Federal Emergency Management Agency
Region V
536 South Clark Street, 6th Floor
Chicago, IL 60605-1521

DEC 1 1 2002

Mr. James Dyer, Regional Administrator
U.S. Nuclear Regulatory Commission Region III
801 Warrenville Road
Lisle, Illinois 60532-4351

Dear Mr. Dyer:

Enclosed is the Final Report for the Radiological Emergency Preparedness Plume Pathway Exercise conducted on September 24, 2002, for the Enrico Fermi 2 Nuclear Power Plant.

No Deficiencies were identified during this exercise. Two Areas Requiring Corrective Action (ARCA) were identified during this exercise. The first ARCA was identified in Monroe County under Criterion 5.b.1 wherein staff at the Public Inquiry Hotline (Emergency Information/Rumor Control Center) provided inaccurate or improper information to the public. The second ARCA was identified in Wayne County under Criteria 5.a.1 wherein Emergency Alert System messages included a Livestock Advisory, which was in conflict with the State of Michigan Department of Agriculture's decision not to issue this advisory. There was one prior ARCA for the State of Michigan identified under Criterion 2.b.2, Protective Action Decision Making, which was resolved during this exercise. A detailed description of each issue can be found in Part IV of the final report.

Based on the results of the September 24, 2002, exercise, the offsite radiological emergency response plans and preparedness for the State of Michigan, and the Counties of Monroe and Wayne, site-specific to the Enrico Fermi 2 Nuclear Power Plant, can be implemented. These plans are adequate to provide reasonable assurance that appropriate measures can be taken offsite to protect the health and safety of the public. Therefore, Title 44 CFR, Part 350, approval of the offsite radiological emergency response plans and preparedness for the State of Michigan and the Counties of Monroe and Wayne, granted on March 9, 1987, remains in effect.

Copies of this report were transmitted to the Nuclear Regulatory Commission National Office, the Federal Emergency Management Agency National Office, and the State of Michigan. If you have any questions, please let me know or have a member of your staff contact Woodie Curtis at (312) 408-5528.

Sincerely,

Edward G. Buikema
Regional Director

Enclosure

Final Exercise Report

Enrico Fermi 2 Nuclear Power Plant

Licensee: Detroit Edison Company

Exercise Date: September 24, 2002

Report Date: December 11, 2002

FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION V
536 South Clark Street, 6th Floor
Chicago, IL 60605

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1. EXECUTIVE SUMMARY

On September 24, 2002, an exercise was conducted in the plume exposure pathway emergency planning zone (EPZ) around the Enrico Fermi 2 Nuclear Power Plant by the Federal Emergency Management Agency (FEMA), Region V. The purpose of this exercise was to assess the level of State and local preparedness in responding to a radiological emergency. This exercise was held in accordance with FEMA's policies and guidance concerning the exercise of State and local Radiological Emergency Response Plans (RERPs) and procedures.

The most recent exercise at this site was conducted on October 25, 2000. The qualifying emergency preparedness exercise was conducted on February 2, 1982.

FEMA wishes to acknowledge the efforts of the many individuals who participated in this exercise. In the State of Michigan the risk counties of Monroe and Wayne participated along with the State government.

Protecting the public health and safety is the full-time job of some of the exercise participants and an additional assigned responsibility for others. Still others have willingly sought this responsibility by volunteering to provide vital emergency services to their communities. Cooperation and teamwork on the part of all the participants was evident during this exercise.

This report contains the evaluation of the biennial exercise.

The State and local organizations, except where noted in this report, demonstrated knowledge of their emergency response plans and procedures, and adequately implemented them. No Deficiencies were identified during this exercise. Two Areas Requiring Corrective Action (ARCA) were identified during this exercise. The first ARCA was identified in Monroe County under Criterion 5.b.1 wherein staff at the Public Inquiry Hotline (Emergency Information/Rumor Control Center) provided inaccurate or improper information to the public. The second ARCA was identified in Wayne County under Criteria 5.a.1 wherein Emergency Alert System messages included a Livestock Advisory, which was in conflict with the State of Michigan Department of Agriculture's decision not to issue this advisory. There was one prior ARCA for the State of Michigan identified under Criterion 2.b.2, Protective Action Decision Making, which was resolved during this exercise.

II. INTRODUCTION

On December 7, 1979, the President directed FEMA to assume the lead responsibility for all off-site nuclear planning and response. FEMA's activities are conducted pursuant to 44 Code of Federal Regulations (CFR) Parts 350, 351, and 352. These regulations are a key element in the Radiological Emergency Preparedness (REP) Program that was established following the Three Mile Island Nuclear Station accident in March 1979.

FEMA Rule 44 CFR 350 establishes the policies and procedures for FEMA's initial and continued approval of State and local governments' radiological emergency planning and preparedness for commercial nuclear power plants. This approval is contingent, in part, on State and local governments' participation in joint exercises with licensees.

FEMA's responsibilities in radiological emergency planning for fixed nuclear facilities include the following:

- Taking the lead in off-site emergency planning and in the review and evaluation of RERPs and procedures developed by State and local governments;

- Determining whether such plans and procedures can be implemented on the basis of observation and evaluation of exercises of the plans and procedures conducted by State and local governments;

- Responding to requests by the U.S. Nuclear Regulatory Commission (NRC) pursuant to the Memorandum of Understanding between the NRC and FEMA dated June 17, 1993 (Federal Register, Vol. 58, No. 176, September 14, 1993); and

- Coordinating the activities of Federal agencies with responsibilities in the radiological emergency planning process:

  - U.S. Department of Agriculture;
  - U.S. Department of Commerce;
  - U.S. Department of Energy;
  - U.S. Department of Health and Human Services;
  - U.S. Department of the Interior;
  - U.S. Department of Transportation;
  - U.S. Environmental Protection Agency;
  - U.S. Food and Drug Administration; and
  - U.S. Nuclear Regulatory Commission.

Representatives of these agencies serve on the FEMA Region V Regional Assistance Committee (RAC), which is chaired by FEMA.

Formal submission of the RERPs for the Enrico Fermi 2 Nuclear Power Plant to FEMA Region V by the State of Michigan and involved local jurisdictions occurred on

March 22, 1982. Formal approval of these RERPs was granted by FEMA on March 9, 1987, under 44 CFR 350.

A REP exercise was conducted on September 24, 2002, and evaluated by FEMA Region V, to assess the capabilities of State and local emergency preparedness organizations in implementing their RERPs and procedures to protect the public health and safety during a radiological emergency involving the Enrico Fermi 2 Nuclear Power Plant. The purpose of this exercise report is to present the exercise results and findings on the performance of the off-site response organizations (ORO) during a simulated radiological emergency.

The findings presented in this report are based on the evaluations of the Federal evaluation team, with final determinations made by the FEMA Region V RAC Chairperson, and approved by the Regional Director.

The criteria utilized in the FEMA evaluation process are contained in:

- NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980;

- FEMA-REP-14, "Radiological Emergency Preparedness Exercise Manual," September 1991; and

- FEMA "Radiological Emergency Preparedness: Exercise Evaluation Methodology" as published in the Federal Register Notice/Vol. 67, No. 80, dated April 25, 2002.

Section III of this report, entitled "Exercise Overview," presents basic information and data relevant to the exercise. This section of the report contains a description of the plume pathway EPZ, a listing of all participating jurisdictions and functional entities, which were evaluated, and a tabular presentation of the time of actual occurrence of key exercise events and activities.

