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PAGE 1

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Media: 8 1/2 X 11

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TMPLAN	RERP PLAN		29	1	ST	01/20/04		AFC

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U.S. Nuclear Regulatory Commission  
Docket No. 50-341  
License No. NPF-43

# Fermi 2

## Radiological Emergency Response Preparedness Plan

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Detroit  
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ARMS - INFORMATION			
DTC: TMPLAN	File: 1715.03	DSN: RERP PLAN	Rev: 29
Date: 01/20/04		Recipient:	

## TABLE OF CONTENTS

	Page
TABLE OF CONTENTS	i
LIST OF ABBREVIATIONS	viii
PREFACE	x
<b>A. ASSIGNMENT OF RESPONSIBILITY (ORGANIZATION CONTROL)</b>	<b>A-1</b>
A.1 Detroit Edison	A-1
A.2 State of Michigan	A-1
A.3 Local Governments	A-3
A.4 Federal Agencies	A-4
A.5 Emergency Response Services	A-4
A.5.1 Medical Services	A-4
A.5.2 Ambulance Service	A-4
A.5.3 Firefighting Assistance	A-5
A.5.4 Law Enforcement Services	A-5
A.5.5 Technical Assistance	A-5
A.6 Continuity of Resources	A-5
<b>SECTION -A- Figures</b>	
Figure A-1: Fermi 2 10-Mile Emergency Planning Zone	A-6
Figure A-2: Fermi 2 50-Mile Emergency Planning Zone	A-7
Figure A-3: State of Michigan Agency Assignment and Function Chart	A-8
Figure A-4: Monroe County Emergency Agency Assignment and Function Chart	A-9
Figure A-5: Wayne County Emergency Agency Assignment and Function Chart	A-10
Figure A-6: Emergency Operation Center Interrelationships	A-11
<b>B. EMERGENCY RESPONSE ORGANIZATION</b>	<b>B-1</b>
B.1 Nuclear Generation Organization	B-1
B.1.1 Normal Organization	B-1
B.1.2 Emergency Response Organization	B-1
B.2 Emergency Assignments	B-2
B.2.1 Responsibilities	B-2
B.3 Emergency Response Organization Interfaces	B-2

## TABLE OF CONTENTS (Con't)

	Page
<b>SECTION-B- Tables and Figures</b>	
Table B-1: Staffing for Fermi 2 Emergency Response Organization	B-3
Table B-2: Emergency Response Organization Functional Responsibilities	B-4
Figure B-1: Nuclear Generation Organization	B-14
Figure B-2: Control Room	B-15
Figure B-3: Operational Support Center	B-16
Figure B-4: Technical Support Center	B-17
Figure B-5: Emergency Operations Facility	B-18
 <b>C. EMERGENCY RESPONSE SUPPORT AND RESOURCES</b>	 C-1
C.1 Government Support	C-1
C.2 Industry Support	C-2
 <b>D. EMERGENCY CLASSIFICATION SYSTEM</b>	 D-1
D.1 Unusual Event	D-2
D.1.1 Definition	D-2
D.1.2 Purpose	D-2
D.1.3 Licensee Actions	D-2
D.1.4 State and/or Local Offsite Authority Actions	D-2
D.2 Alert	D-3
D.2.1 Definition	D-3
D.2.2 Purpose	D-3
D.2.3 Licensee Actions	D-3
D.2.4 State and/or Local Offsite Authority Actions	D-3
D.3 Site Area Emergency	D-4
D.3.1 Definition	D-4
D.3.2 Purpose	D-4
D.3.3 Licensee Actions	D-4
D.3.4 State and/or Local Offsite Authority Actions	D-5
D.4 General Emergency	D-5
D.4.1 Definition	D-5
D.4.2 Purpose	D-5
D.4.3 Licensee Actions	D-6
D.4.4 State and/or Local Offsite Authority Actions	D-7
 <b>SECTION -D - Tables</b>	
Table D-1: Abnormal Rad Levels/Radiological Effluent	D-8
Fission Product Barrier Degradation	D-15
Hazards and Other Conditions Affecting Plant Safety	D-19
System Malfunctions	D-35



## TABLE OF CONTENTS (Con't)

	Page
<b>E. NOTIFICATION METHODS AND PROCEDURES</b>	<b>E-1</b>
E.1 Notification of Onsite Emergency Response Organizations	E-1
E.2 Notification of Offsite Emergency Response Organizations	E-1
E.3 Notification of the General Public	E-2
<b>SECTION-E - Tables and Figures</b>	
Table E-1: Prompt Notification System Siren Locations	E-3
Figure E-1: Siren Locations	E-6
<b>F. EMERGENCY COMMUNICATIONS</b>	<b>F-1</b>
F.1 Telephone Communications	F-1
F.1.1 PBX Lines	F-1
F.1.2 Automatic Ring Lines	F-1
F.1.3 NRC Telephones	F-1
F.1.4 Microwave System	F-1
F.1.5 Medical Support Facilities	F-1
F.1.6 Joint Public Information Center (JPIC)	F-1
F.1.7 Telephone Equipment Maintenance	F-2
F.1.8 General Information	F-2
F.2 Radio Communications	F-2
F.2.1 Operations and Maintenance System	F-2
F.2.2 Offsite Radiological Emergency Teams	F-3
F.2.3 Nuclear Security System	F-3
F.3 Facsimile Transmission	F-3
F.4 Public Address System	F-3
F.5 Plant Intercom System	F-3
<b>SECTION-F - Figures</b>	
Figure F-1: Emergency Communications Telephone Network	F-4
Figure F-2: Personnel in Charge of Communications Links at Fermi 2, Monroe County, Wayne County and the State of Michigan	F-5
<b>G. PUBLIC EDUCATION AND INFORMATION</b>	<b>G-1</b>
G.1 Education and Information Program	G-1
G.2 Public Awareness	G-1
G.3 News Centers	G-2
G.4 Information Sources During an Emergency	G-2
G.5 News Media Acquaintance Program	G-3

## TABLE OF CONTENTS (Con't)

	Page
<b>H. EMERGENCY FACILITIES AND EQUIPMENT</b>	<b>H-1</b>
H.1 Emergency Response Facilities	H-1
H.1.1 Control Room	H-2
H.1.2 Technical Support Center	H-2
H.1.3 Operational Support Center	H-3
H.1.4 Emergency Operations Facility	H-4
H.2 Onsite Monitoring Systems	H-5
H.2.1 Geophysical Phenomena	H-5
H.2.1.1 Meteorological Monitoring	H-5
H.2.1.2 Hydrological Monitoring	H-5
H.2.1.3 Seismic Monitoring	H-5
H.2.2 Radiological Monitoring	H-6
H.2.3 Process Monitors	H-6
H.2.4 Fire and Combustion Product Detectors	H-6
H.3 Offsite Monitoring Systems	H-6
H.3.1 Geophysical Phenomena	H-6
H.3.1.1 Meteorological Monitoring	H-6
H.3.1.2 Hydrological Monitoring	H-6
H.3.1.3 Seismic Monitoring	H-6
H.3.2 Radiological Monitoring	H-7
H.3.2.1 Offsite Monitoring	H-7
H.3.2.2 Laboratory Facilities	H-7
H.4 Integrated Plant Computer System (IPCS)	H-7
H.5 Emergency Equipment and Supplies	H-8

### SECTION-H - Tables and Figures

Table H-1:	Meteorological Parameters	H-9
Table H-2:	Typical Area Radiation Monitors	H-10
Table H-3:	Radiological Effluent Monitors	H-11
Table H-4:	Typical Portable Monitors	H-12
Table H-5:	Post-Accident Process and Effluent Radiation Monitors	H-13
Table H-6:	Process Radiation Monitors	H-14
Table H-7:	Typical Laboratory Capabilities	H-15
Figure H-1:	Block Diagram of Detroit Edison Meteorological Data Acquisition System	H-16

## TABLE OF CONTENTS (Con't)

	Page
<b>I. ACCIDENT ASSESSMENT</b>	<b>I-1</b>
I.1 In-Plant Monitoring Capability	I-1
I.2 Source Terms	I-1
I.2.1 Monitoring Instruments Operable	I-1
I.2.2 Monitoring Instruments Inoperable	I-1
I.3 Dose Assessment	I-2
I.3.1 Airborne Releases	I-2
I.3.1.1 Methodology	I-2
I.3.1.1.1 Dose Assessment Computer Model	I-2
I.3.2 Liquid Releases	I-5
I.3.3 Long-Term Dose Assessment	I-5
I.4 Field Monitoring	I-5
 <b>J. PROTECTIVE RESPONSE</b>	 <b>J-1</b>
J.1 Onsite Notification	J-1
J.2 Evacuation	J-2
J.2.1 Monitoring and Decontamination	J-3
J.2.2 Accountability	J-3
J.3 Radiation Protection Equipment	J-3
J.4 Protective Actions	J-4
J.4.1 Basis for Recommending Protective Actions	J-5
J.4.2 Evacuation Time Estimates	J-5
J.4.3 Population Distribution	J-5
J.4.4 Offsite Monitoring	J-5
 <b>SECTION-J - Tables and Figures</b>	
Table J-1: Exposure Pathways, Incident Phases, and Protective Actions	J-6
Table J-2: Representative Shielding Factors from Gamma Cloud Source	J-7
Table J-3: Distribution of 2000 Population in Emergency Planning Zone Rings and Sectors, Monroe and Wayne Counties, Michigan	J-8
Figure J-1 Owner Controlled Area	J-9
Figure J-2 Evacuation Routes and Assembly Areas	J-10

## TABLE OF CONTENTS (Con't)

	Page
<b>K. RADIOLOGICAL EXPOSURE CONTROL</b>	<b>K-1</b>
K.1 Exposure Guidelines	K-1
K.1.1 Control of Personnel Radiation Exposure	K-1
K.2 Dosimetry	K-2
K.3 Decontamination Criteria	K-3
K.4 Contamination Control	K-3
<b>SECTION -K - TABLES</b>	
Table K-1: Emergency Exposure Criteria	K-5
<b>L. MEDICAL SUPPORT</b>	<b>L-1</b>
L.1 Offsite Support	L-1
L.1.1 Hospitals	L-1
L.1.2 Services	L-1
L.2 Onsite First Aid Capability	L-2
L.3 Transportation Arrangements	L-2
<b>M. REENTRY AND RECOVERY PLANNING AND POST-ACCIDENT OPERATIONS PLANNING</b>	<b>M-1</b>
M.1 Reentry and Recovery	M-1
M.2 Recovery Organization	M-3
M.3 Recovery Operations Notification	M-6
M.4 Population Exposure Evaluation	M-6
M.5 Recovery Organization Composition	M-6
<b>SECTION -M- Figures</b>	
Figure M-1: Recovery Organization	M-7
<b>N. EXERCISES AND DRILLS</b>	<b>N-1</b>
N.1 Exercise Requirements	N-1
N.2 Drill Requirements	N-1
N.2.1 Communications	N-1
N.2.2 Fire	N-2
N.2.3 Medical Emergency	N-2
N.2.4 Radiological Monitoring	N-2
N.2.5 Radiation Protection	N-2
N.2.6 Additional Drills	N-2
N.3 Drill and Exercise Scenarios	N-2
N.4 Conducting Drills and Exercises	N-3

**TABLE OF CONTENTS (Con't)**

	<b>Page</b>
<b>O. RADIOLOGICAL EMERGENCY RESPONSE</b>	<b>O-1</b>
<b>PREPAREDNESS TRAINING</b>	
O.1 Qualification Requirements for Onsite Emergency Response Personnel	O-1
O.2 Training Requirements for Offsite Organizations	O-1
 <b>P. RESPONSIBILITY FOR THE PLANNING EFFORT: DEVELOPMENT, PERIODIC REVIEW, AND DISTRIBUTION OF RERP PLANS</b>	 <b>P-1</b>
P.1 Responsibilities	P-1
P.2 Format of the RERP Plan	P-1
P.3 Review and Revision of the RERP Plan	P-2
P.4 Review and Revision of RERP Program	P-3
P.4.1 Independent Review	P-3
 <b>APPENDIX 1</b>	
Letters of Agreement	App. 1-1
 <b>APPENDIX 2</b>	
Southeastern Michigan EAS Plan	App. 2-1
 <b>APPENDIX 3</b>	
List of RERP Implementing Procedures	App. 3-1
 <b>APPENDIX 4</b>	
List of Supporting Procedures and Documents Identified in the Plan	App. 4-1
 <b>APPENDIX 5</b>	
RERP Plan Cross-Reference with NUREG-0654	App. 5-1

