilation were satisfactory. The kitchen was well equipped and the bathrooms had showers. Additional space is available for storage as well as conferencing. Appropriate supplies of food, utensils, toiletries, etc are available. Equipment included typewriters (3), computer/word processors (6), copiers (Xerox: 2), and cots (approx. 15-20). Access to the facility was controlled by armed police and the wearing of identification badges was required. Maps were positioned in accessible locations for staff use. All maps were up dated throughout the exercise. The list of maps is as follows: Plume EPZ with sector labeled, Relocation Centers, Access Control points, and Radiological Monitoring Points.

Emergency classification levels were posted in full view on a status board. Protective action recommendations were kept on the status board and displayed/updated in a timely manner.

corrected the area requiring corrective action from the last exercise except that the pre-positioned second shift PIO at the JPIC participated in initial media briefings prior to the full activation of the JPIC.

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Emergency classification levels were posted in full view on a status board. Protective action recommendations were kept on the status board and displayed/updated in a timely manner.

Chjective #5 Communications

The State primary communications system is dedicated telephone with the Law Enforcement Information Network (LEIN) as backup. All local EOCs have commercial lines and police radio backup i.e. 803 & RACES (amateur radio 2 meter). Also, there is the Michigan Emergency Protection System (MEPS) backup which goes to Wayne and Monroe Counties. Commercial lines were approximately 50 in number (for the EOCs) and one dedicated red phone for fax to the Monroe County sheriff, JPIC, EOF, State EOC, WJR radio and EBS station (for portable fax). If the fax broke down 800 M 112 Motorols could verify incoming messages. Radio Amateur Citizens Emergency System (RACES) is linked to the EOCs, JPIC, and reception centers. It is on 2 meters and has VHF (450 mhz) and VHF scanner capabilities. LEIN links the state with the County police. Commercial telephone is the backup system. The Wayne County EOC was involved with EBS public alert. The EOC coordinator prepared one EBS message after the sirens were activated. The EBS message is in a prescripted format.

Conferencing capability was demonstrated on the "hot line" between the Sheriff Departments of Wayne and Monroe Counties, the Michigan State Police and utility's EOF. Approximately 20 hand held portable phones are also available.

Objective \$13 Initial Alert and Notification

Wayne County demonstrated the capability to disseminate an alert signal and to initiate an instructional message to the public within 15 minutes of the time the State decided to take a shelter protective action that impacted within Wayne County. The initial protective action only affected Monroe County. When the protective action was updated by the State at 1208 to shelter in place 5-10 miles sectors N, P, Q, R, A, B and C, Wayne County developed an EBS message that was coordinated with Monroe County prior to the activation of the sirens and the EBS station at 1222 and 1223 respectively. Approximately 19,216 Wayne County residents were affected. Wayne County did not activate sirens and the EBS station in Wayne County when only Monroe County was affected by a protective action issued by the State.

AREA REQUIRING CORRECTIVE ACTION: (NUREG 0654/FEMA REP-1, Planning Standard E, Element 5.) Wayne County did not sound the sirens within the County, simultaneously with Monroe County.

RECOMMENDATION: Wayne County should activate the County sirens and EBS station when the sirens and EBS stations are activated in Monroe County. In this way uncertainty can be reduced by keeping the Wayne County public informed.

Objective \$14 Public Instructions

The call initiating the first protective action (in place shelter) was at 1208. Wayne County sirens were activated at 1223 and the EBS station was notified at 1226.

Roads in the County were used to mark the Protective action boundary sectors for the affected planning area. Shelter instructions listed on the EBS message format were adequate for individuals at home but lacked sufficient information for transients without shelter. No ad hoc respiration information was given, i.e. use of handkerchief or rag over mouth/nose. Evacuation routes/monitor stations or the distribution of potassium iodide (KI) did not apply in this exercise. References to Emergency Preparedness Booklets were included.

AREA REQUIRING CORRECTIVE ACTION: (NUREG 0654, Planning Standard E, Element 7) Insufficient information was released in the EBS messages pertaining to ad hoc respiratory protection.

RECOMMENDATION: Include ad hoc respitory protection information in the pre-scripted EBS message.

As a whole, the EOC staff did provide accurate and timely information to the public. All authorized releases were under the direct supervision of the Director, Wayne County Emergency Managment Agency. Logs of all public releases were located at the JFIC and radio station WJR. Copies of all releases were accessible to all staff by centralizing them at the message control desk. An easy flow of information and instructions were coordinated by the Wayne County EOC PIO, the JPIC and communications director.

Objective #15 EPZ Evacuation Objective #18 Mobility-Impaired

The County Department of Social Services and the County Department of Health were responsible for implementing protective action for the impacted permanent transient population including transient dependent persons, special needs population, handicapped persons and institutionalized persons. Twenty-four special needs persons were identified; 14 adult foster care homes were identified. Up to date lists of special needs handicapped and institutionalized persons were updated during the winter of 1887/88.

During the exercise the County Department of Social Services staff contacted the Wayne County Department of Health of the above people located in Brownstown Township, Flat Rock and Gibraltar. The County Department of Health called the mental health 24 hour emergency telephone to contact the above individuals to insure they were in in-place shelter and to be on standby for possible evacuation. Transportation resources are available through private companies, school district vehicles and

private ambulances. Wayne County also provided Monroe County with information concerning access control status of Wayne County evacuation routes, reception and congregate care facilities in Wayne County to assist Monroe County in their evacuation.

Objective #16 Impediments to Evacuation Objective #17 Traffic and Access Control

Wayne County demonstrated via personnel and equipment three traffic control access points (I-75 and Southfield Road, I-75 and Telegraph Road, and Wick and Telegraph Roads). Resources were taken from the Mutual Aid Task Force (MATF). One person and a vehicle were located at each of the above sites, 43 people were identified during the exercise to be part of the MATF. The personnel of the MATF arrived at their sites at 1101 and 1213 respectively.

The objective to demonstrate access control in the field was not evaluated. Pre-exercise planning information provided to FEMA indicated Wayne County was not going to man traffic control and access points during the exercise.