Section IV of this report, entitled "Exercise Evaluation and Results," presents detailed information on the demonstration of applicable exercise criteria at each jurisdiction or functional entity evaluated in a jurisdiction-based, issues-only format. This section also contains: (1) descriptions of all Deficiencies and ARCAs assessed during this exercise, recommended corrective actions, and the State and local governments' schedule of corrective actions, if applicable, for each identified exercise issue; and (2) descriptions of unresolved ARCAs assessed during previous exercises and the status of the OROs' efforts to resolve them.

III. EXERCISE OVERVIEW

Contained in this section are data and basic information relevant to the September 24, 2002, exercise to test the off-site emergency response capabilities in the area surrounding the Enrico Fermi 2 Nuclear Power Plant. This section of the exercise report includes a description of the 10-mile plume pathway EPZ, a listing of all participating jurisdictions and functional entities that were evaluated, and a tabular presentation of the time of the actual occurrence of key exercise events and activities.

A. Plume Emergency Planning Zone Description

The Enrico Fermi 2 Nuclear Power Plant is comprised of approximately 1,120 acres of land owned by DTE Energy. The site is bounded on the north by Swan Creek, on the east by Lake Erie, on the south by Pointe Aux Peaux Road, and on the west by Toll Road. Entrance to the site is from Enrico Fermi Drive (a private road owned by utility) to the west, and from Pointe Aux Peaux Road to another private road owned by utility to the south.

The plant is approximately six miles northeast of Monroe, Michigan; 30 miles southwest of downtown Detroit, Michigan; and 25 miles northeast of downtown Toledo, Ohio. The latitude of the site is 41° 57' 48" north and the longitude is 83° 15' 31" west. Site elevations range from the level of Lake Erie, on the eastern edge of the site, to approximately 25 feet above the lake level, on the western edge of the site.

The 10-mile EPZ includes parts of Monroe and Wayne Counties in Michigan; parts of Lake Erie; and the southern tip of Essex County, (Bay Point) Canada. Most of the 10-mile EPZ lies within Monroe County. Coordinated efforts occur between the two counties, which are divided into five Protective Action Areas. The following jurisdictions are located within the 10-mile EPZ: Ash Township, Carleton Village, Berlin Township, Estral Beach Village, Exeter Township, South Rockwood Village, Frenchtown Township, Monroe City, Monroe Township, Raisinville Township, Brownstown Township, Gibraltar City, Flat Rock City, and Rockwood City. The population in the 10-mile EPZ, based on the 2000 census, is 88,897.

Land use within the EPZ is diverse. About 55 percent of the land is farmland; the majority of agricultural land is located in Monroe County. The portion of Wayne County nearest to Detroit is a growing residential suburb. Twelve state parks and recreational areas, and several light industries are located within the 10-mile EPZ.

There are three major roads within 10 miles of the plant, Interstates 75 and 275, and U.S. Route 24. Their closest approach to the plant is 4.1 miles, 4.2 miles and 5.8 miles, respectively. Five railroad lines operate within 10 miles of the plant. These include the Canadian National Railroad, the Norfolk Southern Railroad, the Chesapeake and Ohio Railroad, the Detroit Toledo and Ironton Railroad, and the

Detroit and Toledo Shore Line Railroad. There are no major airports within 15 miles of the site.

B. Exercise Participants

The following agencies, organizations, and units of government participated in the Enrico Fermi 2 Nuclear Power Plant exercise on September 24, 2002:

STATE OF MICHIGAN

Department of Agriculture
Department of Community Health
Department of Environmental Quality
Department of Natural Resources
Department of State Police
Department of Transportation
Emergency Management Division
Family Independence Agency
Michigan Disaster Medical Assistance Team
Office of the Governor - Executive Office
Office of Services to the Aging
Special Operation Division
Detroit Edison Liaison
Province of Ontario, Canada

RISK JURISDICTIONS

MONROE COUNTY

Agricultural Services
County Board of Commissioners
Emergency Management Division
Emergency Medical Services
Family Independence Agency
Fire Services
Frenchtown Township
Health Services
Human Services
Intermediate School District
Michigan State Liaison
Monroe City Police Services
Public Affairs
Public Works
Road Commission
Sheriff's Office
Social Services
Detroit Edison Liaison

WAYNE COUNTY

Emergency Management Division
Brownstone Police Department
Brownstown Township
City of Gibraltar
City of Flat Rock
City of Rockwood
County Board of Commissioners
Family Independence Agency
Fire Services
Health Services
Human Services
Intermediate School District
Michigan State Liaison
Michigan State Police
Monroe County Liaison
Public Affairs
Police Services
Road Commission
Sheriff's Department
Social Services
Detroit Edison Liaison

RISK SCHOOL DISTRICTS

Monroe Public Schools
Gibraltar School District
    Hunter Elementary School
    Carlson High School

PRIVATE/VOLUNTEER ORGANIZATIONS

American Red Cross
Bedford Fire Department
Bedford High School
Brownstone Fire Station #4
Monroe Community College
Radio Amateur Civil Emergency Services
Salvation Army Emergency Services
Taylor Center High School
WJR Radio Station

C. Exercise Timeline

Table 1, on the following page, presents the times at which key events and activities occurred during the Enrico Fermi 2 Nuclear Power Plant plume pathway exposure exercise on September 24, 2002. Also included are times that notifications were made to the participating jurisdictions/functional entities.

Table 1. Exercise Timeline

DATE AND SITE: September 24, 2002 – Enrico Fermi 2 Nuclear Power Plant

Emergency Classification Level or Event	Time Utility Declared	Time Notification Was Received or Action Was Taken			
		State of Michigan EOC	Monroe County EOC	Wayne County EOC	Joint Public Information Center
Unusual Event	N/A	N/A	N/A	N/A	N/A
Alert	0846	0856	0859	0859	N/A
Site Area Emergency	0948	1000	1000	1005	N/A
General Emergency	1024	1030	1030	1036	1035
Simulated Radiation Release Started	1040	1045	1122	1113	1055
Simulated Radiation Release Terminated	N/A	N/A	N/A	N/A	N/A
Facility Declared Operational		1000	0930	1000	1030
Declaration of State of Emergency (Local / State)		1006	0928 / 1008	0929 / 1010	1037 (State)
Exercise Terminated		1333	1352	1340	1345
Facility Operators Food & Feed Facility Advisory		1035	1056	1055	1058
1st Protective Action Order: Evacuate Protective Action Areas 1 & 2, and Clear Marine Traffic and Lake Activities within 5 Miles of the plant		1030	1032	1035	1037
1st Siren Activation		1036	1036	1036	N/A
1st EAS Message		1039	1039	1039	N/A
2nd Protective Action Order: Evacuate Protective Action Areas 1, 2, 3, & 4, and Clear Marine Traffic and Lake Activities within 10 Miles of the plant		1256	1256	1256	1256
2nd Siren Activation		1258	1258	1258	N/A
2nd EAS Message		1305	1305	1305	N/A
KI Administration Decision: EWs to Ingest KI in Protective Action Areas 1 & 2		1105	1110	1106	1116
KI Administration Decision: EWs to Ingest KI in Protective Action Areas 1, 2, 3, & 4		1258	1303	1305	1305

IV. EXERCISE EVALUATION AND RESULTS

Contained in this section are the results and findings of the evaluation of all jurisdictions and functional entities that participated in the September 24, 2002, exercise to test the off-site emergency response capabilities of State and local governments in the 10-mile EPZ surrounding the Enrico Fermi 2 Nuclear Power Plant.