### LIST OF ABBREVIATIONS

AB	-	Auxiliary Building
APRM	-	Average Power Range Monitor
ARM	-	Area Radiation Monitor
BWR	-	Boiling Water Reactors
CAS	-	Central Alarm Station
CCTV	-	Closed Circuit Television
CHRRM	-	Containment High Range Radiation Monitor
CR	-	Control Room
CRS	-	Control Room Supervisor
CWPH	-	Circulating Water Pump House
DID	-	Direct Inward Dialing
DRD	-	Direct Reading Dosimeter
EAS	-	Emergency Alert System
ECCS	-	Emergency Core Cooling Systems
EDG	-	Emergency Diesel Generator
EECC	-	Employee Emergency Communications Center
EECW	-	Emergency Equipment Cooling Water
EMD	-	Emergency Management Division
EMS	-	Emergency Medical Services
ENS	-	Emergency Notifications System (NRC)
EOC	-	Emergency Operations Center
EOF	-	Emergency Operations Facility
EPA	-	Environmental Protection Agency
EPs	-	Radiological Emergency Response Preparedness Implementing Procedures
EPPOS	-	Emergency Preparedness Positions
EPZ	-	Emergency Planning Zone
ERF	-	Emergency Response Facility
FEMA	-	Federal Emergency Management Agency
FRERP	-	Federal Radiological Emergency Response Plan
FSAR	-	Final Safety Analysis Report
GE	-	General Electric
GMJ	-	General Maintenance Journeyman
GPM	-	Gallons Per Minute
GSW	-	General Service Water
GTOC	-	General Training and Orientation Center
HPCI	-	High Pressure Coolant Injection
HVAC	-	Heating, Ventilation, and Air Conditioning
I&C	-	Instrument & Controls
INPO	-	Institute of Nuclear Power Operations
IPCS	-	Integrated Plant Computer System
IRM	-	Intermediate Range Monitor

# LIST OF ABBREVIATIONS (Con't)

JPIC	-	Joint Public Information Center
JPIT	-	Joint Public Information Team
LOCA	-	Loss of Coolant Accident
LPCI	-	Low Pressure Coolant Injection
MEMP	-	Michigan Emergency Management Plan
MREM	-	Millirem
MSIV	-	Main Steam Isolation Valve
uCi/cc	-	Microcuries per cubic centimeter
uCi/g	-	Microcuries per gram
uCi/kg	-	Microcuries per Kilogram
uCi/l	-	Microcuries per Liter
uCi/sec	-	Microcuries per second
NOAA	-	National Oceanic and Atmospheric Administration
NOC	-	Nuclear Operations Center
NRC	-	Nuclear Regulatory Commission
NSO	-	Nuclear Supervising Operator
NSRG	-	Nuclear Safety Review Group
ODCM	-	Offsite Dose Calculation Manual
OSC	-	Operational Support Center
OSRO	-	Onsite Review Organization
PAG	-	Protective Action Guideline
PBX	-	Private Branch Exchange
PRM	-	Process Radiation Monitor
PRMS	-	Process Radiation Monitoring System
RB	-	Reactor Building
RBCCW	-	Reactor Building Closed Cooling Water
RCIC	-	Reactor Core Isolation Cooling
RERP	-	Radiological Emergency Response Preparedness
RET	-	Radiological Emergency Team
RHR	-	Residual Heat Removal
RWB	-	Radwaste Building
SAS	-	Secondary Alarm Station
SBC	-	Southern Bell Communications
SGTS	-	Stand-by Gas Treatment System
SM	-	Shift Manager
SRV	-	Safety Relief Valve
SSE	-	Safe Shutdown Earthquake
STA	-	Shift Technical Advisor
TAC	-	Technical Assistance Center
TB	-	Turbine Building
TLD	-	Thermoluminescent Dosimeter
TSC	-	Technical Support Center

## PREFACE

The Radiological Emergency Response Preparedness (RERP) Program for Fermi 2 consists of the RERP Plan, RERP Implementing Procedures (EPs), and related emergency preparedness plans and procedures of federal, state, and local government agencies. The purpose of the program is to provide protection of plant personnel and the general public, to restrict the release of radioactivity, and to secure plant systems in a stable and safe configuration in the event of an emergency situation at Fermi 2. The objectives of the Fermi 2 RERP Program are to provide:

- Effective coordination of emergency activities among onsite and offsite organizations having an emergency response role
- Early warning and clear instructions to the general public in the affected area in the event of a radiological emergency
- Continued assessment of actual or potential consequences both onsite and offsite
- Effective and timely implementation of emergency measures
- Continued maintenance of an adequate state of emergency preparedness

The RERP Plan describes the RERP Program which meets the standards of emergency plans as defined in 10CFR50.47(b), 10CFR50, Appendix E, NUREG-0654/FEMA-REP-1, Revision 1, and the Fermi 2 Technical Specifications, Section 5. Changes to the RERP Plan may not be made without NRC permission unless the criteria of 10CFR50.54(q) is met. Additionally, procedures which implement the RERP Plan are subject to the same regulatory criteria.

The RERP Plan is applicable to Fermi 2 and its environs, including a plume-exposure pathway Emergency Planning Zone (EPZ) extending 10 miles and an ingestion pathway EPZ extending 50 miles (See Figures A-1 and A-2). The 10-mile EPZ for the plume-exposure pathway includes all areas within 10 miles of Fermi 2 in Monroe County, Michigan; a small portion of the southern tip of Wayne County, Michigan; and a small portion of the Province of Ontario, Canada. The 50-mile ingestion pathway includes portions of Michigan, Ohio, and Canada.

The Michigan Emergency Management Plan, the Monroe County Emergency Management Plan, and the Wayne County Emergency Operations Plan describe the emergency planning and response for these respective government agencies.



**A. ASSIGNMENT OF RESPONSIBILITY (ORGANIZATION CONTROL)**

RERP planning for an incident at Fermi 2 is a cooperative effort involving Detroit Edison, the State of Michigan, local government agencies, federal government agencies, provincial agencies in Ontario, Canada and various organizations that provide support for these agencies. Each organization has the responsibility to assure, through coordinated planning and regularly scheduled exercises, that it can provide an effective emergency response 24 hours a day. The responsibilities of the state and local government Emergency Response Organizations are summarized in Figures A-3 through A-5. The interrelationships of the organizations supporting the Fermi 2 emergency response are shown in Figure A-6.

**A.1 Detroit Edison**

In the event of a radiological emergency at Fermi 2, Edison's Onsite Emergency Response Organization will initiate corrective and protective actions to control the incident and mitigate its effects. The incident will be classified as an Unusual Event, Alert, Site Area Emergency, or General Emergency based upon the criteria in Section D. Detroit Edison provides initial emergency notifications to the State of Michigan via the Michigan State Police, Monroe and Wayne Counties via the Monroe and Wayne County Sheriff's Offices, and to the Province of Ontario, Canada via the Ontario Emergency Measures Duty Officer. These offices have communication centers staffed 24 hours a day. The Michigan Department of State Police will coordinate all subsequent information updates to the Province of Ontario, Canada.

Throughout an emergency situation, Detroit Edison maintains control over onsite personnel, equipment, and activities. The Director, Nuclear Assessment/Alternate, acting as the Emergency Officer has ultimate responsibility for the Detroit Edison emergency response. The Fermi 2 Emergency Response Organization evaluates plant, meteorological, and radiological conditions to provide timely protective action recommendations to State and/or local Emergency Response Organizations.

**A.2 State of Michigan**

The Governor of the State of Michigan has complete authority over offsite emergency operations and decision making when a radiological emergency occurs at Fermi 2 and a "State of Emergency" or a "State of Disaster" is declared under the provisions of Act 390 of the Public Acts of 1976. The State Director of Emergency Management (Director, Department of State Police), under the direction and auspices of the Governor, has the responsibility for coordinating the state's emergency response. The Deputy State Director of Emergency Management commands the State Emergency Management Division (EMD), which directs and coordinates various State agency responsibilities.

State responsibilities include, but are not limited to, radiological assessment via environmental sampling and monitoring, implementation of protective actions (evacuation or shelter), control of food and water supplies, damage assessment, medical services, sanitation, environmental protection, dissemination of warning and notification information, security, traffic control and maintenance, public information, and crisis counseling. The Michigan Emergency Management Plan (MEMP) details the specific duties of each State agency or department.

The MEMP is activated when the Governor, as a result of available information or at the request of a county, declares a State of Emergency or a State of Disaster. When a disaster has been declared, available State resources are mobilized for the response, and state authority supersedes local authority. Local plans are also activated at this time, if not previously activated.

The State Emergency Operations Center (EOC) in Lansing is activated for coordination of state emergency activities. The EOC is staffed by State personnel in accordance with the MEMP as summarized in Figure A-6 to provide the executive liaison and data verification. Communications with the State from Detroit Edison are transmitted via direct dial or PBX telephone lines. The state has provided for, and is capable of, 24-hour-per-day operation for a protracted period of time during an emergency situation at Fermi 2.

The Department of State Police and the Department of Environmental Quality are the primary State Response Agencies during a radiological emergency. The Department of State Police is responsible for general planning, command and control, and overall direction and coordination including:

- Receiving initial notification of the emergency and notifying other state agencies.
- Providing periodic information updates to affected local governments, adjacent states, and the Joint Public Information Center (JPIC).
- Notifying and providing periodic information updates to the Province of Ontario, Canada through the Ministry of the Solicitor General in Toronto, Canada.
- Operating the State EOC
- Coordinating with local organizations to implement protective actions to evacuate and/or shelter the general population.
- Notifying the Federal Emergency Management Agency (FEMA) and other Federal agencies as required and providing liaisons to these agencies.

The Department of Environmental Quality is responsible for environmental monitoring and formulating ingestion pathway protective actions for the general public.

### **A.3 Local Governments**

Wayne and Monroe County governments have established emergency response facilities in accordance with their individual emergency preparedness plans. Upon notification of a radiological emergency at Fermi 2, Monroe County Central Dispatch initiates notification procedures in Monroe County.

When notified of an emergency at Fermi 2, Wayne County Central Communications initiates notification procedures in Wayne County, including calling the Gibraltar, Flat Rock, and Rockwood Police Departments and the Brownstown Township Fire Department. Detroit Edison maintains communications with Wayne and Monroe Counties until the State EOC in Lansing is activated, at which time all communications with the counties are channeled through the State EOC.

The Chairperson of the Monroe County Board of Commissioners is responsible for Monroe County emergency preparedness and has the authority to declare a "State of Emergency" within the county in the event of a radiological emergency at Fermi 2. If a "State of Emergency" is declared, the Monroe County Emergency Management Plan is implemented and the Monroe County EOC is activated at the Monroe County Emergency Management Division. The EOC is staffed with personnel from county agencies as shown in Figure A-4.

The Wayne County Executive is responsible for Wayne County emergency preparedness and the implementation of the Wayne County Emergency Operations Plan. The Wayne County EOC is located at the Wayne County Emergency Management Division, Romulus, Michigan and is activated upon notification of a radiological emergency at Fermi 2. The Wayne County EOC is staffed with personnel from county agencies as shown in Figure A-5. In addition, personnel from Brownstown Township will occupy the Wayne County EOC.

County responsibilities include, but are not limited to, access and traffic control, firefighting and rescue, public warning and information, sheltering (involving food, clothing, sanitation, medical services, and counseling), decontamination centers, transportation of persons and supplies, and evacuation of the general population. These actions are directed and coordinated from the respective county EOCs. These local emergency response activities are coordinated with the state through the State EOC. Both Monroe and Wayne Counties have made provisions for and are capable of 24-hour operation for extended periods of time during an emergency situation at Fermi 2.