AREA REQUIRING CORRECTIVE ACTION: (NUREG 0654, Planning Standard N, Elements 3.b and 3.f) Wayne County's manning three access control points was not evaluated since FEMA was not aware this was to happen. Consequently a Federal evaluator was not available during the exercise.

RECOMMENDATION: Pre-exercise planning information provided to FEMA for future exercises should be complete so that FEMA can make arrangements for the Federal evaluation of all objectives to be demonstrated.

Remaining traffic control and access points were simulated in the EOC using map displays depicting where these remaining points would be. Air traffic was restricted up to 5000 feet over the 10-mile EPZ. Water and rail traffic were restricted from entering the 10-mile EPZ.

The capability to deal with impediments to the evacuation were also demonstrated procedurally in the EOC when traffic had to be redirected around construction on the Will-Carlton Road and around an over-turned car on Wick-Telegraph Road. Wayne County MATF maintains resource lists of private trucks, tow trucks and equipment owned by Wayne County Highway Department.

Objective #19 Schools

The ability and resources necessary to implement appropriate protective actions for school children within the plume EPZ was demonstrated both at the Wayne County EOC and in the field. The notifications, direction and control functions where driven by

the scenario. The Wayne County school transportation coordinator responded to the Wayne County ECC and participated in the exercise, made the appropriate decisions and notifications based on the simulated emergency.

The field demonstration was held at a predesignated time and location. Six buses were scheduled to arrive at the Woodhaven Senior High School at approximately 0900 with students and staff from the EPZ schools to be processed through the decontamination and reception and congregate care center.

The Wayne County School Transportation Coordinator was located in the Wayne EOC. When the Governor declared a "State of Emergency" during the Alert, the Wayne County school transportation coordinator made notifications, put decontamination/reception centers on stand-by status, and coordinated with the Monroe County School Transportation Coordinator.

At the Site Area Emergency classification, the Wayne County EPZ schools were closed resulting in an early dismissal. There were 173 students sent to Van Buren because their parents were not available to receive and care for their children. During the exercise the only protective action that effected Wayne County was sheltering. The early school dismissal was timely and precautionary. A chart of the school population and necessary number of buses for transportation is documented. The Flat Rock and Gibraltar School Districts have 40 buses. Buses are available from other schools in Wayne County, not in the EPZ, to augment their transportation needs.

The Wayne County Plan and the Public Information Brochure list different number of schools in the EPZ. Of the one private and ten public schools in the EPZ in Wayne County, the one private and eight public schools participated in the field demonstration at the Woodhaven Senior High School. Selected students, principals and teachers arrived at Woodhaven Senior High School on six buses between 0930 and 1000 for the demonstration. Woodhaven Senior High School was set up for the demonstration of the decontamination/reception congregate care functions. The participating schools and school districts were: Gibraltar School District, Carlson Senior High School, Schumate Junior High School, Wiess Elementary School, Chapman Elementary School, Parsons Elementary School, Hunter Elementary School, Flat Rock School District, Simpson Intermediate School, John M. Barnes Elementary School, and St. Mary's (private).

AREA REQUIRING CORRECTIVE ACTION: (NUREG 0654, Planning Standard G, Element 1 and Planning Standard J, Element 10.g) The Wayne County Plan and the Public Information Brochure list different numbers of schools in the EPZ.

RECOMMENDATION: The disparity between the Wayne County plan and

the Public Information Brochure must be corrected.

There were a total of 165 students in the six buses with 26 adults. Of the adults participating they were: Gibraltar School Board Members (2), bus drivers (6), Chapman Elementary School Principal (1), St. Mary's Principal (1), Flat Rock School District Superintendent (1), Gibraltar Senior Citizens (8), Carlson High School Assistant Principal (1), Gibraltar School District bus dispatcher (1), Weiss School Principal (1), Hunter Elementary School Principal (1), Simpson Intermediate Assistant Principal (1) and Parsons Elementary School representative (1).

None of the bus drivers had dosimetry kits. Dosimetry is not stored at the central bus garage. It is reported to be available at the Flat Rock Fire Station.

The school bus dispatcher was thoroughly knowledgeable of her duties and responsibilities. The bus drivers knew how they would be notified and what routes they would be required to take if an early dismissal was ordered or if an evacuation was ordered. They knew what the proposed decontamination/reception centers and how to get to them. They did not have maps in their possession showing them how to get to the centers. But maps are available at the central bus garage. The maps were not used for this demonstration. Woodhaven Senior High School is not one of the three predesignated schools to be used. This is referenced elsewhere in this report for clarification and corrective action.

The County Superintendent of Schools receives information from the school transportation coordinator in the Wayne County EOC. He is responsible for keeping all schools in the County informed. Through discussion of the notification and protective action implementation procedures, he demonstrated knowledge of his role in emergency response.

The only training the school principals receive is participation in the demonstration on the exercise day, May 18, 1988. The only information regarding the emergency plan they have received is the public information brochure if they live in the EPZ.

AREA RECOMMENDED FOR IMPROVEMENT: Meetings within the Wayne County School Districts to review emergency response procedures should be conducted on a continuing basis.

Objective #20 Radiological Exposure Control

Dosimetry was distributed prior to the school evacuation, decontamination, reception center, congregate care demonstration at the Woodhaven School. All facility workers were issued one of the following personal dosimeters: #138 0-200 MR; #740 0-100 R; #742 0-200 R and TLDs. A log of dosimetry issued was maintained.

The dosimetry issued to facility workers (decontamination, reception and congregate care and school evacuation) was not coordinated or organized to provide workers with the proper range of instrumentation. Each emergency worker was issued one TLD and one dosimeter. The dosimeters issued were of various scales as listed in the plan. No record keeping cards or information on potassium iodide and dosimetry was issued to the incoming emergency workers.

Neither an emergency worker nor the radiological protection officer was observed making or recording periodic dosimeter readings. Emergency workers exposure criteria was the typical EPA PAGS. Information dose rates and authorizations was unclear.

Bus drivers did not have dosimetry nor did they have radiation control instructions.