Each jurisdiction and functional entity was evaluated based on its demonstration of exercise criteria delineated in Federal Register Notice/Vol. 67, No. 80, dated April 25, 2002. Detailed information on the exercise criteria and the extent-of-play agreement used in this exercise are found in Appendix 3 of this report.

A. Summary Results of Exercise Evaluation

The matrix presented in Table 2, on the following page(s), presents the status of all exercise criteria from Federal Register Notice/Vol. 67, No. 80, dated April 25, 2002, that were scheduled for demonstration during this exercise by all participating jurisdictions and functional entities. Exercise criteria are listed by number and the demonstration status of those criteria are indicated by the use of the following letters:

M – Met (No Deficiency or ARCA assessed and no unresolved ARCAs from prior exercises)

D – Deficiency assessed

A – ARCA(s) assessed or unresolved ARCA(s) from prior exercise(s)

N – Not Demonstrated (Reason explained in Section IV.B.)

Blank – Not scheduled for demonstration

Table 2. Summary Results of Exercise Evaluation

DATE AND SITE: September 24, 2002 – Enrico Fermi 2 Nuclear Power Plant (Sheet 1 of 2)

JURISDICTIONS/ FUNCTIONAL ENTITY	1. a. 1	1. b. 1	1. c. 1	1. d. 1	1. e. 1	2. a. 1	2. b. 1	2. b. 2	2. c. 1	2. d. 1	2. e. 1	3. a. 1	3. b. 1	3. c. 1	3. c. 2	3. d. 1	3. d. 2	3. e. 1	3. e. 2	3. f. 1	4. a. 1	4. a. 2	4. a. 3	4. b. 1	4. c. 1	5. a. 1	5. a. 2	5. a. 3	5. b. 1	6. a. 1	6. b. 1	6. c. 1	6. d. 1
STATE OF MICHIGAN																																
Initial Notification Point	M			M																												
Emergency Operations Center	M		M	M	M	M		M	M							M									M			M				
Technical Support Group					M	M	M	M																								
Dosimetry/KI Distribution					M																											
Joint Public Information Center/PIO		M																										M				
Michigan State Police TCP/ACP				M								M	M			M																
DEQ - Evacuee & Vehicle M&D (Monroe County)												M																	M			
DEQ – Evacuee & Vehicle M&D (Wayne County)												M																	M			
DEQ – EW/Vehicle M&D (Monroe County)												M																	M	M		
DEQ – EW/Vehicle M&D (Wayne County)												M																	M	M		
RISK JURISDICTIONS																																
MONROE COUNTY																																
Initial Notification Point	M			M																												
Emergency Operations Center	M	M	M	M	M			M				M	M	M	M	M	M								M			M				
Traffic & Access Control Point				M								M	M			M																
Joint Public Information Center, PIO																												M				
Public Inquiry Hotline																												A				
Protective Actions for School Children – EV 2															M																	

LEGEND: M = Met (No Deficiency or ARCA(s) assessed)
D = Deficiency assessed
A = ARCA(s) assessed (Not affecting health and safety of public)
U = Unresolved ARCA(s) from prior exercises
Blank = Not scheduled for demonstration
N = Not demonstrated as scheduled (Reason explained in Section IV.B.

Table 2. Summary Results of Exercise Evaluation

DATE AND SITE: September 24, 2002 – Enrico Fermi 2 Nuclear Power Plant (Sheet 2 of 2)

JURISDICTIONS/ FUNCTIONAL ENTITY	1. a. 1	1. b. 1	1. c. 1	1. d. 1	1. e. 1	2. a. 1	2. b. 1	2. b. 2	2. c. 1	2. d. 1	2. e. 1	3. a. 1	3. b. 1	3. c. 1	3. c. 2	3. d. 1	3. d. 2	3. e. 1	3. e. 2	3. f. 1	4. a. 1	4. a. 2	4. a. 3	4. b. 1	4. c. 1	5. a. 1	5. a. 2	5. a. 3	5. b. 1	6. a. 1	6. b. 1	6. c. 1	6. d. 1
Dosimetry/KI Distribution					M							M	M																			
Evacuee M&D												M																	M			
Evacuee Vehicle M&D																													M			
Public Reception																													M			
Congregate Care																															M	
EW/Vehicle M&D												M																	M	M		
WAYNE COUNTY																																
Initial Notification Point	M			M																												
Emergency Operations Center	M	M	M	M	M				M			M	M	M	M	M	M								A			M				
Traffic & Access Control Point				M								M	M			M																
Joint Public Information Center, PIO																												M				
Emergency Alert System Radio																									M							
Protective Actions for School Children – EV 2															M																	
Dosimetry/KI Distribution					M							M	M																			
EW/Vehicle M&D												M																	M	M		
Evacuee M&D												M																	M			
Evacuee Vehicle M&D																													M			
Public Reception																													M			
Congregate Care																															M	

LEGEND: M = Met (No Deficiency or ARCA(s) assessed)
D = Deficiency assessed
A = ARCA(s) assessed (Not affecting health and safety of public)
U = Unresolved ARCA(s) from prior exercises
Blank = Not scheduled for demonstration
N = Not demonstrated as scheduled (Reason explained in Section IV.B.)

B. Status of Jurisdictions Evaluated

This subsection provides information on the evaluation of each participating jurisdiction and functional entity in a jurisdiction-based, issues-only format. Presented below are definitions of the terms used in this subsection relative to criteria demonstration status.

- **Met** – Listing of the demonstrated exercise criteria under which no Deficiencies or ARCAs were assessed during this exercise and under which no ARCAs assessed during prior exercises remain unresolved.

- **Deficiency** – Listing of the demonstrated exercise criteria under which one or more Deficiencies was assessed during this exercise. Included is a description of each Deficiency and recommended corrective actions.

- **Area Requiring Corrective Action** – Listing of the demonstrated exercise criteria under which one or more ARCAs were assessed during the current exercise or ARCAs assessed during prior exercises remain unresolved. Included is a description of the ARCAs assessed during this exercise and the recommended corrective action to be demonstrated before or during the next biennial exercise.

- **Not Demonstrated** – Listing of the exercise criteria that were not demonstrated as scheduled during this exercise and the reason(s) they were not demonstrated.

- **Prior ARCAs – Resolved** – Descriptions of ARCAs assessed during previous exercises that were resolved in this exercise and the corrective actions demonstrated.

- **Prior ARCAs – Unresolved** – Descriptions of ARCAs assessed during prior exercises that were not resolved in this exercise. Included is the reason the ARCA remains unresolved and recommended corrective actions to be demonstrated before or during the next biennial exercise.

The following are definitions of the two types of exercise issues that may be discussed in this report.

- A **Deficiency** is defined in FEMA-REP-14 as "...an observed or identified inadequacy of organizational performance in an exercise that could cause a finding that offsite emergency preparedness is not adequate to provide reasonable assurance that appropriate protective measures can be taken in the event of a radiological emergency to protect the health and safety of the public living in the vicinity of a nuclear power plant."

- An **ARCA** is defined in FEMA-REP-14 as "...an observed or identified inadequacy of organizational performance in an exercise that is not considered, by itself, to adversely impact public health and safety."