#### **A.4 Federal Agencies**

Federal Agencies will be activated according to the Federal Radiological Emergency Response Plan to provide support to utility, state, or local authorities upon notification from the utility or state of an emergency that may affect public health and safety. The U.S. Nuclear Regulatory Commission (NRC) is responsible for conducting investigative activities associated with an emergency and verifying that emergency plans have been implemented and the appropriate agencies have been notified. The NRC is also responsible for the notification of other Federal agencies. The NRC response is described in NUREG-0845. Further actions of Federal Emergency Management Agency (FEMA) and the NRC are outlined in NUREG-0981/FEMA-51.

The U.S. Coast Guard will provide assistance through the Federal Radiological Emergency Response Plan upon request from the State of Michigan in the event that an emergency at Fermi 2 may affect activities on Lake Erie, including Canadian waters.

FEMA is responsible for ensuring that offsite protective actions are carried out appropriately and expeditiously by the state. FEMA also provides coordination of other federal emergency response agencies and provides back-up provisions to support state and local emergency response organizations.

#### **A.5 Emergency Response Services**

The nature of an emergency may require augmenting onsite response groups with offsite services, personnel, and equipment. Support from offsite organizations, such as those listed in Appendix 1, may be obtained by direct notification to the individual organization by the Emergency Director or Emergency Officer. Types of services that may be required are briefly outlined below.

- A.5.1 Medical Services** - In the event of an emergency involving an injury to onsite personnel, the medical staff at Mercy-Memorial Hospital (Monroe) or Oakwood Southshore Medical Center (Trenton) is called upon to provide medical services.

The Control Room ensures notification of the appropriate hospital and provision of pertinent information if the injury involves radiological contamination. Radiation Protection personnel are dispatched to perform contamination surveys for the ambulance service and at the hospital.

- A.5.2 Ambulance Service** - Contractual arrangements have been made with an ambulance service for the transportation of patients from Fermi 2. This includes individuals who may have injuries complicated by the presence of radioactive contamination or who may have exceeded personnel exposure limits. They will be transported to either Mercy-Memorial Hospital or Oakwood Southshore Medical Center for treatment.

- A.5.3 **Firefighting Assistance** - In the event the Fermi 2 Fire Brigade requires assistance with an onsite fire, the Frenchtown Fire Department will be called. All firefighting personnel periodically receive training for fighting fires involving radiological hazards.
- A.5.4 **Law Enforcement Services** - Civil disorder or other plant security threats may require prompt augmentation of the onsite security force. In the event law enforcement services are required, the Monroe County Sheriff's Department or the local Michigan State Police barracks (Monroe Post #28) are notified.
- A.5.5 **Technical Assistance** - Detroit Edison has entered a mutual emergency assistance agreement with Nuclear Management Company and Indiana Michigan Power Company. This agreement provides personnel and equipment for offsite radiation monitoring activities.

In addition, the Institute of Nuclear Power Operations (INPO) may be called for technical support. A dedicated emergency call number is capable of activating the INPO support function on a 24-hour basis. INPO will be able to provide the following support functions:

- Assistance in locating sources of emergency staff with nuclear and health physics experience.
- Analysis of the operational aspects of the incident.
- Obtaining nuclear operations experts for assistance and advice in technical matters.
- Assistance in locating sources of specialized equipment.

Technical/engineering assistance is also available from the following organizations:

- General Electric Company
- Sargent and Lundy Engineers
- Washington Group

Assistance in the analysis of environmental samples will be performed by the contractor or vendor who conducts the routine Radiological Environmental Monitoring Program.

## A.6 Continuity Of Resources

Sufficient staffing is provided to ensure that the Fermi 2 Emergency Response Organization can operate on a continuous, 24-hour basis for extended periods of time. Communications systems between Detroit Edison and offsite authorities are available and are staffed 24 hours a day. These systems are discussed in detail in Section F of this plan.

Detroit Edison's Vice President, Nuclear Generation is responsible for ensuring continuity of technical, administrative, and material resources.

Figure A-1  
FERMI 2 10-MILE EMERGENCY PLANNING ZONE

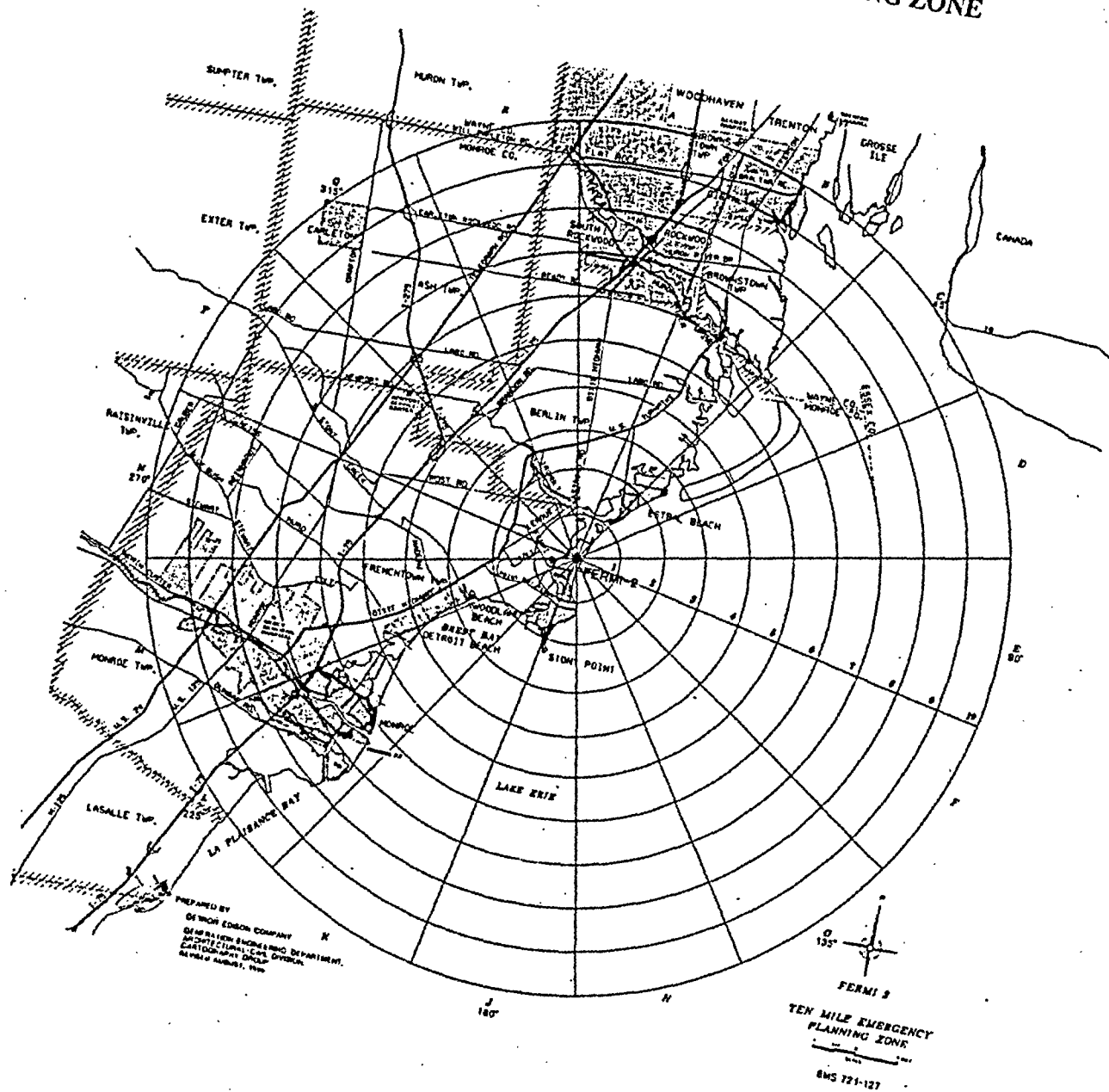


Figure A-2

FERMI 2 50-MILE EMERGENCY PLANNING ZONE

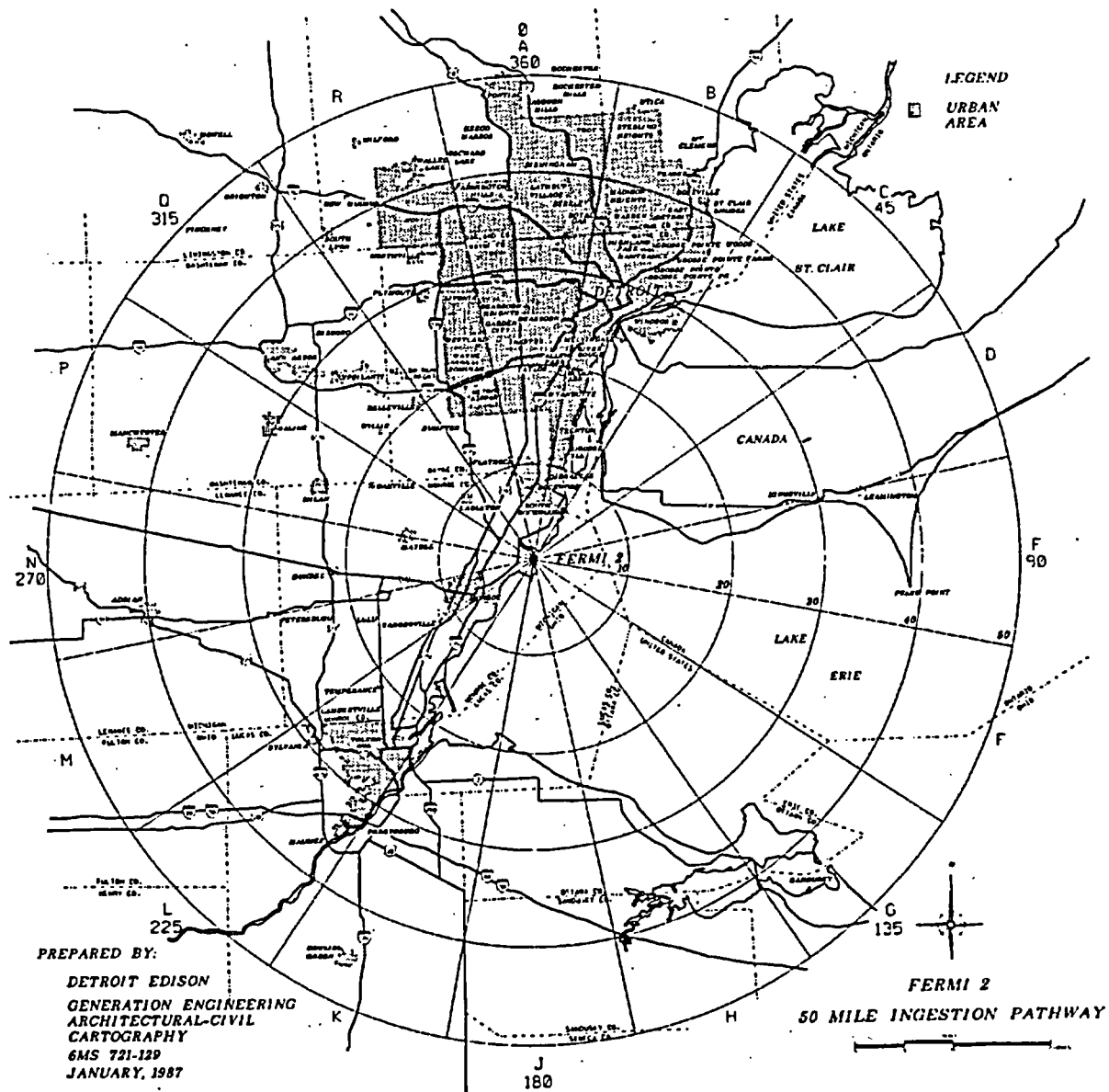


Figure A-3

STATE OF MICHIGAN AGENCY ASSIGNMENT AND FUNCTION CHART

AGENCY ASSIGNMENT	AGRICULTURE	CONS & INDUS SERV*	CORRECTIONS	EDUCATION	EXECUTIVE (GOV)	ENVIRO QUALITY	MILITARY AFF	NATURAL RES	COMM HEALTH	FAMILY IND AGY	STATE POLICE	TRANSPORTATION
DISASTER FUNCTION												
Access Control											P	S
Accident/Dose Assessment						P					S	
Alerting											P	
Classification of Accident						S					S	
Clothing, Provision of			S						S	P		
Communications						S	S	S			P	S
Crisis Counseling									P	S		
Damage Assessment											P	
Decontamination Guidance						P						
Direction and Control					P						S	
Dosimetry						P					S	
Emergency Medical Service									P			
Evacuation Authority					P						S	
Exposure control						P						
Fire								P			S	
Food	S		S	S			S		S	P		
Heavy Rescue												P
Housing				S			S		S	P		
Insurance Claims		P										
Law Enforcement								S			P	
Liaison to County											P	
Liaison to Federal											P	
Liaison to Utility											P	
Meteorological Analysis	P											
Monitoring						P						
Notification											P	
Planning											P	
Public Health						S			P			
Public Information						S					P	
Radioprotect. Drug Guid.						S			P			
Reentry Authority					P						S	
Sampling	S					P		S				
Sanitation									P			
Social Services										P		
Traffic Control											P	S
Training/Exercise											P	
Transportation, Public			S	P			S		S			S
Waste Removal						P						