DEFICIENCY: (NUREG Ø654, Planning Standard K, Elements 3.a, 3.b and 4) Effective emergency worker exposure control was not demonstrated in this exercise.

RECOMMENDATIONS: (1) Provide emergency workers with emergency worker exposure kits to include two dosimeters, a TLD, exposure card and instructions on the kits use. The kits should be made available to all EPZ emergency workers. (2) Conduct additional training for the radiological protection officer on periodic chacks on emergency workers exposure. The radiological protection officer should develop radiological exposure kits for emergency workers to include record keeping cards, potassium iodide and dosimetry information as well as TLDs and dosimetry, and instructions for periodic reporting of exposure readings. (3) Demonstrate emergency worker exposure control during a remedial drill.

AREA REQUIRING CORRECTIVE ACTION: (NUREG 0654, Planning Standard K, Element 3.b) Dosimetry at access control points was not observed. In the exercise manual for offsite authorities it was identified that Wayne County would not dispatch personnel to an access control point. Therefore, no evaluation of dosimetry and access control personnel abilities was conducted.

RECOMMENDATION: During the next exercise Wayne County should demonstrate the issuance of dosimetry and maintenance of radiation control records at access control points.

Objective #27 Reception Center

Objective #28 Mass Care

Objective #29 Emergency Worker Decontamination

Staffing and activation of the reception center was not scenario driven. The Wayne County radiological officer tagged each evacuee prior to surveying them. After the survey the "clean"

evacuees were sent to the gymnasium and registered using Wayne County DSS forms. The evacuees requiring decontamination were directed to the shower area, resurveyed, decontaminated and then sent to the gymnasium for registering at the Red Cross station where they also got their temperature and blood pressure read. Speed of surveying was inconsistent. Some of the CDV-700 instruments did not have calibration stickers, others did. The clothes of decontaminated evacuees were properly bagged. Emergency plans and procedures were available.

Woodhaven School does not appear in the Wayne County plan as a facility to be used during an incident at the Fermi 2 Nuclear Power Plant. The Woodhaven High School cafeteria was simulated to be activated as a congregate care center by the Red Cross. Adequate amenities were available for evacuees and/or handicapped individuals. Ambulances were on site. A mobil communications van had plant information available to the site coordinator (Red Cross personnel would hold unregistered evacuees from entering the congregate care center until they had been surveyed.

The objective to demonstrate emergency worker decontamination was also conducted at Woodhaven which is not one listed in the plan. The Wayne County plan designates specific emergency worker decontamination facilities. Rather than using a facility listed in the plan, emergency workers suspected to be contaminated were processed at the Woodhaven High School. The Woodhaven High School was also used for the school evacuation and the evacuee reception and congregate care demonstrations. This made it difficult for the Federal evaluator to evaluate the emergency worker decontamination objective.

The monitoring process for both personnel and vehicles were acceptable. The speed of the survey varied. Proper monitoring instruments (according to the plan) and action levels for initiating decontamination procedures were used by the staff on the emergency workers processed at the facility. If an emergency needed hospital assistance an ambulance was contacted by radio.

AREA REQUIRING CORRECTIVE ACTION: (NUREG 0654 Planning Standard J, Element 10.h) The facility used for the exercise, Woodhaven School, is not the facility identified as the primary or alternate reception center, congregate care center or emergency worker decontamination center in the Wayne County Plan. Additionally, the consolidation of these three activities into a single demonstration made it very difficult to differentiate among the various capabilities being demonstrated.

RECOMMENDATION: During the demonstration of emergency response capability during an exercise the primary or alternate facility is to be used. If Woodhaven School is to be used it must be included in the Wayne County Plan.

Objective #35 Recovery and Reentry

Recovery and reentry activities were limited to deescalation of emergency status and message play between the State EOC, Wayne County EOC, Monroe County EOC and the JPIC. The ability to determine and implement appropriate measures for controlled recovery and reentry was procedurally demonstrated in the Wayne County EOC during the final staff briefing. Each department discussed the necessary actions needed to implement the cancellation of protective actions, close congregate care facilities, initiate reentry, establish traffic control and restore operations to a non-emergency status.

4. Joint Public Information Center

Objective #1 Mobilization and Activation

The JPIC was activated and operational at 1020 with the security, communications, RACES, rumor control and media briefing capability. Full staffing was evident at that time. During the period of its operation (1020-1526) five media briefings were conducted.

Objective #2 24 Hour Staffing

A shift change was demonstrated by both Monroe County and Wayne County PIOs. The Rumor Control staff and the utility spokesperson also demonstrated a shift change. Second shift personnel were briefed by first shift personnel and proved to be capable and adequately oriented to the responsibilities they had assumed. Each of the County PIOs took part in at least two media briefings.

Objective #3 Direction and Control

Upon receipt of the notification of ECLs they were prominently displayed and staff members were made aware of the classification level by a general announcement. ECLs were displayed in the front of the room on the briefing stage. Message forms containing ECLs were distributed desk-to-desk upon verification of level changes. Notification of the Unusual Event occurred at 0845; the Alert at 0949; the Site Area Emergency at 1048 and the General Emergency at 1122. Functions and activities we reimplemented in a manner consistent with the emergency plan.

The JPIC was coordinated by the Michigan State Police/Emergency Maragement Division. They held conferences with County PIOs and utility company representatives in order to make decisions regarding public information releases following declarations by the Governor. He ensured that all JPIC staff were informed of all changes in ECL. He directed the schedule of media briefings and represented the State of Michigan on the briefing team.

Message logs were kept for all incoming and outgoing messages.

Objective #4 Facilities, Equipment and Displays

The JPIC had adequate space, furnishings, good lighting, restrooms, and ventilation. There was also adequate office equipment and supplies, visual aides equipment and supplies, and an operating kitchen facility. Access to the facility was controlled and identification badges were provided. All of the necessary maps were available in the JPIC within 15-20 feet of the briefing podium. However, except for a map showing the outline of the evacuation area (green) and the in-place sheltering area (orange), none of the maps were used. This particular map was used only in the last three media briefings of the day. Use and posting of the Plume EPZ, Evacuation Route, and Relocation Center maps during the appropriate briefings could have made the briefings more meaningful and perhaps have reduced the number and intensity of questions raised by media representatives (WJR, CBS-TV, the Detroit News, Tower-98, and the Monroe Evening News). Posting these maps and possibly a meteorological chart for media review and study could also help.