FEMA has developed a standardized system for numbering exercise issues (Deficiencies and ARCAs). This system is used to achieve consistency in numbering exercise issues among FEMA Regions and site-specific exercise reports within each Region. It also is used to expedite tracking of exercise issues on a nationwide basis.

The identifying number of Deficiencies and ARCAs includes the following elements, with each element separated by a hyphen (-).

- **Plant Site Identifier** – A two-digit number, corresponding to the Utility Billable Plant Site Code.

- **Exercise Year** – The last two digits of the year the exercise was conducted.

- **Criterion Number** – An alpha and two-digit number corresponding to the criteria numbers in the six Exercise Evaluation Areas described in Federal Register Notice/Vol. 67, No. 80 dated April 25, 2002, which amends FEMA-REP 14, Radiological Emergency Preparedness Exercise Manual.

- **Issue Classification Identifier** – (D = Deficiency, A = ARCA). Only Deficiencies and ARCAs are included in exercise reports. Planning Issues are reported to the State(s) via a letter from the Regional Director. Therefore, standardized issue numbers are not assigned to Planning Issues.

- **Exercise Identification Number** – A separate two- (or three-) digit indexing number assigned to each issue identified in the exercise.

1. STATE OF MICHIGAN

1.1 Initial Notification Point

a. **MET:** Criteria 1.a.1 and 1.d.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

1.2 Emergency Operations Center

a. **MET:** Criteria 1.a.1; 1.c.1; 1.d.1; 1.e.1; 2.a.1; 2.b.2; 2.c.1; 3.d.1; 5.a.1; and 5.b.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:**

Issue No: 44-02-2.b.2-A-01

Condition: The first Livestock Advisory was broadcast to the EPZ population immediately prior to the first Protective Action Order (PAO) to evacuate, while the second Livestock Advisory was issued in conjunction with the second PAO to extend the evacuated area.

Corrective Action Demonstrated: State Emergency Operations Procedures and the Michigan Department of Agriculture Procedures were modified to include a caution not to issue the Livestock Agricultural Advisory if an evacuation has been ordered or is imminent. The Livestock Agricultural Advisory was not made based upon the revised procedures.

f. **PRIOR ISSUES – UNRESOLVED:** NONE

1.3 Technical Support Group

a. **MET:** Criteria 1.e.1; 2.a.1; 2.b.1; and 2.b.2

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

1.4 Dosimetry/Potassium (KI) Distribution, Michigan State Police Emergency Management Division

a. **MET:** Criterion 1.e.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

1.5 Joint Public Information Center

a. **MET:** Criteria 1.b.1 and 5.b.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

1.6 Michigan State Police Traffic Control Point/Access Control Point

a. **MET:** Criteria 1.d.1; 3.a.1; 3.b.1; and 3.d.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES - RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

1.7 DEQ - Evacuee and Vehicle Monitoring and Decontamination, Bedford High School – Monroe County

a. **MET:** Criteria 3.a.1 and 6.a.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

1.8 DEQ - Evacuee and Vehicle Monitoring and Decontamination, Taylor Center High School – Wayne County

a. **MET:** Criteria 3.a.1 and 6.a.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

1.9 DEQ – Emergency Worker (EW)/Vehicle Monitoring and Decontamination, County Fair Grounds – Monroe County

a. **MET:** Criteria 3.a.1; 6.a.1; and 6.b.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

1.10 DEQ –EW/Vehicle Monitoring and Decontamination, Brownstone Fire Station #4 – Wayne County

a. **MET:** Criteria 3.a.1; 6.a.1; and 6.b.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

2. RISK JURISDICTIONS

2.1 MONROE COUNTY

2.1.1 Initial Notification Point

a. **MET:** Criteria 1.a.1 and 1.d.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

2.1.2 Emergency Operations Center

a. **MET:** Criteria 1.a.1; 1.b.1; 1.c.1; 1.d.1; 1.e.1; 2.c.1; 3.a.1; 3.b.1; 3.c.1; 3.c.2; 3.d.1; 3.d.2; 5.a.1; and 5.b.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

2.1.3 Traffic and Access Control Point

a. **MET:** Criteria 1.d.1; 3.a.1; 3.b.1; and 3.d.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

2.1.4 Joint Public Information Center, County Public Information Officer

a. **MET:** Criterion 5.b.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

2.1.5 Public Inquiry Hotline, Monroe Community College

a. **MET:** None

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** Criterion 5.b.1

Issue No.: 23-02-5.b.1-A-01

Condition: The Public Inquiry Hotline (Emergency Information/Rumor Control Center) staff provided inaccurate or improper information to the public after confusing a Utility Protective Action Recommendation (PAR) with a State Protective Action Order (PAO). In addition, they advised people that they could enter an area that had been evacuated, under a PAO, to retrieve personnel goods and relatives, but that the police probably would stop them.

Possible Cause: Some of the members of the Public Inquiry Hotline staff do not understand the difference between a Utility PAR and a State PAO. Nor do they understand the implications of a PAO, and the need not to enter an evacuation area in the context of a radiological emergency.

Reference: NUREG-0654, G.4.c

Effect: Members of the public were instructed that they could enter an area that had been designated for evacuation.

Recommendation: The Public Inquiry Hotline staff should receive training that adequately addresses the difference between a Utility PAR and State PAO in the context of a radiological emergency.

Schedule of Corrective Actions: Public Inquiry Hotline staff will be trained on the difference between a protective action order from the Governor and recommendations issued by the utility. Training will also include proper instructions to provide to members of the public seeking to retrieve personal goods and relatives. This criterion will be demonstrated during the next biennial exercise.

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

2.1.6 Protective Actions for School Children – EV-2, Monroe Public Schools

a. **MET:** Criterion 3.c.2

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

2.1.7 Dosimetry/KI Distribution, Monroe County Health Department

a. **MET:** Criteria 1.e.1; 3.a.1; and 3.b.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

2.1.8 Evacuee Monitoring and Decontamination, Bedford High School

a. **MET:** Criteria 3.a.1 and 6.a.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

2.1.9 Evacuee Vehicle Monitoring and Decontamination, Bedford High School

a. **MET:** Criterion 6.a.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES UNRESOLVED:** NONE

2.1.10 Public Reception, Bedford High School

a. **MET:** Criterion 6.a.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

2.1.11 Congregate Care, Bedford High School

a. **MET:** Criterion 6.c.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

2.1.12 Emergency Worker/Vehicle Monitoring and Decontamination, County Fair Grounds

a. **MET:** Criteria 3.a.1; 6.a.1; and 6.b.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

2.2 WAYNE COUNTY

2.2.1 Initial Notification Point

a. **MET:** Criteria 1.a.1 and 1.d.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

2.2.2 Emergency Operations Center

a. **MET:** Criteria 1.a.1; 1.b.1; 1.c.1; 1.d.1; 1.e.1; 2.c.1; 3.a.1; 3.b.1; 3.c.1; 3.c.2; 3.d.1; 3.d.2; and 5.b.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** Criterion 5.a.1

Issue No: 23-02-5.a.1-A-02

Condition: The Emergency Alert System (EAS) messages, simulated broadcast at 1039 hours and 1305 hours by Wayne County, were in conflict with the

Governor's PAOs. The EAS messages instructed the general public to "evacuate immediately", and at the same time instructed farmers to stay behind and "shelter their animals and provide stored feed and water". The State of Michigan Department of Agriculture had decided not to issue a Livestock Agriculture Advisory because the Governor had issued a PAO to evacuate persons from the affected areas.