P = Primary Responsibility

S = Support Responsibility

\*(Insurance Bureau)



Figure A-4

MONROE COUNTY EMERGENCY AGENCY ASSIGNMENT AND FUNCTION CHART

AGENCY ASSIGNMENT	CHIEF EXECUTIVE	EMERGENCY MANAGEMENT COORDINATOR	WARNING/COMMUNICATIONS	SCHOOL SERVICES	PUBLIC INFORMATION	DAMAGE ASSESSMENT	RADIOLOGICAL DEFENSE	LAW ENFORCEMENT	FIRE SERVICES	PUBLIC WORKS	HEALTH SERVICES	EMERGENCY MEDICAL SERVICES	HUMAN SERVICES
DISASTER FUNCTION													
Command & Control	P	S											
Alert Notifications		S	P				S	S	S				
Communications			P										
Damage Assessment						P							
Public Information					P								
Accident Assessment						P	S	S	S				
EAS Activation		S	P										
Evacuation	P	S						S	P				
Public Health											P		
Human Services													P
Interagency Coordination		P											
Mass Feeding – Care													P
Missing Person Inquiry													P
Notification – Key Official		P	P										
Command Post								S	P				
Fire & Rescue								S	P				
Traffic Control								P	S	S			
Emergency Medical Services									S		S	P	
Law Enforcement								P					
Transportation				P				S	S				
Protective Actions	P	P					P						
Radiation Exposure Control							P				S		
School Services				P									
Temporary Shelter				S									P
Decontamination							S		P				
EOC Operations		P											
Utilities Coordination			S							P			
Rumor control					P								
Victim Identification											P		
Water Use Restriction											P		
Transportation of Goods										P			

P = Primary Responsibility

S = Support Responsibility

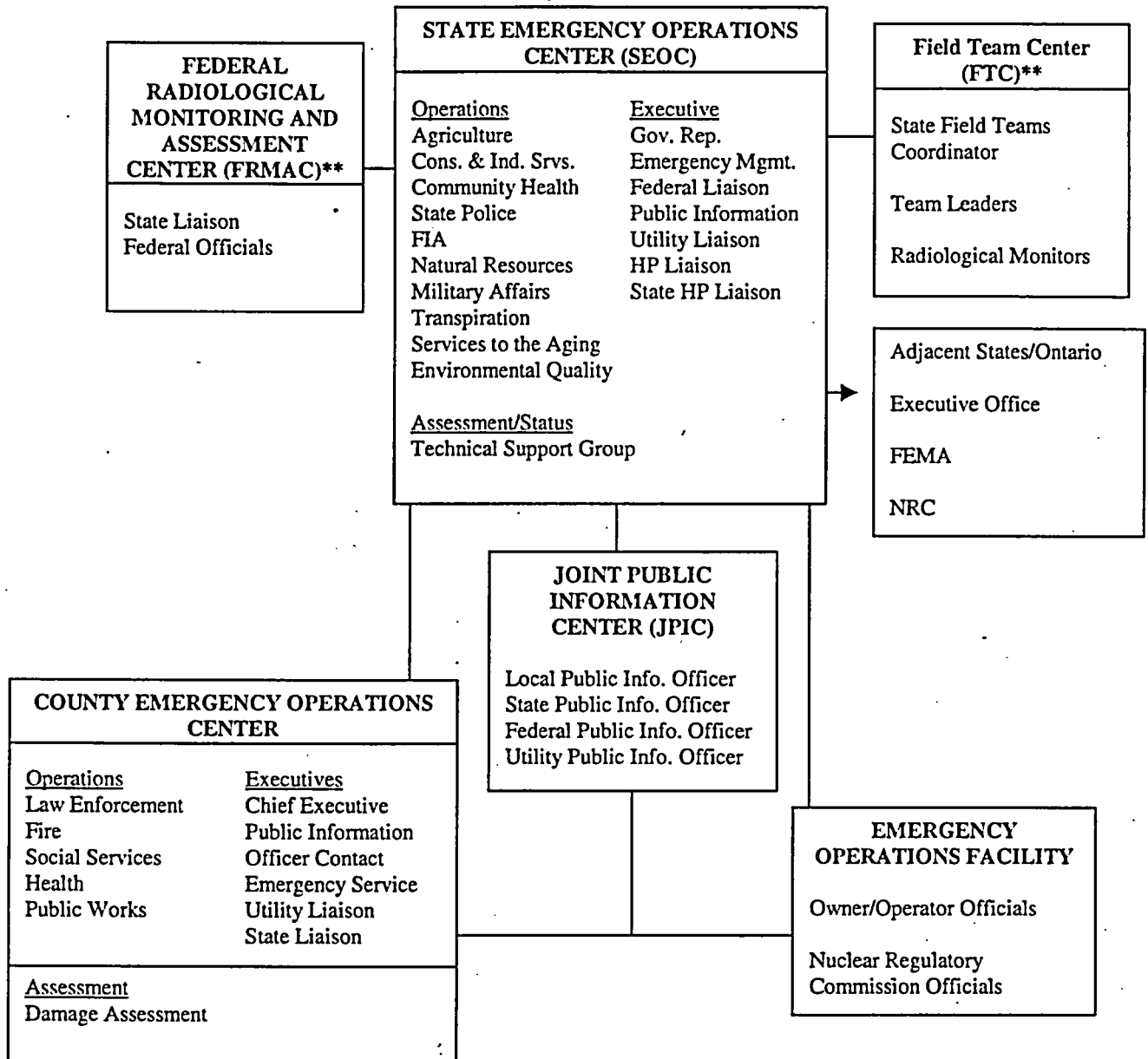
Figure A – 5

WAYNE COUNTRY EMERGENCY FUNCTION AND AGENCY ASSIGNMENT CHART

INDIVIDUAL OR ANNEX GROUP	PRIMARY FUNCTION/RESPONSIBILITY	SUPPORT FUNCTION/RESPONSIBILITY
Chief Executive	Command & Control Protective Response	Public Information
EMD Director		Command & Control, Public Information, Alert & Notification, Accident Assessment, Communications, Public Health, Social Services, Fire/Rescue, Emergency Medical Services, Traffic & Access Control, Law Enforcement, Transportation, Protective Response, Exposure Control
Communications Officer	Communications, Public Information, Alert & Notification	
Damage Assessment	Accident Assessment	Accident Assessment, Exposure Control
Public Information	Public Information	
Radiological Protection	Accident Assessment, Exposure Control	Protective Response
Law Enforcement	Law Enforcement, Traffic & Accident Control	Fire/Rescue, Protective Response
Fire/Rescue	Fire Rescue, Emergency Medical Services	Traffic & Access Control, Protective Response, Exposure Control
Health Services	Health Services	Social Services, Emergency Medical Services
Public Services	Traffic & Access Control	Public Health, Fire/Rescue, Transportation, Protective Response
Family Independence Agency	Social Services	Public Health, Emergency Medical Services, Protective Response
Schools	Public Health, Transportation	Social Services, Protective Response

Figure A-6

EMERGENCY OPERATION CENTER INTERRELATIONSHIPS\*



\*Under a Governor's State of Disaster/Emergency Declaration

\*\*When the FRMAC is opened, the FTC is then incorporated into FRMAC.

## **B. EMERGENCY RESPONSE ORGANIZATION**

### **B.1 Nuclear Generation Organization**

- B.1.1 Normal Organization** - The Nuclear Generation Organization includes operating, technical and administrative support, engineering, and management personnel.

Figure B-1 is a chart showing the functional levels and detailing the plant and technical support organizations. The Nuclear Generation Organization is onsite during normal working hours Monday through Friday, excluding holidays. Plant Operations, Radiation Protection, Chemistry, and Security personnel are onsite on a 24-hour basis including holidays. The minimum shift complement is specified in Technical Specifications Section 5.2.2.

- B.1.2 Emergency Response Organization** - In the event of an emergency at Fermi 2, the Emergency Response Organization is activated. The normal complement of shift personnel is augmented according to the emergency classification. The Nuclear Generation Organization provides the majority of the personnel required to staff the organization. Additional Detroit Edison personnel are called upon to provide specific expertise as required.

During an emergency, the Emergency Response Organization is located in the Control Room and the three Emergency Response Facilities (ERFs) described in Section H of this plan: Operational Support Center (OSC); Technical Support Center (TSC); and Emergency Operations Facility (EOF). It is Detroit Edison's intent to activate the ERFs based on the emergency classification. The OSC and TSC are activated at the Alert level and the EOF is activated at the Site Area Emergency level. Figures B-2 through B-5 show the organization in the Control Room, OSC, TSC and EOF.

The Emergency Response Organization is predefined by the Supervisor, RERP. Assignments to various positions are specified to provide timely, unambiguous staffing. Table B-1 shows the minimum staffing for the Fermi 2 Emergency Response Organization according to functional area, ERF, and emergency classification. Table B-1 reflects Detroit Edison's intent to achieve the 30-minute and 60-minute augmentation times indicated in Table B-1 of NUREG-0654/FEMA-REP-1 and in Supplement 1 to NUREG-0737 as a desirable goal for staffing the ERFs.

It is the goal of Detroit Edison to augment Control Room staff by the Emergency Response Organization (Table B-1) in two groups of key personnel. The first group of key personnel should be in their Emergency Response Facility within 30 minutes of an Alert being declared. However, there may be some conditions where up to 60 minutes may be required. The second group of key personnel should be in place within 60 minutes of a Site Area Emergency being declared.

## **B.2 Emergency Assignments**

### **B.2.1 Responsibilities - The organization and functional responsibilities of the Emergency Response Organization personnel are outlined in Table B-2 for the key functional positions.**

The Emergency Director assumes full responsibility for the emergency response measures and implementation of the RERP Plan prior to activation of the EOF. At the onset of an emergency, the Shift Manager assumes the role of the Emergency Director and retains this role until relieved of the responsibility by the Plant Manager/alternate.

The Emergency Director operates from the Control Room initially, and then from the TSC should the situation progress beyond the Unusual Event classification. Certain responsibilities may be delegated to other individuals or groups, with the exception of decisions to: (1) classify the emergency; (2) authorize radiation exposures over 10 CFR 20 limits for emergency workers; (3) make protective action recommendations to offsite response organizations (prior to EOF activation); and (4) authorize distribution and use of KI to radiological emergency workers.

Detroit Edison will implement Severe Accident Guidelines (SAG) from the TSC. Should an event require entry into SAG, the control room will interact with the TSC and transition from Emergency Operating Procedure (EOP) decision making in the control room to SAG decision making in the TSC. The TSC must be functional to implement SAG. The TSC Technical Engineer is the primary SAG decision-maker, but the Emergency Director retains overall authority for SAG implementation.