AREA RECOMMENDED FOR IMPROVEMENT: Better utilization of the maps and displays available in the JPIC would enhance the briefings.

Objective #5 Communications

The JPIC was equipped with a number of communication systems, including commercial telephones, facsimile machines, and dedicated telephone lines. Communications backup was available from RACES and Michigan State Police Radio. The JPIC was linked to the State EOC, Monroe County EOC, Wayne County EOC, Fermi 2 EOF and Detroit Edison General Office Emergency Communications Center. The communications provided for JPIC staff and for the media were very adequate for the needs of the JPIC.

Objective #24 Emergency Information for the Media
Objective #25 Advance Coordination of Emergency Information

The JPIC staff received current, accurate, and timely information on hard copy through desk-to-desk distribution in a very short time after an action was recommended. In media briefings all protective action areas were described in terms of familiar landmarks and boundaries. The formulation and dissemination of all information to be released to the media was coordinated by the State, county PIOs, and utility representatives. However, excessive lag time was noted between EBS messages disseminated to the public and information releases to media persons inside the JPIC. In one case, the emergency classification level notice board was deliberately downgraded from a "Site Area Emergency" to "Alert" in order to match the prepared briefing. In other words, the schedule was maintained regardless of actual conditions.

This resulted in a significant disjunction between ECL changes and releases to the public.

AREA RECOMMENDED FOR IMPROVEMENT: It is recommended that there be immediate spot announcements of changes in ECLs and protective actions to the media at the JPIC rather than waiting for the next briefing.

Five briefings were held for media personnel in order to provide current information regarding changes in ECLs, changing utility plant conditions and protective actions recommended. The location of Reception and Congregate Care Centers was disseminated to the public and evacuation areas and routing discussed. At the end of the General Emergency, plans for reentry were presented to the media by the JPIC briefing team. This briefing also included a timetable for reentry to the 2-mile radius (96 hrs) and the need for continuing radiological monitoring in the affected area. Three news releases and information kits were provided to supplement oral briefings. A question and answer period was included at the end of each media briefing.

Objective #26 Rumor Control

The Rumor Control system was activated and staffed by volunteers from five (5) community organizations from Monroe and Wayne Counties. A total of 7 persons were involved. The five rumor control telephone numbers were given to the media (at the beginning of each of five briefings) for their use in informing the public. Five telephone lines were used to provide accurate, responsive information to the concerned public. The rumor control staff used a Protection Action Handbook, information from the vellow Pages of the local telephone directory, and up-to-date information messages relating to recommended protective actions to respond to calls.

The Rumor Control system demonstrated in the Fermi 2-88 Exercise corrected the Monroe County Area Requiring Corrective Action established during the previous exercise.

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REMEDIAL EXERCISE

FERMI NUCLEAR POWER STATION

MONROE COUNTY

WAYNE COUNTY

Remedial Exercise Date: November 3, 1988

Prepared by

FEDERAL EMERGENCY MANAGEMENT AGENCY REGION V 175 WEST JACKSON BOULEVARD CHICAGO, ILLINOIS 60604 On May 18, 1988, the fourth scheduled joint exercise for the Fermi Nuclear Power Plant was conducted involving the utility, Detroit Edison Company, the Michigan State Police/Emergency Management Division, and the Counties of Monroe and Wayne. As a result of the exercise Monroe County had four deficiencies, Wayne County had one deficiency. In a letter of August 17, 1988, from FEMA Region V to the Michigan State Police/Emergency Management Division, guidance was provided for corrective actions to both the deficiencies and the areas requiring corrective action. Also in that letter was a request for a schedule of corrective actions. To clear the deficiencies a remedial exercise had to be conducted prior to December 15, 1988. A meeting was held by the State in September 1988 to discuss all the weaknesses observed during the exercise with particular emphasis on the deficiencies. FEMA Region V was represented at that meeting. The date of November 3, 1988 was mutually agreed upon for the two Counties to redemonstrate their radiological emergency response capability.

The deficiencies cited during the May 18, 1988 exercise are:

Monroe County

- 1. A complete shift change at one time by the entire executive group contributed to the confusion in the processing of protective action recommendations to the public. (NUREG 0654/FEMA REP 1, Planning Standard A.4.)
- 2. The mishandling of messages resulted in the failure to provide recommended protective actions to the population in the risk area. (NUREG 0654/FEMA REP 1, Planning Standard A.2.a.)
- 3. The first EBS message giving protective actions was not complete. It did not contain the physical boundary descriptions of the area requiring protective action. (NUREG 0654/FEMA REP 1, Planning Standard E.6.)
- 4. The subsequent EBS messages giving protective actions and other emergency information were incomplete or inaccurate. Specifically, the second EBS message also did not contain the physical boundary descriptions. (NUREG 0654/FEMA REP 1, Planning Standard E.7.)

Wayne County

1. Effective emergency worker exposure control was not demonstrated in this exercise. (NUREG 0654/FEMA REP 1, Planning Standards K.3.a., K.3.b. & K.4.)

This report summarizes both Monroe and Wayne Counties' redemonstrations of radiological emergency response to clear the deficiencies.

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Monroe County

The scenario was driven by the State Emergency Management Division at the State EOC in Lansing, Michigan. A limited staff at that location participated in the remedial exercise, only to the extent to trigger key events for the County's response.