Possible Cause: The Michigan Department of Agriculture procedures were modified to indicate that if an evacuation PAO was imminent or issued by the State, a Livestock Agriculture Advisory would not be issued. When the Department of Agriculture procedures changed, the EAS Evacuation Orders within the Wayne County procedures were not updated to reflect the changes.

Reference: NUREG-0654, J.9, 10.m

Effect: The EAS Evacuation Orders conflicted with the State's PAOs. They instructed the general public to evacuate, but instructed farmers to stay behind and tend to their animals.

Recommendation: The animal advisory, contained within Wayne County's EAS Evacuation Orders, should be removed. Consideration should be given to drafting a separate, stand alone, Livestock Agriculture Advisory that could be disseminated as a news release.

Schedule of Corrective Actions: Wayne County and the State of Michigan agree with the logic of the issue cited. Generic EAS language on placing milk animals within 10 miles on stored feed and water will be deleted. Future agricultural advisories will be issues separate and apart from Governor's PAOs. This criterion will be demonstrated during the next biennial exercise.

d. NOT DEMONSTRATED: NONE

e. PRIOR ISSUES – RESOLVED: None

f. PRIOR ISSUES – UNRESOLVED: NONE

2.2.3 Traffic and Access Control Point

a. MET: Criteria 1.d.1; 3.a.1; 3.b.1; and 3.d.1

b. DEFICIENCY: NONE

c. AREAS REQUIRING CORRECTIVE ACTION: NONE

d. NOT DEMONSTRATED: NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

2.2.4 Joint Public Information Center, County Public Information Officer

a. **MET:** Criterion 5.b.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

2.2.5 Emergency Alert System Radio Station, WJR

a. **MET:** Criterion 5.a.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

2.2.6 Protective Actions for School Children – EV-2, Gibraltar Schools

a. **MET:** Criterion 3.c.2

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

2.2.7 Dosimetry/KI Distribution, Brownstone Fire Station #4

a. **MET:** Criteria 1.e.1; 3.a.1; and 3.b.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

2.2.8 Emergency Worker/Vehicle Monitoring and Decontamination, Brownstone Fire Station #4

a. **MET:** Criteria 3.a.1; 6.a.1; and 6.b.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

2.2.9 Evacuee Monitoring and Decontamination, Taylor Center High School

a. **MET:** Criteria 3.a.1; and 6.a.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

2.2.10 Evacuee Vehicle Monitoring and Decontamination, Taylor Center High School

a. **MET:** Criterion 6.a.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

2.2.11 Public Reception, Taylor Center High School

a. **MET:** Criterion 6.a.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

2.2.12 Congregate Care, Taylor Center Middle School

a. **MET:** Criterion 6.c.1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

APPENDIX 1

ACRONYMS AND ABBREVIATIONS

The following is a list of the acronyms and abbreviations that were used in this report and the REP Program.

ACP	Access Control Point
ALARA	As Low As Reasonable Achievable
ARCA	Area Requiring Corrective Action
CFR	Code of Federal Regulations
cpm	counts per minute
DEQ	Department of Environmental Quality
EAS	Emergency Alert System
EMD	Emergency Management Division
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EPZ	Emergency Planning Zone
EW	Emergency Worker
FEMA	Federal Emergency Management Agency
FIA	Family Independence Agency
FTC	Field Team Center
HP	Health Physics or Health Physicist
HS	High School
ICF	ICF Consulting
JPIC	Joint Public Information Center
KI	Potassium Iodide
M&D	Monitoring and Decontamination
mR	milliroentgen
mR/hr	milliroentgen per Hour
MS-1	Medical Services Drill
MSP	Michigan State Police
N/A	Not Applicable
NRC	U.S. Nuclear Regulatory Commission

NUREG-0654	NUREG-0654/FEMA-REP-1, Rev. 1, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants, November 1980.
ORO	Off-site Response Organization
OSC	Operational Support Center
PAO	Protective Action Order
PAR	Protective Action Recommendation
R	Roentgen
R/hr	Roentgen per hour
RAC	Regional Assistance Committee
RACES	Radio Amateur Civil Emergency Services
RASCAL	Radiological Assessment System for Consequence Analysis
RCP	Reactor Coolant Pump
RCS	Reactor Coolant System
REA	Radiation Emergency Area
rem	Roentgen Equivalent Man
REP	Radiological Emergency Preparedness
RERP	Radiological Emergency Response Plan
SEOC	State Emergency Operations Center
SGTS	Standby Gas Treatment System
T/L	Team Leader
TCP/ACP	Traffic and Access Control Point
TSC	Technical Support Center

APPENDIX 2

EXERCISE EVALUATORS AND TEAM LEADERS

The following is a list of the personnel who evaluated the Enrico Fermi 2 Nuclear Power Plant exercise on September 24, 2002. Evaluator Team Leaders are indicated by the letters "(TL)" after their names. The organization which each evaluator represents is indicated by the following abbreviations:

FEMA	Federal Emergency Management Agency
ICF	ICF Consulting

	NAME	ORGANIZATION
RAC Chairperson	Woodie Curtis	FEMA
Exercise Director	Gary Naskrent	FEMA

EVALUATION SITE	**EVALUATOR**	**ORGANIZATION**
STATE OF MICHIGAN		
Initial Notification Point	Terry Connors-Murphy	FEMA
Emergency Operations Center	T. Connors-Murphy (TL)	FEMA
	Gary Naskrent	FEMA
Technical Support	Richard Grundstrom	ICF
Dosimetry/KI Distribution	Richard Grundstrom	ICF
Joint Public Information Center	George MacDonald	ICF
Michigan State Police, TCP/ACP	Alejandro Fernandez	ICF
DEQ – Evacuee & Vehicle Monitoring and Decontamination, Bedford HS – Monroe County	Eddie Fuente	ICF
DEQ – Evacuee & Vehicle Monitoring and Decontamination, Taylor Center HS – Wayne County	Edward Wojnas	ICF
DEQ - Emergency Worker & Vehicles Monitoring and Decontamination, County Fair Grounds- Monroe County	William Neidermeyer	ICF

DEQ - Emergency Worker & Vehicles Monitoring and Decontamination, Brownstone Fire Station #4- Wayne County	Joseph Lischinsky	ICF

MONROE COUNTY

Initial Notification Point	David Goldbloom-Helzner	ICF
Emergency Operations Center	Sandra Bailey (TL) David Goldbloom-Helzner Harold Spedding	FEMA ICF ICF
Traffic & Access Control Point	Harold Spedding	ICF
Joint Public Information Center, County Public Information Officer	George Mac Donald	ICF
Public Inquiry Hotline	Alejandro Fernandez	ICF
Protective Actions for School Children – EV 2, Monroe Public Schools	John Turley	ICF
Dosimetry/KI Distribution	John Turley	ICF
Evacuee Monitoring and Decontamination, Bedford HS	Carol Herzenberg Eddie Fuente	ICF ICF
Evacuee Vehicle Monitoring and Decontamination, Bedford HS	Edward Wojnas	ICF
Public Reception, Bedford HS	Sandra Bailey	FEMA
Congregate Care, Bedford HS	Sandra Bailey	FEMA
Emergency Worker & Vehicle Monitoring and Decontamination, County Fair Grounds	William Neidermeyer Joseph Lischinsky	ICF ICF