When the EOF is activated, the Emergency Officer assumes overall management responsibility for the Emergency Response Organization and for all assignments in the organization. The Emergency Officer also assumes full responsibility for all coordination and interaction with offsite response organizations, with the exception of the local fire department, the ambulance service, and the hospital for contaminated injured personnel. These organizations are, and will continue to be, contacted through the Control Room. The EOF will be the focal point for meteorological data, dose assessment and projection, offsite radiological field surveys, and recommendations for protective action for the general public within the 10-mile EPZ. The Emergency Officer will approve all protective action recommendations made to the State, when the EOF is activated. The Emergency Director, EOF Staff, and Joint Public Information Center (JPIC) Corporate Spokesperson report to the Emergency Officer. The Emergency Officer: (1) ensures that the full resources of Detroit Edison are made available as required to secure the plant systems and to minimize the effects of the incident on plant personnel and the public, including the availability of other utilities, vendors, and consultants, (2) ensures that information released to the public is accurate and directed through proper channels, (3) communicates with Corporate Headquarters, and (4) ensures that the long-term emergency and recovery organizations are established.

Operations, technical, and administrative support personnel will be assigned according to the needs of each ERF. Table B-2 describes the functional duties and responsibilities of the personnel who may be present in each of the facilities.

## **B.3 Emergency Response Organization Interfaces**

The onsite ERFs are discussed in Section H. The offsite centers are, at a minimum, Western Wayne Center and the emergency centers of the federal, state, and local response organizations. The interface among all these centers provides a logical flow of information in a direct and unambiguous manner and is based on the functional responsibilities of each center. Communications systems, as discussed in Section F, are provided to maintain these primary interfaces.

**TABLE B-1**  
**STAFFING FOR FERMI 2**  
**EMERGENCY RESPONSE ORGANIZATION**

Major Functional Area	Major Tasks	Locations	Emergency Response Organizational Title	Detroit Edison Position Title/Expertise	On Shift	Alert +30 min	Site Area +60 min
Plant Operations and Assessment of Operational Aspects		CR	Control Room Supervisor	Control Room Supervisor	1		
			Nuclear Supervising Operator	Nuclear Supervising Operator	2		
			Non-Licensed Operator	Non-Licensed Operator	2		
Emergency Direction and Control		CR	Emergency Director	Shift Manager	1		
Notification/Communication	Notify ERO, State, Local and Federal Authorities, Maintain Communications	CR	Communicator	Communicator	1		
		TSC	Communicator	Engineer/Technician		1 (c)	1 (c)
		EOF	Communicator	Engineer/Technician			1 (c)
Radiological Accident Assessment and Support of Operational Accident Assessment	Emergency Officer	EOF	Emergency Officer	Director/Manager			1
	Offsite Dose Assessment	CR	Shift Technical Advisor	Shift Technical Advisor	1 (a)		
	Offsite Surveys	TSC	Radiation Protection Advisor	Supervisor Radiation Protection		1	
			Offsite RET	RP Technicians		2 (c)	2 (c)
	Onsite (out of plant) Surveys		Onsite RET	RP Technicians		1	1
	In plant Surveys		RP Technicians	RP Technicians	1	1	1
	Chemistry/Radiochemistry		Chemistry Technician	Chemistry Technician	1		1
Plant System Engineering, Repair and Corrective Actions	Technical Support	CR	Shift Technical Advisor	STA	1 (a)		
		CR	Reactor Engineer	Station Nuclear Engineer		1	
		TSC	Technical Engineer or Nuclear Safety Advisor	Engineer			1
		TSC	Support Engineer	Engineer			1
	Repair and Corrective Actions	OSC	Damage Control and Rescue Team	Non-licensed Operators, GMJs and I&C Techs	2 (b)	2	3
Protective Actions (In Plant)	Radiation Protection: 1. Access Control 2. HP coverage for repair, corrective actions, search and rescue, first-aid and fire-fighting 3. Personnel monitoring 4. Dosimetry		RP Technicians	RP Technicians	2 (b)	2	2
Fire Fighting			Fire Brigade	Fire Brigade	UFSAR		
Rescue Operations and First Aid			Damage Control and Rescue Teams	Non-licensed Operators, GMJs and I&C Techs	2 (b)		
Site Access Control and Personnel Accountability	Security and Personnel Accountability		Nuclear Security Force	Nuclear Security Force	Per Security Plan		
Total					10	11	15

- (a) The Shift Technical Advisor provides for Technical Support and On-Shift dose assessment capability.  
(b) May be provided by shift personnel assigned other functions.  
(c) May be performed by other qualified personnel.

**TABLE B-2:  
EMERGENCY RESPONSE ORGANIZATION FUNCTIONAL RESPONSIBILITIES**

Functional Position	Location	Reports To	Responsibilities
Emergency Officer	Emergency Operations Facility	Chief Executive Officer, Detroit Edison	Overall emergency management
Director, Nuclear Engineering			Approve all protective action recommendations
Director, Nuclear Assessment			Ensure that the full resources of Detroit Edison are made available to secure the plant systems and to minimize the effects of the incident on plant personnel and public. This includes availability of other utilities and vendor resources
Manager, Radiation Protection			Interface with governmental authorities as required
Project Manager, Nuclear Engineering Projects			Ensure information released to the public is prompt and accurate and released through proper channels
Supervisor RERP			Establish long-term emergency and recovery organization
			Communicate with Corporate Headquarters
Emergency Director	Control Room	Emergency Officer	Implement the immediate onsite corrective and protective actions to bring the incident under control and mitigate its effects
Nuclear Shift Manager			Classify the emergency
Director, Nuclear Production	Technical Support Center	Emergency Officer	Initiate offsite notifications and protective action recommendations
			Interface with governmental authorities as required
			Ensure Detroit Edison personnel are called in as conditions warrant

**TABLE B-2:  
EMERGENCY RESPONSE ORGANIZATION FUNCTIONAL RESPONSIBILITIES  
(Continued)**

Functional Position	Location	Reports To	Responsibilities
Emergency Director (continued)			Ensure that information to be released to the public is prompt, accurate, and released through proper channels
Manager, Nuclear Operations			Coordinate and direct the combined activities of Detroit Edison personnel in the Control Room, TSC, OSC, and elsewhere on owner-controlled property
Operations Engineer			
Manager, Nuclear Maintenance			Authorize plant and emergency workers to receive radiation doses in excess of 10 CFR 20 limits
			Authorize the distribution and use of Potassium Iodide (KI)
			Obtain assistance of offsite support organizations as necessary
			Provide oversight of Severe Accident Management
Shift Technical Advisor	Control Room	Emergency Director	Advise the Emergency Director on plant technical matters.
Shift Technical Advisor			Access meteorological data
			Perform dose assessment based on potential or actual radiological releases
Reactor Engineer	Control Room	Emergency Director	Analyze conditions affecting core safety
Station Nuclear Engineer			Advise the Emergency Director/Shift Manager on all matters relating to reactor core safety



**TABLE B-2:**  
**EMERGENCY RESPONSE ORGANIZATION FUNCTIONAL RESPONSIBILITIES**  
**(Continued)**

Functional Position	Location	Reports To	Responsibilities
OSC Coordinator	Operational Support Center	Emergency Director	Direct maintenance operations. Dispatch onsite emergency teams
Operations Support			Advise the Emergency director on repair activities
Senior Reactor Operator			Recommend maintenance actions to mitigate the emergency
Reactor Operator			Provide work assignments for maintenance personnel
Operations Work Control			
Supervisor, Operations Support			
Technical Engineer	Technical Support Center	Emergency Director	Provide recommendations to the Emergency Director on plant technical matters
Operations Support			Request technical and engineering analyses from the Nuclear Safety Advisor
Operations, Outage Management Support			Severe Accident Management decision maker
Shift Manager, F.I.R.S. Team			
Operations Liaison	Technical Support Center	Technical Engineer	Advises Technical Engineer Severe Accident Management Team Member
Operations Work Control			Monitors Plant Status
Operations Human Performance Coordinator			

**TABLE B-2:**  
**EMERGENCY RESPONSE ORGANIZATION FUNCTIONAL RESPONSIBILITIES**  
**(Continued)**

Functional Position	Location	Reports To	Responsibilities
Nuclear Safety Advisor	Technical Support Center	Emergency Director	Advise the Emergency Director on plant engineering matters
Manager, Nuclear Performance Engineering			Provide work assignments for Nuclear Engineering Support groups
Manager, Nuclear Fuels/PSA			
Manager, Nuclear System Engineering			
Manager, Nuclear Plant Support Engineering			
Radiation Protection Advisor	Technical Support Center	Emergency Director	Advise the Emergency Director concerning offsite protective action recommendations
General Supervisor, RP Operations			Provide work direction for radiation protection and dose assessors
General Supervisor, Radiological Engineering			Ensure personnel exposure records are maintained
Specialist, Safety/Industrial Hygiene			Ensure TSC habitability surveys are performed
Principal Radiological Engineer			Authorize the Dispatch of Onsite RETs
Supervisor, Radiation Protection			Authorizes the Dispatch of Offsite RETs until the EOF is activated
			Evaluate results of offsite environmental surveys until the EOF is activated
			Ensure that radiation protection equipment, such as dosimetry devices, respiratory protection gear, and protective clothing, is issued and controlled, as required
			Direct onsite decontamination activities

**TABLE B-2:  
EMERGENCY RESPONSE ORGANIZATION FUNCTIONAL RESPONSIBILITIES  
(Continued)**

Functional Position	Location	Reports To	Responsibilities
Dose Assessor	Technical Support Center	Radiation Protection Advisor	Perform onsite and offsite dose assessment and projections
General Supervisor, Radwaste			Assess meteorological conditions and projections
Supervisor, Radwaste			
Radiological Engineering			
Radchem Advisor	Technical Support Center	Emergency Director	Direct in-plant chemistry sampling activities
General Supervisor, Chemistry			Direct Radiochemistry Laboratory activities
Supervisor, Chemistry Engineering			Advise Emergency Director on radwaste processing/storage/disposal
Supervisor, Chemistry Laboratory			
Security Advisor	Technical Support Center	Emergency Director	Ensure that site security is maintained and appropriate contingency measures are implemented
General Supervisor, Security			Ensure that security and traffic Operations control measures are in effect, including traffic direction during evacuation
Security Shift Supervisor			Ensure personnel accountability procedures are implemented in the event of a radiological emergency or the need for plant/site evacuation
			Advise the Director, Nuclear Security and Emergency Director on matters related to security

**TABLE B-2:**  
**EMERGENCY RESPONSE ORGANIZATION FUNCTIONAL RESPONSIBILITIES**  
**(Continued)**

Functional Position	Location	Reports To	Responsibilities
Support Engineers	Technical Support Center	Nuclear Safety Advisor	Use IPCS/SPDS to monitor and/or trend key plant parameters
Supervisor, Engineering			Advise Nuclear Safety Advisor on plant engineering matters as required
Lead/Principal Engineer			Severe Accident Management evaluator
Engineer			
TSC Administrator	Technical Support Center	Emergency Director	Ensure that all notifications and communications to offsite organizations are accomplished within time requirements
Supervisor, Refuel Outage Scheduling			
Scheduling, Nuclear Work Control			Maintain and control documentation concerning the emergency
General Supervisor, Operations Support			Supervise TSC communicators, and clerical support
Project Manager, Work Management Improvement			Coordinate logistical support for onsite emergency personnel
Specialist, Strategic Planning			Advise the Emergency Director on matters relating to personnel and equipment
			Provide for replacement or addition of TSC personnel or equipment as conditions warrant

**TABLE B-2:  
EMERGENCY RESPONSE ORGANIZATION FUNCTIONAL RESPONSIBILITIES  
(Continued)**

Functional Position	Location	Reports To	Responsibilities
Radiation Protection Coordinator	Emergency Operations Facility	Emergency Officer	Direct and coordinate offsite environmental assessment activities
Supervisor, Radiological Health			Direct Radiological emergency Team Coordinator, Dose Assessors, Meteorologists, and Laboratory Tech
Radiological Engineering			Determine survey areas for offsite RETs
			Determine environmental samples/surveys
General Supervisor, RP Technical Services and Support			Advise Emergency Officer on offsite protective action recommendations
			Evaluate results of offsite environmental surveys
			Direct activities in EOF Emergency Laboratory
			Ensure personnel exposure records are maintained
			Ensure EOF habitability surveys are performed
			Ensure that radiation protection equipment, such as dosimetry devices, respiratory protection gear, and protective clothing, is issued and controlled
			Implement a vehicle monitoring/decontamination program