The Monroe County Emergency Operations Center (MCEOC) on Raisinville Road was activated for the exercise. The simulated Alert was declared at 0800. The Governor's declared "State of Disaster" was simulated at 0815. At that same time the State EOC (SEOC), the Joint Public Information Center (JPIC) and the Monroe County EOC were activated. The State EOC achieved partial activation by 0830 and the County was fully staffed by 0846. Beginning at 0830 and periodically there after the County EOC staff were briefed by the County Operations Officer. He requested every agency at the operations table to participate in staff briefings. The briefings were informative and timely. Represented in the County EOC were: County Agriculture (Extension Office), County Health and Medical, County Emergency Medical Services (EMS)/Transportation, Fire Services (represented by the City of Monroe), the Operations Officer, County Sheriff, County Public Works, County School Services, County Social Services and State Liaison.

Messages were drafted, reproduced and distributed internal to the EOC. Vital message information was faxed and/or voice transmitted to the State and simulated transmitted to Wayne County EOC and the JPIC. Messages were concise, accurate and timely. Message handling was effective and efficient. The demonstration clears deficiency #2.

The Communications Officer placed the Emergency Broadcast Station (EBS) on standby through actual telephone contact with Detroit radio station WJR, this occurred at 0854. At 0910 the emergency classification level elevated to Site Area Emergency with no protective actions recommended. The General Emergency was declared at 0940 with protective actions for evacuation of all sectors out to two miles and evacuation out to five miles in sectors P, Q and R. Later in the General Emergency (1020) sectors L, M and N out to five miles were added and eventually (1100) sector K was added to the evacuation area.

The Communications Officer, upon receiving the drafted EBS message from the executive group, simulated calling the EBS station, read the scripted message giving the physical boundaries of the evacuation area. His actions and those of the Executive Group were accurate and timely. The initial message went out at 0950 for broadcast by the EBS station, WJR. Subsequent EBS messages were handled in the same manner. The action demonstrated by the Communications Officer and the Executive Group clears deficiency #3 & #4.

The State, when making the recommendations for sectors to be added the emphasis needs to be made "in addition to". It was not clear in the County EOC if the wind caused a significant shift of three sectors or an error had been made in the designation of the initial three sectors. If the message would have had the six cumulative sectors, the message would have been better interpreted.

At approximately 1200 noon the executive group began phasing in the shift change. Initially the Chief Executive was replaced with a member of the County Commission replacing the Chairman of the County Board. After that replacement the Chief of Staff was replaced along with the Public Information Officer and eventually the Executive Secretary. The transition was satisfactorily implemented. Periodic training should be continued to familiarize the Executive Group staff with the implementation of procedures and skills to effectively execute decisions and actions. Deficiency #1 is cleared by the demonstrated action of the Executive Group.

The remedial exercise for Monroe County ended at approximately 1230. Following the exercise the Monroe County EOC staff and support staff critiqued their participation. They expressed their pleasure at their improved handling of messages and pledged their support to further improvement. They discussed use of maps in the EOC and the refinement of maps. They also cited the proposed remodeling of the operations room, communications room and the addition of communications equipment. The proposal is to move the Executive Group from an isolated room into the general operations room for improved use of support displays and materials and more direct eye-to-eye communications. This move will enhance the implementation of emergency response.

Wayne County

During the May 18, 1988 exercise Wayne County was cited with a deficiency in its ability to adequately demonstrate the issuance of dosimetry, record individual exposure and in general control and monitor emergency worker exposure. Specifically, the problem was insufficient personnel to issue exposure recording devices and instructions.

For the redemonstration the County prepared a folded leaflet which is included in a newly developed emergency worker packet. The packet contains the four page Individual Radiation Record which requires completion by the individual receiving the dosimetry. Instructions are contained on the leaflet on the use of dosimetry and the recording of exposure. The packet also contains one CDV-138 pocket dosimeter, one CDV-742 Pocket dosimeter and one clip-on film badge. These packets are made up in advance and stocked aboard the County's communications van

which will be located adjacent to the primary Congregate Care/Reception Center/Emergency Worker Decontamination Station.

Demonstration for evaluation was: 1. the issuance of the Individual Radiation Record Packet by qualified County staff from the County communications van; 2. using four volunteer subjects from the County emergency response staff who were walked through a contamination survey process using CD survey meters, entered the van, were individually given instructions on the use of the materials in the new packet and simulated dispatched to the field.

In that the deficiency alone is difficult to effectively redemonstrate, the County Emergency Management organization devoted considerable time to remedy the problem of the issuance of record keeping devices and adequate materials and instructions to protect individuals and afford exposure control. Senior County officials expressed satisfaction on their part to develop an entirely new process and procedure. As a part of the total new package a Standard Operating Procedure (SOP) has been drafted and was used in the remedial exercise. The SOP Will undergo final review and become a part of the SOPs held by the County. Copies will be distributed to holders of record.

The redemonstration and development of materials has cleared the deficiency.

DEFICIENCIES State of Michigan

NUREG 0654 Criteria

Summary Statement

Proposed Corrective Action Estimated Date

There were no deficiencies identified for the State of Michigan.

AREAS REQUIRING CORRECTIVE ACTION State of Michigan

NUREG 0654 Criteria

Summary Statement

Proposed Corrective Action Estimated Date

There were no areas requiring corrective action identified for the State of Michigan.

AREAS RECOMMENDED FOR IMPROVEMENT State of Michigan

- 1. Although no problems were noted, it is recommended that training be provided for new communications operators at the State Police Command Headquarters due to the recent promotions and reassignments.
- 2. It is recommended that personnel be reminded of the importance of exercise messages read and written beginning with the identification indicating that the message is for "Test" or "Drill" purposes.
- 3. Better utilization of the maps and displays available in the JPIC would enhance the briefings.
- 4. It is recommended that there be immediate spot announcements of changes in ECLs and protective actions to the media at the JPIC rather than waiting for the rext briefing.