WAYNE COUNTY

Initial Notification Point	Clint Crackel	FEMA
Emergency Operations Center	Clint Crackel (TL) Carolyn Sturghill Nancy Johnson	FEMA FEMA ICF
Traffic & Access Control Point	Nancy Johnson	ICF
Joint Public Information Center, County Public Information Officer	George Mac Donald	ICF
Emergency Alert System Radio Station - WJR	John Turley	ICF
Protective Actions for School Children - EV2, Gibraltar Schools	Carol Herzenberg	ICF
Dosimetry Distribution	William Neidermeyer	ICF
Emergency Worker & Vehicle Monitoring and Decontamination, Brownstone Fire Station #4	William Neidermeyer Joseph Lischinsky	ICF ICF
Evacuee Monitoring and Decontamination, Taylor Center HS	Carol Herzenberg Eddie Fuente	ICF ICF
Evacuee Vehicle Monitoring and Decontamination, Taylor Center HS	Edward Wojnas	ICF
Public Reception, Taylor Center HS	Carol Herzenberg	ICF
Congregate Care, Bedford HS	Alejandro Fernandez	ICF

APPENDIX 3

EXERCISE CRITERIA AND EXTENT-OF-PLAY AGREEMENT

This appendix lists the exercise criteria that were scheduled for demonstration in the Enrico Fermi 2 Nuclear Power Plant exercise on September 24, 2002, and the off-site extent-of-play agreement approved by FEMA Region V on August 15, 2002.

The exercise criteria, contained in FEMA "Radiological Emergency Preparedness Exercise Evaluation Methodology" as published in the Federal Register Notice/Vol. 67, No 80, dated April 25, 2002, represent a functional translation of the planning standards and evaluation criteria of NUREG-0654/FEMA-REP-1, Rev. 1, Criteria for the Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants, November 1980.

Because the exercise criteria are intended for use at all nuclear power plant sites, and because of variations among off-site plans and procedures, an extent-of-play agreement is prepared by the State and approved by FEMA to provide evaluators with guidance on expected actual demonstration of the criteria.

A. Exercise Criteria and Extent-of-Play

Listed below are the specific REP criteria scheduled for demonstration during this exercise.

ENRICO FERMI 2 NUCLEAR POWER PLANT EXERCISE

September 24, 2002

Extent Of Play Agreements for
Monroe County,
Wayne County, and the
State of Michigan

Evaluation Area 1 - Emergency Operations Management

Criterion 1.a.1: OROs use effective procedures to alert, notify and mobilize emergency personnel and activate facilities in a timely manner.

The State Emergency Operations Center (SEOC) will be fully activated. State personnel will be mobilized in accordance with procedures with the exception of personnel reporting to local government EOCs and the JPIC, who will be pre-positioned. Pre-positioned personnel will begin participation following the Alert classification as directed by the State Controller in each facility. The Field Team Center and associated personnel will not be demonstrated for this exercise. A cell will be established to initiate exercise data inputs for SEOC players. Personnel involved in out-of-sequence demonstrations will be prestaged. A roster will be provided to demonstrate 24-hour staffing.

The Monroe and Wayne County EOCs will be fully activated. Personnel will be mobilized in accordance with procedures with the exception of those from Wayne County reporting to the JPIC, who will be pre-positioned. Pre-positioned personnel will begin participation no earlier than the Alert classification. Personnel involved in out-of-sequence demonstrations will be pre-positioned. Rosters will be provided to demonstrate 24-hour staffing.

Criterion 1.b.1: Facilities are sufficient to support the emergency response.

This criterion will be demonstrated by Monroe County and Wayne County. The SEOC was demonstrated during the Palisades exercise on June 4, 2002. The State, Monroe County, and Wayne County EOCs are all set-up permanently. The JPIC will be set-up in advance of the exercise.

Criterion 1.c.1: Key personnel with leadership roles for the ORO provide direction and control to that part of the overall response effort for which they are responsible.

This criterion will be demonstrated at the SEOC, Monroe County EOC, and the Wayne County EOC.

Criterion 1.d.1: At least two communication systems are available, at least one operates properly, and communication links are established and maintained with appropriate locations. Communications capabilities are managed in support of emergency operations.

This criterion will be demonstrated at the SEOC, Monroe County EOC, the Wayne County EOC, and the JPIC.

Criterion 1.e.1: Equipment, maps, displays, dosimetry, potassium iodide (KI) and other supplies are sufficient to support emergency operations.

Equipment, maps, displays, and other supplies will be demonstrated to support emergency operations at the SEOC, JPIC, Monroe County EOC, and the Wayne County EOC. The FTC will not be demonstrated. Potassium iodide and dosimetry are stored at the Health Department in Monroe County; at the Emergency Management Office and Brownstown Fire Station #4 in Wayne County; and at the MSP/EMD office in Lansing. The Michigan Department of Environmental Quality also maintains supplies of potassium iodide and dosimetry for use by its personnel.

Evaluation Area 2 - Protective Action Decision Making

Criterion 2.a.1: OROs use a decision-making process, considering relevant factors and appropriate coordination, to ensure that an exposure control system, including the use of KI, is in place for emergency workers including provisions to authorize radiation exposure in excess of administrative limits or protective action guides.

The ability to make the decision to recommend the use of KI to emergency workers will be demonstrated by the SEOC. Authorization to exceed state exposure limits will be demonstrated as driven by the scenario.

This criterion may be re-demonstrated as approved on a case-by-case basis by the Chair of the Regional Assistance Committee.

Criterion 2.b.1: Appropriate protective action recommendations are based on available information on plant conditions, field monitoring data and licensee and ORO dose projections, as well as knowledge of on-site and off-site environmental conditions.

The Technical Support Group in the SEOC will evaluate licensee and FTC Cell provided information and complete an independent analysis of scenario data. Dose assessment evaluation will be conducted via interview with the individual performing the FTC Cell role at the MSP/EMD office in Lansing.

This criterion may be re-demonstrated as approved on a case-by-case basis by the Chair of the Regional Assistance Committee.

This criterion does not apply to Monroe and Wayne Counties.

Criterion 2.b.2: A decision-making process involving consideration of appropriate factors and necessary coordination is used to make protective action decisions (PADs) for the general public (including the recommendation for the use of KI, if ORO policy).

This criterion will be demonstrated by the Executive Group in the SEOC in conjunction with applicable support staff.

This criterion may be re-demonstrated as approved on a case-by-case basis by the Chair of the Regional Assistance Committee.

This criterion does not apply to Monroe and Wayne Counties.

Criterion 2.c.1: Protective action decisions are made, as appropriate, for special population groups.

This criterion will be demonstrated by the Executive Group in the SEOC in conjunction with applicable support staff through the decision to recommend the use of KI to institutionalized persons, if applicable.

Lists of transportation dependent and special needs populations are kept by each county. No personnel will be moved. Equipment lists and rosters will be available in the Wayne and Monroe County EOCs. No phone calls to transportation dependent persons will be made.

Criterion 2.d.1: Radiological consequences for the ingestion pathway are assessed and appropriate protective action decisions are made based on the ORO's planning criteria.

This criterion will not be demonstrated during this exercise.

Criterion 2.e.1: Timely re-location, re-entry and return decisions are made and coordinated as appropriate, based on assessments of the radiological conditions and criteria in the OROs plan and/or procedures.

This criterion will not be demonstrated during this exercise.