**TABLE B-2:**  
**EMERGENCY RESPONSE ORGANIZATION FUNCTIONAL RESPONSIBILITIES**  
(Continued)

Functional Position	Location	Reports To	Responsibilities
Dose Assessor	Emergency Operations Facility	Radiation Protection Coordinator	Perform dose assessment and projections
Radiological Engineer			Assess meteorological conditions as required
Principal Engineer, Radiological			
Specialist, Environmental			
Radiological Health Specialist			
Operations Training Instructor			
Meteorologist	Emergency Operations Facility	Radiation Protection Coordinator	Assesses meteorological conditions and projection
Engineer			
Radiological Emergency Team Coordinator	Emergency Operations Facility	Radiation protection Coordinator	Update RET status
Nuclear Training Specialist			Coordinate efforts of the Offsite RETs
Nuclear Operations Advisor	Emergency Operations Facility	Emergency Officer	Advise Emergency Officer on plant status
Supervisor, Operations Continuing Training			Provide updated information to the Detroit Edison liaisons to the State of Michigan, Monroe County, and Wayne County
Operations Support			
Strategic Planning			

**TABLE B-2:  
EMERGENCY RESPONSE ORGANIZATION FUNCTIONAL RESPONSIBILITIES  
(Continued)**

Functional Position	Location	Reports To	Responsibilities
Public Information Coordinator	Emergency Operations Facility	Emergency Officer	Prepare information under the direction of the Emergency Officer for prompt release to the Joint Public Information Center (JPIC)
Principal Licensing Engineer			
Specialist, Nuclear Licensing			
Project Manager, Engineering Projects			
EOF Administrator	Emergency Operations Facility	Emergency Officer	Ensure that all notifications and communications to offsite organizations are accomplished with the time requirements
Manager, Nuclear Quality Assurance			Ensure communications with offsite emergency response organizations are established.
General Supervisor, Inspection and Surveillance			Maintain and control documentation concerning the emergency
General Supervisor, Audits			Supervise EOF status board clerks communicators, and clerical support
Specialist, Assessment and Support			Coordinate logistical support for onsite emergency personnel
General Supervisor, Assessment and Support			Advise the Emergency Officer on matters relating to personnel and equipment
Lead, Internal Audits			Provide for replacement or addition of EOF personnel or equipment as conditions warrant

**TABLE B-2:**  
**EMERGENCY RESPONSE ORGANIZATION FUNCTIONAL RESPONSIBILITIES**  
**(Continued)**

Functional Position	Location	Reports To	Responsibilities
Security Advisor	Emergency Operations Facility	Emergency Officer	Coordinate access and egress of offsite personnel to owner-controlled area
Supervisor, Nuclear Security			Advise the Emergency Officer on security matters
Nuclear Security Planning Analyst			Maintain security of the EOF
Manager, Nuclear Security			



**Figure B-1**  
**NUCLEAR GENERATION ORGANIZATION**

See UFSAR Figure 13.1-2

Figure B-2  
CONTROL ROOM

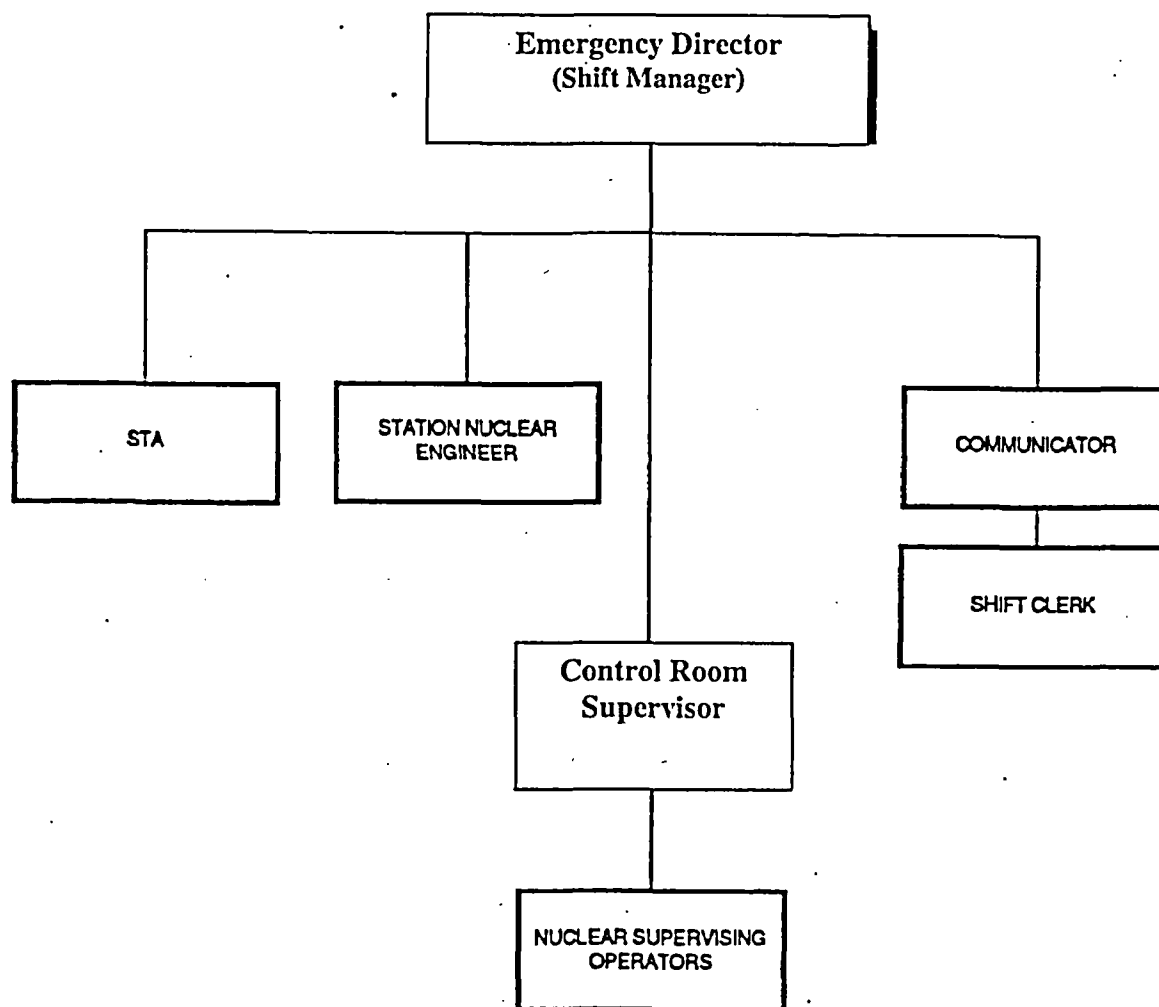
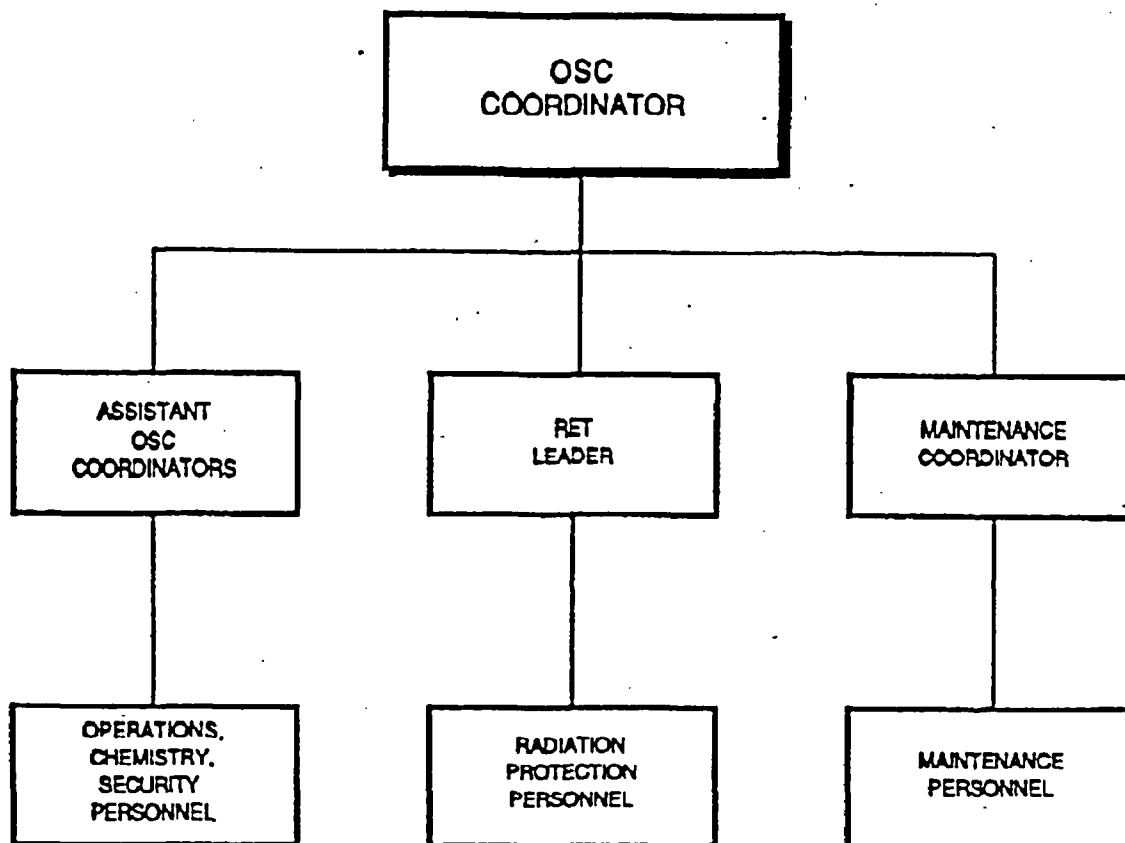