DEFICIENCIES Monroe County

NUREG 0654 Criteria	Summary Statement	Proposed Corrective Action	Estimated
A.4	A complete shift change at one time by the entire executive group contributed to the confusion in the processing of protective action recommendations to the public.	Shift changes will be accomplished by phasing in replacement staff personnel at those times that will not disrupt the response efforts that may be taking place within a group or by an individual.	-3 Nov 88
A.2.a	The mishandling of messages resulted in the failure to provide recommended protective actions to the population in the risk area.	Changes in the personnel that staff the message center and additional training of this staff on the handling of messages and other activities conducted in the message center will provide Monroe County with the capability to properly handle all messages.	3 Nov 88
E.6	The first EBS message giving protective actions was not complete. It did not contain the physical boundary descriptions of the area requiring protective action.	Additional training of the Executive Group staff (CEO, Chief of Staff and Public Information Officer) and the inclusion of supplemental information in the boundary book will be accomplished in order to provide the capability to issue complete and accurate EBS messages.	
E.7	The subsequent EBS messages giving protective actions and other emergency information were incomplete or inaccurate. Specifically, the second EBS message also did not contain the physical boundary descriptions.	Additional training of the Executive Group staff (CEO, Chief of Staff and Public Information Officer) and the inclusion of supplemental information in the boundary book will be accomplished in order to provide the capability to issue complete and accurate EES messages.	

AREAS REQUIRING CORRECTIVE ACTION Monroe County

NUREG 0654 Criteria	Summary Statement	Proposed Corrective Action	Estimated Date
A.4	A full shift change was not demonstrated as designed in objectives and scenario.	A full shift change of all personnel will be demonstrated at the next exercise.	1990
J.10.j & 0.4.d	First shift law enforcement personnel in the EOC were unfamiliar with predetermined traffic and access control points. The Operations Chief was observed explaining where to locate this information in the plan and how to use this information once located.	Additional predetermined access control point information sheets have been developed (completed August 1988) training sessions to be conducted for law enforcement EOC staff to make them more familiar with the RERP and to provide them with the further instructions of the use of the SOP and the information included therein.	0
G.1 & J.10.g	The bus driver and the public information brochure indicate that St. Charles School would relocate to St. Stevens School in New Boston while the Monroe County Plan indicates that the reception school would be the Mason Senior High School which is the reception school for the four schools in the Jefferson School District.	The Monroe County Plan was changed in July 1988 to indicate that the students from St. Charles School would relocate at St. Stephen School in New Boston. (Refer School Services Annex; Attachment A; Page M-1-Al, Rev 7/88)	Jul 88
K.4	The Radiological Officer on the first shift provided incorrect information as to the exposure limit which required notification by field personnel.	The radiological officer serving first shift responsibilities corrected his misstatement at the time of the Fermi II exercise. However, all radiological officers serving E.O.C. duties have thoroughly reviewed the exposure criteria for emergency worker personnel. It is not anticipated that this misstatement will reoccur.	Nov 88

AREAS REQUIRING CORRECTIVE ACTION Monroe County

NUREG 0654 Criteria	Summary Statement	Proposed Corrective Action	Estimated Date
J.12	The registration and radiological monitoring conducted at the reception center was not coordinated with similar activities being conducted at the mass care facility.	The current format for reception center operations is currently being revised. Such revision will be addressing the issue of coordination with mass care facility operations as well as addressing several other issues of concern to the local response team.	Nov 88
K.5.b	The emergency worker decontamination station was not established at a location identified in the plan.	The alternate Emergency Worker Decontamination Station located at the County Dog Pound will be duly designated in the Master Plan.	Nov 88
K.5.b & 0.4.c	Personnel conducting radiological monitoring at the emergency worker decontamination station utilized some inproper techniques.	The improper monitoring technique observed during this exercise was immediately corrected by the Radiological Monitor Team Supervisor. However, more intensive training of radiological monitors is proposed. Provide such additional training sessions will address the issue of improper techniques being utilized by field radiological monitors.	ling s
к.3.ь	The decontamination procedures do not address the preservation of emergency worker dosimetry during the decontamination process.	Decontamination procedures will be revised to include provision for the preservation of emergency worker dosimetry during the decontamination process.	Nov 88
N.2.c, N.3.b & N.3.f	FEMA was not informed in advance as to the date and time of the medical drill. (Note: The time and location of the school and emergency worker decontamination demonstrations were not finalized until just prior to and during the exercise respectively.)	No corrective action required by Monroe County.	N/A

AREAS RECOMMENDED FOR IMPROVEMENT Monroe County

- 1. The professional staff assigned to the EOC should identify information to be posted on the status boards and either post it themselves or provide the necessary information in written form for someone else to post.
- 2. Routinely provide emergency information concerning ongoing radiological excremely response actions and furnish maps or information of important public service locations and routes to personnel assigned to traffic and access control duties.
- 3. The meetings within the School District to review emergency response procedures should be conducted on a continuing basis. These types of meetings should also be conducted within the other two Monroe County School Districts which could be impacted by Fermi-2.
- 4. Dosimetry and exposure control activities should be exphasized during the next annual training conducted for bus drivers. Copies of the written dosimetry instructions should be provided to the bus drivers during the training session which they can refer to throughout the year and during in-service training.
- 5. A step ladder would facilitate vehicle monitoring in that the monitor should use it to minimize his contact with the vehicle and to reach areas generally inaccessible while standing on the ground. This would be particularly useful for buses and other large emergency vehicles.
- 6. Monroe County should consider an amendment to the decontamination station procedures to include a survey of emergency workers' hands and feet as he disembarks from the vehicle. This survey would provide an early indication of vehicle interior contamination and assist in containing the spread of contamination as the emergency worker moved within the facility.

AREAS RECOMMENDED FOR IMPROVEMENT Nonroe County

- 7. Monroe County should consider a change in their plan to include the logging of vehicles, equipment and personnel which are processed through the emergency worker decontamination station and found to be uncontaminated. This record might be useful to the County following a radiological emergency.
- 8. Better utilization of the maps and displays available in the JPIC would enhance the briefings.