Evaluation Area 3 - Protective Action Implementation

Criterion 3.a.1: The OROs issue appropriate dosimetry and procedures, and manage radiological exposure to emergency workers in accordance with the plan and procedures. Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart.

Issuance of dosimetry will be discussed during scheduled interviews, which may occur during the exercise. Refer to the Table of Exercise Demonstrations for specific times and locations.

This criterion will be demonstrated by the State of Michigan, Monroe County, and Wayne County during out-of-sequence reception and decontamination center demonstrations.

This criterion will be demonstrated during the traffic and access control demonstrations for Wayne County, Monroe County, and the State of Michigan. The briefing on dosimetry and KI use for the State of Michigan demonstration will be provided by the State Controller.

This criterion may be re-demonstrated immediately for credit, at the discretion of the evaluator.

Criterion 3.b.1: KI and appropriate instructions are available should a decision to recommend use of KI be made. Appropriate record keeping of the administration of KI for emergency workers and institutionalized individuals (not the general public) is maintained.

This criterion will be demonstrated during the traffic and access control demonstrations for Monroe County, Wayne County, and the State of Michigan. Dosimetry and KI for the State demonstration will be pre-staged since the Field Team Center is not being demonstrated for this exercise.

Simulated KI will be distributed to emergency workers in Wayne and Monroe Counties along with their dosimetry if driven by the scenario. The State will demonstrate this criterion through decision-making and orders to the counties to implement appropriate Protective Action Orders.

Criterion 3.c.1: Protective action decisions are implemented for special population groups within areas subject to protective actions.

This criterion will be demonstrated in the Monroe and Wayne County EOCs via EOC staff discussions, which may include evacuation of hospitals, nursing homes, correctional facilities, mobility impaired individuals, and transportation dependent. These discussions will be documented in situation logs. Actual contacts to special population groups will not be made. Each county will contact a minimum of four providers of transportation services, which may include a public transit authorities, school systems for buses, ambulance services, or a fire/rescue services. There will be no discussion of scenario information during these calls.

Criterion 3.c.2: OROs/School officials decide upon and implement protective actions for schools.

This criterion will be demonstrated in the Monroe and Wayne County EOCs as driven by the scenario.

EV-2 interviews will be conducted in Monroe and Wayne Counties. Refer to the Table of Exercise Demonstrations for specific times and locations.

Criterion 3.d.1: Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel.

Decisions related to traffic and access control will be demonstrated in the Monroe and Wayne County EOCs. Monroe County, Wayne County, and the State of Michigan will demonstrate one traffic and access control point. Monroe and Wayne County demonstration locations will be determined during the exercise at a time agreed upon by the FEMA evaluator, the State Controller, and the county emergency management coordinator. The State of Michigan demonstration will be initiated by a briefing from a State Controller and may be conducted out-of-sequence from the exercise. Staffing of the all other access and traffic control points will be simulated.

This criterion may be re-demonstrated immediately for credit, at the discretion of the evaluator.

Criterion 3.d.2: Impediments to evacuation are identified and resolved.

This criterion will be demonstrated through discussions at the Monroe and Wayne County EOCs. Messages will be injected by the State Controller to drive this demonstration. Personnel will deal with the impediment by discussing the need for equipment, discussing its estimated time of arrival, etc. The State of Michigan will not demonstrate this criterion. If the impediment posed involves road closures that would have been known to exercise participants during the course of normal operations, this information will be provided to the players as part of the initial conditions for the exercise.

This criterion may be re-demonstrated immediately for credit, at the discretion of the evaluator.

Criterion 3.e.1: The ORO demonstrates the availability and appropriate use of adequate information regarding water, food supplies, milk and agricultural production within the ingestion exposure pathway emergency-planning zone for implementation of protective actions.

This criterion will not be demonstrated during this exercise.

Criterion 3.e.2: Appropriate measures, strategies and pre-printed instructional material are developed for implementing protective action decisions for contaminated water, food products, milk and agricultural production.

This criterion will not be demonstrated during this exercise.

Criterion 3.f.1: Decisions regarding controlled re-entry of emergency workers and relocation and return of the public are coordinated with appropriate organizations and implemented.

This criterion will not be demonstrated during this exercise.

Evaluation Area 4 - Field Measurement and Analysis

Criterion 4.a.1: The field teams are equipped to perform field measurements of direct radiation exposure (cloud and ground shine) and to sample airborne radioiodine and particulates.

This criterion will not be demonstrated during this exercise.

Criterion 4.a.2: Field teams are managed to obtain sufficient information to help characterize the release and to control radiation exposure.

This criterion will not be demonstrated during this exercise.

Criterion 4.a.3: Ambient radiation measurements are made and recorded at appropriate locations, and radioiodine and particulate samples are collected. Teams will move to an appropriate low background location to determine whether any significant (as specified in the plan and/or procedures) amount of radioactivity has been collected on the sampling media.

This criterion will not be demonstrated during this exercise.

Criterion 4.b.1: The field teams demonstrate the capability to make appropriate measurements and to collect appropriate samples (e.g., food crops, milk, water, vegetation, and soil) to support adequate assessments and protective action decision-making.

This criterion will not be demonstrated during this exercise.

Criterion 4.c.1: The laboratory is capable of performing required radiological analyses to support protective action decisions.

This criterion will not be demonstrated during this exercise.

Evaluation Area 5 - Emergency Notification and Public Information

Criterion 5.a.1: Activities associated with primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. The initial instructional message to the public must include as a minimum the elements required by current FEMA REP guidance.

The Wayne County Sheriff's Department and Monroe County Sheriff's Department are the primary activation points for the public warning siren systems. The Emergency Alert System is activated by the Wayne County Sheriff Department for both counties. To demonstrate this criterion, the State will provide information to Monroe and Wayne Counties for release in the Emergency Alert System messages.

This criterion may be re-demonstrated as approved on a case-by-case basis by the Chair of the Regional Assistance Committee.

Criterion 5.a.2: [RESERVED]

Criterion 5.a.3: Activities associated with FEMA approved exception areas (where applicable) are completed within 45 minutes following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. Backup alert and notification of the public is completed within 45 minutes following the detection by the ORO of a failure of the primary alert and notification system.

This criterion does not apply to the State of Michigan, Monroe County, or Wayne County.

Criterion 5.b.1: OROs provide accurate emergency information and instructions to the public and the news media in a timely manner.

This will be demonstrated at the JPIC via dissemination of Emergency Alert System announcements in coordination with the SEOC, Monroe County EOC, and Wayne County EOC. All media briefings will be conducted at the JPIC.

A public inquiry hotline will be operated by Monroe County during the exercise at the JPIC.

This criterion may be re-demonstrated as approved on a case-by-case basis by the Chair of the Regional Assistance Committee.

Evaluation Area 6 - Support Operation/Facilities

Criterion 6.a.1: The reception center/emergency worker facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees and/or emergency workers.

Wayne and Monroe Counties will each fully demonstrate separate emergency worker and public reception/decontamination centers during out-of-sequence demonstrations. Personnel will not go through alert, mobilization, activation, or shift changes. State DEQ HP personnel will provide assistance as requested during Monroe and Wayne County demonstrations. Public reception centers will demonstrate the ability to screen 1/3 of the monitoring teams required to monitor 20% of the population allocated to that facility within a 12 hour time period. The State of Michigan Field Team Center is not being demonstrated.