Figure B-3  
OPERATIONAL SUPPORT CENTER



Note: Some personnel may  
be directed to report to  
the Control Room

Figure B-4

TECHNICAL SUPPORT CENTER

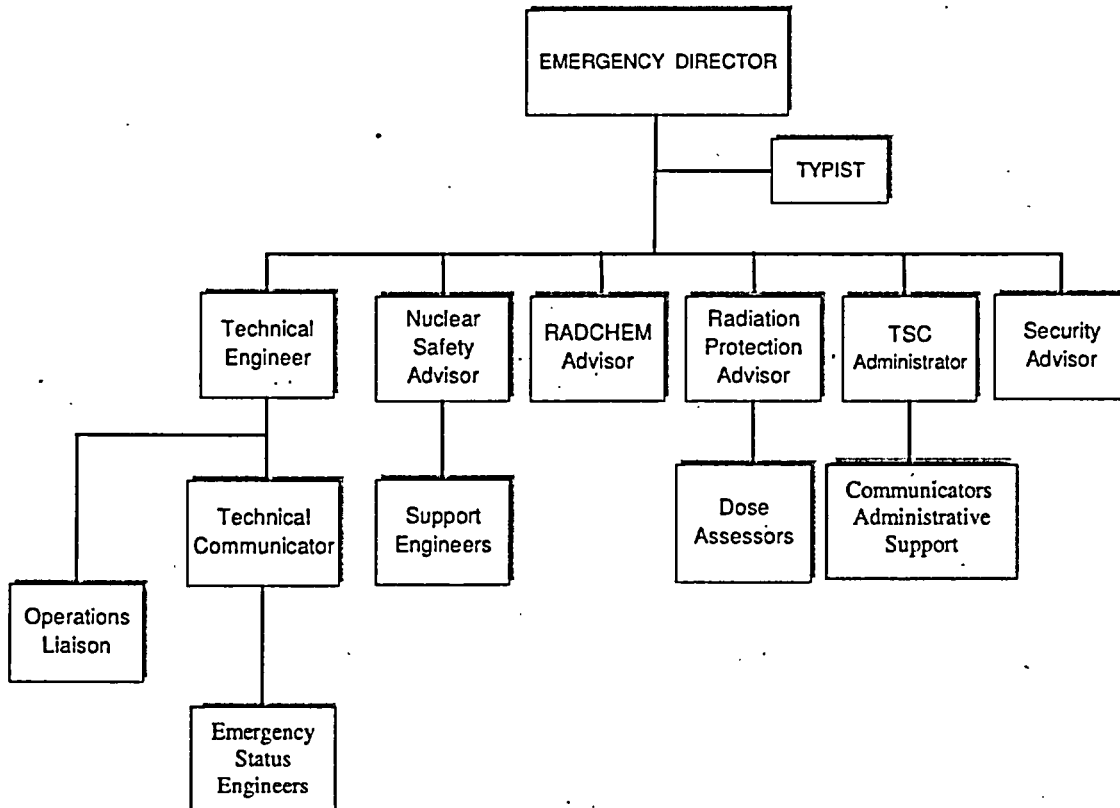
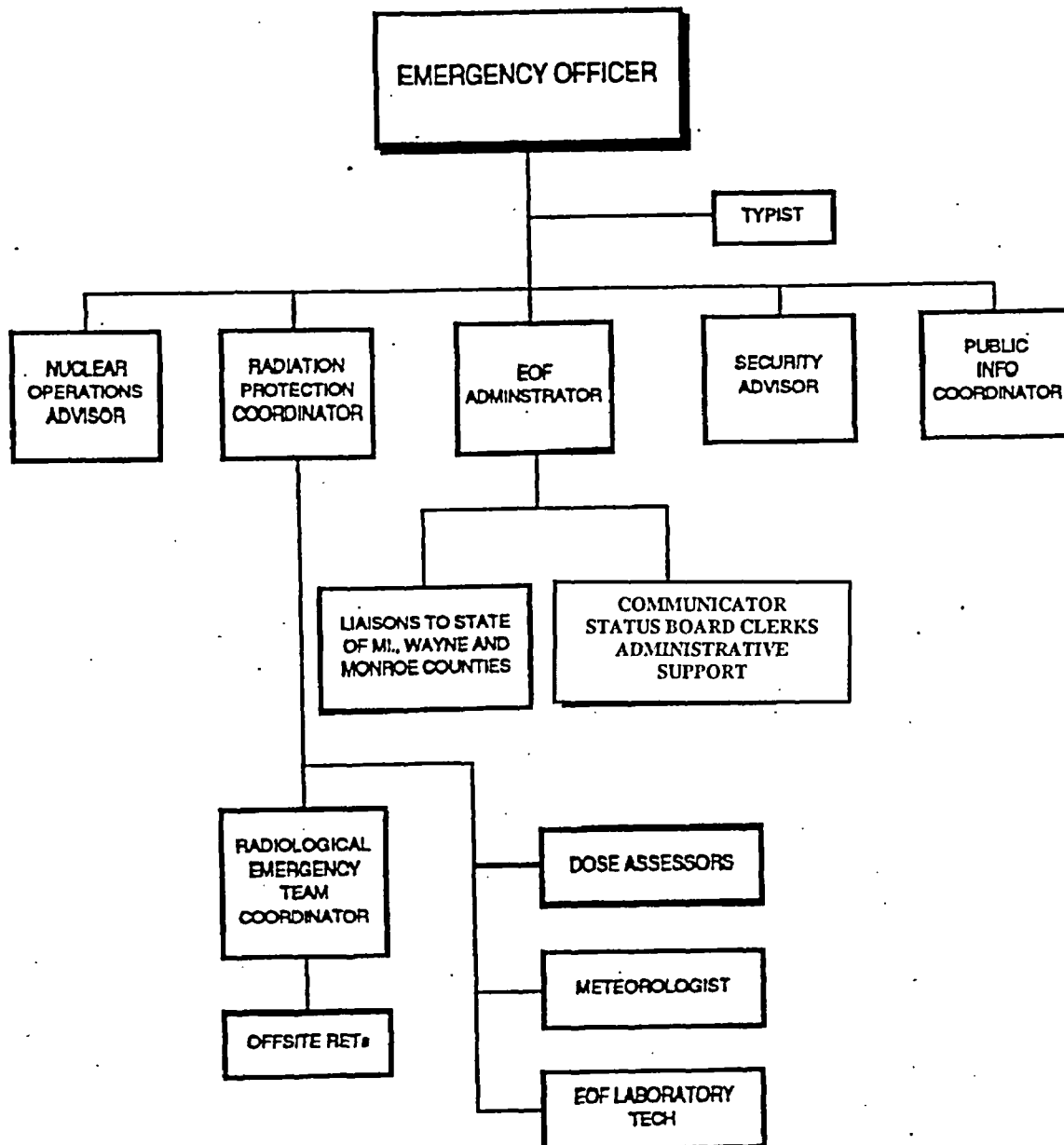


Figure B-5  
EMERGENCY OPERATIONS FACILITY



## C. EMERGENCY RESPONSE SUPPORT AND RESOURCES

This Plan Section describes arrangements for requesting and effectively using government or other industry support to augment the onsite emergency response capability.

### C.1 Government Support

Federal assistance can be requested as needed by the Emergency Officer or the Emergency Director. Federal assistance is available through the Federal Radiological Emergency Response Plan (FRERP). Requests can also be initiated by the Michigan Department of State Police, Emergency Management Division. In addition, the Nuclear Regulatory Commission (NRC) dispatches representatives to the EOF and to the TSC in accordance with NUREG-0845. Federal representatives are expected to be dispatched to the Joint Public Information Center to participate in the coordinated dissemination of information to the media.

Airfields in the vicinity of the plant that may be used by emergency support groups include commercial airports and small municipal airports that can only accommodate small aircraft. The approximate distances in miles and directions to these airfields from Fermi 2 follow. Two helicopter landing pads are located in the Fermi 2 Owner-Controlled Area.

Airport	Distance, Mi	Direction
<b>Commercial</b>		
Detroit Metropolitan	19	NNW
Detroit City	34	NNE
Toledo Express	39	SW
Willow Run	24	NW
<b>Municipal</b>		
Carl	6	NNW
Custer	10	W
Grosse Ile	11	NNE

State and local command centers that may be available to support federal response include the State EOC located at the Department of State Police, Emergency Management Division, in Lansing, Michigan, and the alternate State EOC located at the State Police Second District Headquarters, Northville, Michigan. The State Emergency Operations Centers (EOCs) are described in the Michigan Emergency Management Plan.

The local EOCs are described in detail in the Monroe County and Wayne County, Emergency Operations Plans. The Monroe County EOC is located at the Emergency Management Division, Monroe, Michigan and the Wayne County EOC is located at the Emergency Management Division, Romulus, Michigan.

Detroit Edison will provide liaison personnel to the State and county EOCs. These liaisons are knowledgeable in the integrated aspects of the Fermi 2 RERP Plan.

The state may have a Liaison Officer from the Department of State Police in the EOF; the counties may dispatch liaisons as they deem necessary. In addition, the Department of Environmental Quality has a laboratory located in Lansing, Michigan capable of analyzing radiological and environmental samples.

## **C.2 Industry Support**

Detroit Edison, a member of the Institute of Nuclear Power Operations (INPO), is provided with the INPO Emergency Resources Manual. The Manual provides a summary description of each U.S. nuclear plant, principal contacts at each station for use in an emergency, and technical expertise and specialized equipment that utilities and suppliers could provide in response to requests for emergency assistance from an INPO member or participant. For example, technical experts may be called upon to assist in the analysis or solution of unique or complex problems, and specialized equipment may be requested to mitigate an emergency or assist in recovery.

The INPO Emergency Resources Manual provides the licensee with the option of either communicating directly with the organization that is providing the support or using INPO as an agent to arrange for and coordinate the required support. The individuals to be contacted in the various organizations along with their telephone numbers are listed in the manual, which is updated annually.

In addition, a separate mutual assistance agreement exists among Nuclear Management Company, Indiana and Michigan Power Company, and Detroit Edison. Such requests for assistance can be in the form of personnel or equipment. This agreement is limited to assistance in offsite environmental monitoring.

General Electric (GE) has a support program in place which utilizes the full resources of the Nuclear Energy Group in San Jose and the Installation and Services Engineering personnel in the local districts to support utilities during emergency situations. This program has provided assistance for boiling-water reactors (BWRs) during major component failures and plant transients to minimize the impact of the event and to assure rapid return to operation. To assist BWR owners/operators more expeditiously during emergency situations that could potentially endanger the health and safety of the public or plant personnel, or that under certain circumstances could have a major impact on continued plant operations, a special Emergency Support Program has been established by GE's Nuclear Services Department. Fermi 2 has access to this GE support program 24 hours a day. The support program is described in detail in Appendix 1.

In addition to that provided by government emergency plans, Detroit Edison has arranged for emergency assistance from local and other private organizations through signed letters of agreement with each of these organizations. The letters of agreement containing concepts of operation, specific support commitments, authorities, responsibilities, and limits of these organizations are included in their entirety in Appendix 1. The following is a complete list of these organizations:

- Hart Medical, Inc. Ambulance Service
- Frenchtown Fire Department
- GE Company (BWR Emergency Support Program) - not a Letter of Agreement
- INPO (Nuclear Power Plant Emergency Response Voluntary Assistance Agreement)
- Mercy Memorial Hospital
- Monroe County Community College
- Mutual Assistance Agreement
  - Nuclear Management Company
  - Detroit Edison Company
  - Indiana Michigan Power Company
- Oakwood Southshore Medical Center



## **D. EMERGENCY CLASSIFICATION SYSTEM**

A standard emergency classification and action level scheme, the basis of which includes facility system and effluent parameters, has been established. State and local response organizations will rely on information provided by the facility licensee for the classification of an emergency and related appropriate offsite protective action recommendations.

The emergency classifications are as follows:

- Unusual Event
- Alert
- Site Area Emergency
- General Emergency

A general description and the purpose of each classification level is provided in Sections D.1 through D.4. The actions required by the licensee and by the state and/or local offsite authorities are also given for each class.

Emergency Action Levels are provided in Table D-1. Included in this table are the UFSAR postulated accidents that are considered to be of sufficient severity to establish an emergency condition. Specific information on instruments, parameter values, and/or equipment status for establishing the emergency class is provided in RERP Implementing Procedures. The initiating conditions are classified to provide consistency with established plant Technical Specifications and abnormal and emergency operating procedures. The classification is then further related to the four emergency classification levels.

Table D-1 is a guide for classifying emergency conditions. In any situation not covered in the Table, the Shift Manager/Emergency Director must make a judgment in determining the appropriate emergency classification in consultation with the Control Room and/or other knowledgeable individuals in the TSC.

## **D.1 Unusual Event**

**D.1.1 Definition** - Unusual events are in progress or have occurred that indicate a potential degradation of the level of safety of the plant. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs.

**D.1.2 Purpose** - The purpose of offsite notification is to assure the first step in any response later found to be necessary has been carried out. It is also to bring the operating staff to a state of readiness and to provide systematic handling of unusual events information and decision making.

### **D.1.3 Licensee Actions**

1. Inform state and local offsite authorities of the nature of the unusual condition within 15 minutes following classification and notify the Nuclear Regulatory Commission (NRC) as soon as possible but within one hour.
2. Augment on-shift resources as needed
3. Assess and respond.
4. Escalate to a more severe class, if appropriate, or
5. Close out with verbal summary to offsite authorities.

### **D.1.4 State and/or Local Offsite Authority Actions**

1. Provide fire, ambulance, or security assistance, if requested.
2. Escalate to a more severe class, if appropriate.
3. Stand by until verbal closeout.

## **D.2 Alert**

**D.2.1 Definition** - Events are in progress or have occurred that involve an actual or potentially substantial degradation of the level of safety of the plant. Any releases of radioactive material are expected to be limited to small fractions of the Environmental Protection Agency (EPA) Protective Action Guideline (PAG) exposure levels.

**D.2.2 Purpose** - Purpose of Alert is to (1) assure that emergency personnel are readily available to respond if the situation becomes more serious or to perform confirmatory radiation monitoring if required, and (2) provide offsite authorities with current status information.

### **D.2.3 Licensee Actions**

1. Inform state and local authorities of Alert status and reason for Alert within 15 minutes following classification and to the NRC as soon as possible but within one hour.
2. Augment resources by activating the TSC and OSC.
3. Assess and respond.
4. Mobilize and dispatch onsite monitoring teams with associated communication equipment if required.
5. Provide periodic plant status updates to offsite authorities.
6. Provide periodic meteorological assessments to offsite authorities and, if any releases of radioactive material as specified for an Alert in Table D-1 are occurring, provide dose estimates for those releases.
7. Escalate to a more severe class, if appropriate, or
8. Close out emergency class by verbal summary to offsite authorities.