DEPICIENCIES Wayne County

Criteri	HENES IN HER STORE TO THE TENES IN THE STORE IN	Proposed Corrective Action	Estimated Date
K.3.a, 6.3.b & K.4	Effective emergency worker exposure control was not demonstrated in this exercise.	Wayne Co. will demonstrate effective emergency worker exposure control at a remedial exercise	2 pm 11/3/88

AREAS REQUIRING CORRECTIVE ACTION

NUREG 065 Criteria	[발발] 이번 열어나 있다면 내려가 되었다면서 이 이 이 이 나를 보고 있다면서 하나 하는데 보고 있다면서 하는데 되었다.	Proposed , Fstimated Corrective Action Date	
E.2	Pre-exercise material submitted by the State indicated the first shift JPIC staff would be activated and mobilized correcting the ARCA from	Wayne Co. successfully demonstrated JPIC-PIO alert/mobilization to the JPIC in a timely manner, correcting the 1986 ARCA.	
	the previous exercise. The pre- positioned second shift Wayne County PlO at the JPIC in actuality participated in the initial JPIC media briefings until the first shift PIO arrived at the JPIC.	In future exercises, the Wayne Co. 2nd shift JPIC-PI will not participate in JPIC operations until the appropriate time.	
E.7	Insufficient information was released in the EBS messages pertaining to ad hoc respiratory protection.	Not applicable - Radiological releases from the plant did not require ad hoc respiratory protection	
N.3.b & N.3.f	Wayne County's manning three access control points was not evaluated since FENA was not aware this was to happen. Consequently a Federal evaluator was not available during the exercise.	Not an Exercise Objective. Exercise objectives for Wayne Co. indicated EOC demonstration only of access control.	
J.10.g & G.1	The Wayne County Plan and the Public Information Brochure list different numbers of schools in the EPZ.	The Wayne Co. Plan and the Public Information Browne do not list different numbers of schools in the EPZ. The brochure and plan do, however, provide that students from schools in the Woodhaven and Trenton School Districts would be evacuated to Taylor Center High School if necessary during a Fermi emergency.	

This language was placed in the plan and brochure to provide a buffer of safety should a Fermi emergency impact on the schools in school districts that are

contiguous to the districts in the EPZ.

(Continued on page 65).

JUL 84 '89 14:44 FEMA CHICAGO REGION 5

SUMMARY LISTING OF EXERCISE WEARNESSES FERMI-2 RADIOLOGICAL EMERGENCY PREPAREONESS EXERCISE MAY 18, 1988

AREAS REQUIRING CORRECTIVE ACTION Wayne County

Estimated Date

NUREG 0654 Criteria	Summary Statement	Proposed Corrective Action
в.2	Pre-exercise material submitted by the State indicated the first shift JPIC staff would be activated and mobilized correcting the ARCA from the previous exercise. The pre- positioned second shift Mayne County PIO at the JPIC in actuality participated in the initial JPIC media briefings until the first shift PIO arrived at the JPIC.	
R.5	Wayne County did not sound the sirens within the County, simultaneously with Moncoe County.	
E.7	Insufficient information was released in the EBS messages pertaining to ad hoc respiratory protection.	
N.3.b & N.3.f	Wayne County's manning three access control points was not evaluated since FEMA was not aware this was to happen. Consequently a Federal evaluator was not available during the exercise.	
J.18.9 6 G.1	The Wayne County Plan and the Public Information Brochure list different numbers of schools in the BPZ.	

SUMMARY LISTING OF EXERCISE WEAKNESSES FERMI-2 KADIOLOGICAL EMERGENCY PREPAREDNESS EXERCISE MAY 18, 1988

AREAS REQUIRING CORRECTIVE ACTION karne County

NUREG 0		Proposed Estimated Corrective Action Date
к.з.ь	Dosimetry at access control points was not observed. In the exercise manual for offsite authorities it was identified that Wayne County would not dispatch personnel to an	Not an Exercise Objective for access control points - Since field demonstration of access control points was not an objective for Wayne Co., emergency worker dosimetry at the access control points could not be an objective.

The facility used for the exercise, J. 10.h Woodhaven School, is not the facility identified as the primary or alternate reception, congregate care or emergency worker decontamination center in the Wayne County Plan. Additionally, the consolidation of these three activities nto a single demonstration made it very difficult to differentiate among the

was conducted.

access control point. Therefore. no evaluation of dosimetry and access control personnel abilities

The Wayne Co. Plan (page M-1-5) identifies Romulus. Belleville, and Taylor Center High Schools as facilities that may be used as reception and/or decontamination centers during a nuclear power plant incident, and that additional schools are available for this purpose. Although the words "primary" and "secondary" are not used to describe reception/decontamination centers. it is the intent of the plan to designate Romulus. Belleville, and Taylor Center High Schools as primary various capabilities being demonstrated. reception/decontamination centers, and all other additional schools as secondary centers. This allows emergency response managers the flexibility to use other available schools if better suited at the time to the emergency situation. (Continued on page 65).

SUMMARY LISTING OF EXERCISE WEAKNESSES FERMI-2 RADIOLOGICAL EMERGENCY PREPAREDNESS EXERCISE MAY 18, 1988

AREAS RECOMMENDED FOR IMPROVEMENT Wayne County

- 1. Wayne County should continue to study ways to reduce noise levels and to determine if the operations room can be enlarged.
- 2. Meetings within the Wayne County School Districts to review emergency resource procedures should be conducted on a continuing basis.
- 3. Better utilization of the maps and displays available in the JPIC would commance the briefings.



· IES J. BLANCHARD, GOVERNOR DEPAR MENT OF STATE POLICE COL R T. DAVIS, DIRECTOR

EMERGENCY MANAGEMENT DIVISION

KNAPPS CENTRE, SUFFE 303 300 SOUTH WASHINGTON SQUARE LANSING MICHIGAN 18912

PRIMING 519 321 7050

March 30, 1988

Mr. Wallace J. Weaver, Chairman Regional Assistance Committee FEMA, Region V 175 W. Jackson, 4th Floor Chicago, IL 60604

RE: 1988 E. Fermi 2 REP Off-Site Scenario

Dear Mr. Weaver:

Enclosed is the off-site scenario for the Enrico Fermi-2 1988 REP Exercise scheduled for May 18, 1988. The scenario shows key off-site events and actions, as well as approximate timing. The scenario is based on the on-site scenario developed by the Detroit Edison Company. Our review of the Detroit Edison Company's scenario indicates that all off-site objectives may not be driven by the on-site releases and meteorological conditions. Specifically, off-site effects may not be of the level necessary to drive protective actions into Wayne County.