This criterion may be re-demonstrated immediately for credit, at the discretion of the evaluator.

Criterion 6.b.1: The facility/ORO has adequate procedures and resources for the accomplishment of monitoring and decontamination of emergency worker equipment including vehicles.

Wayne and Monroe Counties will each fully demonstrate an emergency worker decontamination center out-of-sequence with the exercise. Emergency vehicles will be monitored and decontaminated as appropriate. State DEQ HP personnel will provide assistance as requested during Monroe and Wayne County demonstrations. The State of Michigan Field Team Center is not being demonstrated.

This criterion may be re-demonstrated immediately for credit, at the discretion of the evaluator.

Criterion 6.c.1: Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with American Red Cross planning guidelines. Managers demonstrate the procedures to assure that evacuees have been monitored for contamination and have been decontaminated as appropriate prior to entering congregate care facilities.

Wayne and Monroe Counties will each fully demonstrate a congregate care center out-of-sequence with the exercise. Personnel manning the centers will not go through alert, mobilization, activation, or shift changes.

This criterion may be re-demonstrated immediately for credit, at the discretion of the evaluator.

Criterion 6.d.1: The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals.

This criterion was demonstrated during the Medical Services (MS-1) Drill on March 6, 2002.

This criterion may be re-demonstrated immediately for credit, at the discretion of the evaluator.

APPENDIX 4

EXERCISE SCENARIO

This appendix contains a summary of the simulated sequences of events that were used as the basis for invoking emergency response actions by OROs in the Enrico Fermi 2 Nuclear Power Plant exercise on September 24, 2002.

The plume exercise scenario was submitted by the State of Michigan and Detroit Edison Company, and approved by FEMA Region V on August 15, 2002.

During the exercise, controllers from the State of Michigan either gave or telephoned "inject messages", containing scenario events and/or relevant data, to those persons or locations who would normally receive notification of such events. These inject messages were the method used for invoking response actions by OROs.

SCENARIO SUMMARY

FERMEX 2002 - EXERCISE DESCRIPTION

Initial Conditions

The Reactor is operating at 100% power. LLRT on T4803-F601, D/W supply air purge inlet is underway. RHR pump 'C' is out of service for maintenance to E1150-F047A. The Operational Support Center (OSC)/Ops break room is out of service due to remodeling and cannot be used.

Active Malfunctions

Failure of test connection T4802-F018
Fire in Division 1 Switchgear Room
Loss of 64 B (due to fire)
RWCU Effluent High Conductivity Alarm
RWCU Effluent High Dissolved Oxygen Alarm
Jet Pump #10 failure
Three stuck control rods
Reactor Recirc 'B' motor impeller failure due to debris
RR Loop B failure
Standby Gas Treatment System (SGTS) Division 1 fan failure

Release Paths

After the primary containment break, there is a release through the test connection to T4803-F601 D/W Supply Air Purge Inlet valve upstream of T4802-F018 valve. The release to the

environment will be through the SGTS.

Emergency Response Organization Activation

The fire that occurs at 0835 in the Division 1 Switchgear room will last greater than 15 minutes. This requires an Alert declaration, resulting in activation of the Alternate Operations Support Center and the Technical Support Center (TSC). A Site Area Emergency should be declared at approximately 0945 when the Emergency Director determines that the Reactor Coolant System and Primary Containment barriers have failed. This declaration will activate the Emergency Operations Facility and the Joint Public Information Center.

Emergency Response Facility Activities

1. Control Room

   After initial accident response and emergency classification, Control Room makes offsite notifications, activates the emergency response organization, and monitors and controls reactor, primary containment, and secondary containment parameters in accordance with the Emergency Operating Procedures.

2. Operational Support Center

   The OSC assists the Control Room in monitoring in-plant and onsite radiological conditions and operating, investigating or repairing any plant equipment at the direction of the Emergency Director.

3. Technical Support Center

   Once declared functional, The TSC assumes responsibility from the Control Room for overall emergency management, offsite notifications, emergency classification, offsite dose assessment, protective action recommendations, and implementing the severe accident management guidelines. Engineering staff provides Emergency Director with technical input to attempt accident mitigation.

4. Emergency Operations Facility

   Once declared functional, Emergency Operations Facility (EOF) assumes responsibility from Technical Support Center for offsite notifications and protective action recommendations. EOF also performs offsite dose assessment and coordinates activities of offsite Radiological Emergency

SEQUENCE OF EVENTS

TIME	KEY EVENTS
0730	Commence turnover. Initial Conditions: Reactor operating at 100% power. LLRT on T4803-F601, D/W supply air purge inlet is underway. RHR pump 'C' is out of service for maintenance. The OSC/Ops break room is out of service due to remodeling and cannot be used.
0800	Announcement for the start of the exercise.
0802	Upon completion of leak test personnel attempt to re-install the cap, in doing so the test connection is sheared off creating a pathway out of containment
0817*	**Expected Action:** Shift Manager declares an **Unusual Event** due to (FU1) loss of Primary Containment.
0835	Fire in Division 1 Switchgear Room, which results in damage to 64B.
0850*	**Expected Action:** Shift Manager declares an **Alert** due to fire or explosion affecting the operability of plant safety systems required to establish or maintain safe shutdown. **On-Site Protective Action:** Assembly and Accountability ordered.
0900	RWCU Effluent High Conductivity Alarm (Note: local indications as read)
0902	RWCU Effluent High Dissolved Oxygen Alarm (Note: local indications as read)
0920*	Alternate OSC/TSC functional, Assembly and Accountability.
0930	Failure of Jet Pump #10, debris jams the 'B' Recirc Motor Impeller. Reactor Scram with 3 rods stuck. Small break LOCA from the 'B' loop inside containment SGTS Division 1 fan fails.
0945*	**Expected Actions:** Emergency Director declares a **Site Area Emergency** due to (FS1) Loss of RCS and Primary Containment. Loss of 64C bus breakers RHR pump "C" & CS pump "C". **On-Site Protective Action:** Evacuate all non-ERO from the site to home or Monroe Power Plant. The EOF and Joint Public Information Center (JPIC) are activated.

1020* Reactor water level drops to < 0" and Containment High Range Radiation Monitor (CHRRMs) reading is greater than 10,000 R/hr.

1035* **Expected Actions:** Emergency Director declares a **General Emergency** due to loss of 3 fission product barriers. (FG1).

Expected PAR: **Evacuate Areas 1 and 2, shelter 3, 4, and 5 based on plant status.** If dose assessment is running, there is no impact on PARs.

1045 The EOF is functional

1115 The JPIC is functional

1145* Dose Assessment calculations based on effluent radiation monitors indicates exceeding PAGs at five (5) miles forcing a **change in PAR.**

1200* **Expected PAR**: **Evacuate Areas 1, 2, 3, and 4, Shelter Area 5.**

1215 to end The ERO takes actions to:

1. Isolate the primary containment leak through the test connection. Personnel will evaluate emergency dose limits for piping repairs. Consideration may be given to drive attempting to close T4803-F601, which will be successful once all other avenues have been evaluated and all other criteria's have been demonstrated.
2. Restore reactor water level and stabilize the plant.
3. Walk down affected areas, and take actions to ensure no further damage occurs.

The exercise will be terminated when the following actions have been completed and all other criteria are demonstrated:

1330* Provide exercise termination announcement.

Note: * Indicated times are based on Emergency Response Organization actions and are approximate.