We would request that FEMA coordinate the off-site scenario review with the Nuclear Regulatory Commission to insure that state and local objectives can be met.

If you have any questions, please feel free to contact this office.

Sincerely.

F/Lt. James M. Tyler

Commanding Officer

Pre-Disaster Services Section

Attachments

cc: Mr. Gordon Wenger, FEMA

Battle Creek

CO 11.1 C2 UM 1

Attachment I

ENRICO FERMI-2 R.E.P. EXERCISE - 88

Partial participation R.E.P. Exercise Scenario (Controlled Information)

May 18, 1988

OFF-SITE AUTHORITIES ACTIVITIES

EXERCISE SCENARIO

Background Information

- 1. The E. Fermi 2 Exercise is scheduled for May 18, 1988.
- 2. This will be a full participation exercise for Monroe and Wayne Counties and a partial participation exercise for the State of Michigan.
- 3. Reference is made here to the Exercise Objectives (dated March 3, 1988).
- 4. Attached is a portion of the utility onsite scenario.
- 5. Facilities to be activated include:
 - a. SEOC Lansing (partial)
 - b. Monroe EOC Monroe County
 - c. Wayne EOC Wayne County
 - d. Joint Public Information Center Monroe Community College
 - e. Reception/Decontamination/Congregate Care Centers
 - f. Access Control Points (Monroe County only)
- 6. Full staffing will be demonstrated for all local EOC positions through shift changes or double staffing. Local JPIC personnel will also be double staffed or shift changed. Reception/Decontamination/Congregate Care will not shift change, but will have staff listings.
- 7. All facilities (EOC's and JPIC) will be in normal daily status.
- Monroe and Wayne Counties will simulate siren and EBS activation. EBS
 message content will be coordinated between the two counties. Rumor
 control will be demonstrated at the JPIC.
- 9. Wayne and Monroe Counties will open reception/decontamination centers.

TIME	SCENARIO	ONSITE ACTIVITIES	SEOC !	MEOC I	WEOC	JPIC
0700	1 0009	-Initial briefing on-site	NO OFF-SIT	E ACTIVITIES BEGIN	UNTIL APPROXIMATEL	Y 9:15 A.M.
		-Reactor at 95% to 100% power		!	!	
0730	1 0030	-Loss of 6 north feed water heater				
	1 1	-MST Radiation levels increased due to fuel clad cracking	1	- i	 	
0815	0115	-Loss of recirc pump "R"				
0835	0135	-UNUSUAL EVENT declared				
		-Notifications made to state/ local government		thorities notified -MEOC/WEOC and JPI of NUE and report SOP's. (Limited of alert and mobilize	to MEOC per lemonstration of	(KEY:
	-	-Plant begins power reduction				a = Actual a = Sigulat

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TIME	SCENARIO I TIME	ONSITE ACTIVITIES	SEOC I	MEOC	MEOC I	JPIC
		-Notifications made to state and local governments				
	1 1 1 1		-EMD and MDPH/RHD; confer and make joint assessment	may not d Emergency depending clans and	ernments may or eclare State of under local plans on local REP timing of s Disaster	
			-EMD recommends to governor that he declare state of disaster under Act 390		1	
		-Plant provides 15 minute up- dates during ALERT level	-Governor concurs and orders acti- vation of MEPP and local plans			-JPIC notified of plant status and off-site actions
			-SEOC notifies MEOC/WEOC and JPIC of Disaster Declaration			-Holds press briefings on regular schedule

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OFF-SITE SCENARIO TIME/ACTIVITY

TIME	SCENARIO	ONSITE ACTIVITIES	SFOC I	MEGC I	MEOC	JPIC
	1 1 1		-SEOC notifies FEMA, Ohio, Ontario of Alert status and disaster declar-		tional	
1015	0315	-TSC functional	-SEOC passes plant data to counties and JPIC as it is received			
		-Loss of recirc pump seal	!		,	
1016	0316	-CHRRM's reading increases to 4600 rads/hr				
1030	1 0330 1	-SITE AREA EMERGENCY declared, loss of 2 barriers				
		-Plant notifies state of SAE	-State receives notice of SAE		!	1
			-SEOC notifies WEOC/MEOC and JPIC of SAE	-MEOC/WEOC receiv -EBS brought to s -Siren operabilit	tandby	JPIC notified of SAE. Holds press briefings

TIME	SCENARIO	ONSITE ACTIVITIES	SEOC	MECC	MEOC	JPIC
			-SEOC notifies FEMA, Ohio and Ontario of SAE A			
1035		-Drywell pressure decrease due to crack in Torus weld seam				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	1	-Projected dose at site boundary exceeds 1 %.			1 1 1 1	
1110	1 0410	-Emergency Direc- tor declares a GENERAL EMERGENCY				1
	!	-Notification made to SEOC	-SEOC receives motification of GENERAL EMERGENCY			
		 	-Radiological -Radiological			
			recommends pro- tective actions to governor			1

TIME	I SCENARIO I	ONSITE ACTIVITIES	SZOC	MEOC I	MEOC	JPIC
1130	0430	-EOF functional	-Governor orders p. otective actions. SEOC notifies local ECC's and JPIC of PA's -SEOC notifies FEMA, Ohio and Ontario of GZNERAL EMERGZNCY	-MEOC and WECC action and EBS per local require it well and insurant control, and insurant decontamination at care centers are	ablish access re reception/ nd congregate	-JPIC provides information of General Emer- gency and PA's ordered by Governor A

TIME	I SCENARIO	ONSITE	SEOC !	MEOC	MEOC	JPIC .
1230 to 1430		-Repairs made to primary contain- ment and recirc pump	-SECC monitors release-modifies PA's as needed a		 	1 .
			local EOC's, FEMA, Ontario	-Local EOC's begi activities. Thi	s will consist of cions concerning status and close //Decontamination	public on dees-
			-Reentry and recovery discus- sions - limited to tabletop dis- cussions among state and local EOC's - media information from JPIC -Exercise terminated			

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