### **D.2.4 State and/or Local Offsite Authority Actions**

1. Provide fire, ambulance, or security assistance, if required.
2. Augment resources and bring Emergency Operations Centers (EOCs) to standby.
3. Place key emergency personnel on standby status, including monitoring teams with associated communication equipment.
4. Provide confirmatory offsite radiation monitoring and ingestion pathway dose projections if actual releases substantially exceed Technical Specifications limits.
5. Escalate to a more severe class, if appropriate.
6. Maintain Alert status until verbal closeout or de-escalation of emergency class.

### **D.3 Site Area Emergency**

**D.3.1 Definition** - Events are in progress or have occurred that involve actual or likely major failures of plant functions needed for protection of the public. Any releases of radioactive material are not expected to exceed PAG exposure levels, except near the site boundary.

**D.3.2 Purpose** - Purpose of the Site Area Emergency declaration is to (1) assure that response centers are staffed, (2) assure that monitoring teams are dispatched, (3) provide consultation with offsite authorities, and (4) provide updates for the public through offsite authorities.

#### **D.3.3 Licensee Actions**

1. Inform state and local offsite authorities of Site Area Emergency status and reason for emergency within 15 minutes following classification and to the NRC as soon as possible, but within one hour.
2. Augment resources by activating the TSC, OSC, EOF and JPIC.
3. Assess and respond.
4. Dispatch onsite and offsite monitoring teams with associated communication equipment if required.
5. Provide regular plant status updates to offsite authorities and periodic press briefings with offsite authorities.
6. Make onsite senior technical and management staff available for consultation with NRC and state authorities on a periodic basis.
7. Provide meteorological data and dose estimates to offsite authorities for potential/actual releases as appropriate.
8. Provide release data and dose projections based on available plant condition information and foreseeable contingencies.
9. Escalate to General Emergency classification, if appropriate, or
10. Close out or de-escalate emergency classification by briefing offsite authorities.

#### **D.3.4 State and/or Local Offsite Authority Actions**

1. Provide any assistance requested.
2. Provide public within 10-mile radius with periodic updates on emergency status.
3. Augment resources by activating EOCs.
4. Dispatch key emergency personnel, including monitoring teams with associated communications.
5. Alert other emergency personnel to standby status (for example, those needed for evacuation) and dispatch personnel to assigned near-site locations.
6. Provide offsite monitoring results to licensee and others, and jointly assess them.
7. Continuously assess information from licensee and offsite monitoring teams regarding changes to protective actions already initiated for public and mobilizing evacuation resources.
8. Consider placing milk animals within 2-mile radius on stored feed and assess need to extend distance.
9. Provide press briefings with licensee.
10. Escalate to General Emergency classification, if appropriate.
11. Maintain Site Area Emergency status until closeout or de-escalate of emergency class.

#### **D.4 General Emergency**

**D.4.1 Definition** - Events are in progress or have occurred that involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity. Release of radioactive material can be reasonably expected to exceed PAG exposure levels offsite for more than the immediate site area.

**D.4.2 Purpose** - Purpose of the General Emergency declaration is to (1) initiate predetermined protective actions for the public, (2) provide continuous assessment of information from licensee and offsite organization measurements, (3) initiate additional measures as indicated by actual or potential releases, (4) provide consultation with offsite authorities, and (5) provide updates for the public through offsite authorities.

#### D.4.3 Licensee Actions

1. Inform state and offsite authorities of the General Emergency status, reason for emergency, and a minimum protective action recommendation (PAR) within 15 minutes following classification and the NRC as soon as possible, but within one hour.
2. Augment resources by activating the TSC, OSC, EOF, and JPIC, if not already activated.
3. Assess and respond.
4. Dispatch onsite and offsite monitoring teams with associated communications, if required.
5. Provide regular plant status updates to offsite authorities and periodic press briefings with offsite authorities.
6. Continually assess existing PAR for adequacy based on review of plant conditions, current and future meteorological data, dose estimates, field readings, and plant response efforts.
7. Make senior technical and management staff available onsite for consultation with NRC and State authorities on a periodic basis.
8. Provide meteorological data and dose estimates to offsite authorities for potential/actual releases.
9. Provide release data and dose projections based on available plant condition information and foreseeable contingencies.
10. Close out or de-escalate emergency class by briefing offsite authorities.

#### **D.4.4 State and/or Local Offsite Authority Actions**

1. Provide any assistance requested.
2. Activate public notification system promptly, inform public of emergency status, and provide updates periodically.
3. Order protective actions based on actual or potential plant conditions, licensee recommendations, and field surveys.
4. Augment resources by activating EOCs.
5. Dispatch key emergency personnel including monitoring teams with associated communications.
6. Dispatch other emergency personnel to duty stations within 5-mile radius and alert all others to standby status.
7. Provide offsite monitoring results to licensee and others, and jointly assess them.
8. Continuously assess information from licensee and offsite monitoring teams regarding changes to protective actions already initiated for public and mobilizing evacuation resources.
9. Consider placing milk animals within 10-mile radius on stored feed and assess need to extend distance.
10. Provide press briefings with licensee.
11. Maintain General Emergency status until closeout or de-escalation of emergency class.

TABLE D-1

ABNORMAL RAD LEVELS/RADIOLOGICAL EFFLUENT

UNUSUAL EVENT

**AU1** Any Unplanned Release of Gaseous or Liquid Radioactivity to the Environment that Exceeds Two Times the Values of ODCM Control 3.11.2.1 or 3.11.1.1 for 60 Minutes or Longer

**OPERATING MODE APPLICABILITY:** All

Emergency Action Levels:

1. **Note:** If a valid monitor reading indicates a release of radioactivity that may be in excess of 2 times the ODCM Control value for greater than 60 minutes, and it is not confirmed by sample analysis within that time, then the declaration must be based on the valid monitor reading.

A valid monitor reading from the table below which exceeds the corresponding value may indicate a release in excess of 2 times the ODCM Control 3.11.2.1 or 3.11.1.1 value, and warrants immediate confirmation by sampling and analysis in accordance with ODCM methodology or by performing dose assessment using nuclide analysis method.

Effluent Monitor	Channel	Reading
RB SPING	5	4.6E-3 $\mu\text{Ci/cc}$
SGTS I SPING	7	5.3E-2 $\mu\text{Ci/cc}$
SGTS II SPING	7	4.6E-2 $\mu\text{Ci/cc}$
RW SPING	5	4.9E-3 $\mu\text{Ci/cc}$
TB SPING	5	3.3E-4 $\mu\text{Ci/cc}$
CW Decant	N/A	2600 cpm

2. Valid projection of Actual Dose indicates a dose rate in excess of 0.1 mRem/hr TEDE at the site boundary using computerized dose assessment by nuclide analysis method, with the condition sustained for a duration of 60 minutes or greater
3. Valid sample analysis of gaseous or liquid effluent release using ODCM methodology indicates a release rate or concentration in excess of 2 times the ODCM Control 3.11.2.1 or 3.11.1.1 value, with the condition sustained for a duration of 60 minutes or greater



TABLE D-1

ABNORMAL RAD LEVELS/RADIOLOGICAL EFFLUENT

ALERT

AA1 Any Unplanned Release of Gaseous or Liquid Radioactivity to the Environment that Exceeds 200 Times the Values of ODCM Control 3.11.2.1 or 3.11.1.1 for 15 Minutes or Longer

OPERATING MODE APPLICABILITY: All

Emergency Action Levels:

1. **Note:** If a valid monitor reading indicates a release of radioactivity that may be in excess of 200 times the ODCM Control value for greater than 15 minutes, and it is not confirmed by sample analysis within that time, then the declaration must be based on the valid monitor reading.

A valid monitor reading from the table below which exceeds the corresponding value may indicate a release in excess of 200 times the ODCM Control 3.11.2.1 or 3.11.1.1 value, and warrants immediate confirmation by sampling and analysis in accordance with ODCM methodology or by performing dose assessment using nuclide analysis method.

Effluent Monitor	Channel	Reading
Div I AXM	4	5.3 $\mu\text{Ci/cc}$
Div II AXM	4	4.6 $\mu\text{Ci/cc}$
CW Decant	N/A	2.6E5 cpm

2. Valid projection of Actual Dose indicates a dose rate in excess of 10 mRem/hr TEDE at the site boundary using computerized dose assessment by nuclide analysis method, with the condition sustained for a duration of 15 minutes or greater
3. Valid sample analysis of gaseous or liquid effluent release using ODCM methodology indicates a release rate or concentration in excess of 200 times the ODCM Control 3.11.2.1 or 3.11.1.1 value, with the condition sustained for a duration of 15 minutes or greater

TABLE D-1

ABNORMAL RAD LEVELS/RADIOLOGICAL EFFLUENT

SITE AREA EMERGENCY

**AS1 Site Boundary Dose Resulting from an Actual or Imminent Release of Gaseous Radioactivity Exceeds 100 mrem TEDE or 500 mrem Adult Thyroid for the Actual or Projected Duration of the Release**

**OPERATING MODE APPLICABILITY: All**

**Emergency Action Levels:**

1. **Note:** If a valid monitor reading indicates a release of radioactivity that may result in a Site Boundary Doses in excess of 100 mrem TEDE or 500 mrem Adult Thyroid for greater than 15 minutes, and it is not confirmed by sample analysis or dose projection within that time, then the declaration must be based on the valid monitor reading.

A valid monitor reading of greater than 80  $\mu\text{Ci/cc}$  on SGTS DIV I/II AXM, Channel 3, may indicate a release resulting in Site Boundary Dose Rates in excess of 100 mrem/hr TEDE or 500 mrem/hr Adult Thyroid, and warrants immediate confirmation by sampling and analysis in accordance with ODCM methodology or by performing dose assessment.

2. Valid projection of Actual or Potential Dose indicates a dose in excess of 100 mrem TEDE or 500 mrem Adult Thyroid at the Site Boundary for the projected duration of the release.
3. Site Boundary Dose Rate measurements in excess of 100mrem/hr expected to continue for more than one hour; or a sample analysis indicating a combined radioiodine concentration in excess of 20 DAC expected to continue for more than one hour.

**TABLE D-1**

**ABNORMAL RAD LEVELS/RADIOLOGICAL EFFLUENT**

**GENERAL EMERGENCY**

**AG1 Site Boundary Dose Resulting from an Actual or Imminent Release of Gaseous Radioactivity Exceeds 1000 mrem TEDE or 5000 mrem Adult Thyroid for the Actual or Projected Duration of the Release Using Actual Meteorology**

**OPERATING MODE APPLICABILITY: All**

**Emergency Action Levels:**

1. **Note:** If a valid monitor reading indicates a release of radioactivity that may result in Site Boundary Doses in excess of 1000 mrem TEDE or 5000 mrem Adult Thyroid for greater than 15 minutes, and it is not confirmed by dose projection within that time, then the declaration must be based on the valid monitor reading.

A valid monitor reading of greater than 800  $\mu\text{Ci/cc}$  on SGTS DIV I/II AXM, Channel 3, may indicate a release resulting in Site Boundary Dose Rates in excess of 1000 mRem/hr TEDE or 5000 mRem/hr Adult Thyroid, and warrants immediate confirmation by sampling and analysis in accordance with ODCM methodology or by performing dose assessment.

2. Valid projection of Actual or Potential Dose indicates a dose in excess of 1000 mrem TEDE or 5000 mrem Adult Thyroid for the projected duration of the release
3. Site Boundary Dose Rate measurements in excess of 1000 mrem/hr expected to continue for more than one hour; or a sample analysis indicating a combined radioiodine concentration in excess of 200 DAC expected to continue for more than one hour.

**TABLE D-1**

**ABNORMAL RAD LEVELS/RADIOLOGICAL EFFLUENT**

**UNUSUAL EVENT**

**AU2 Unexpected Increase of Plant Radiation Levels**

**OPERATING MODE APPLICABILITY:** All

**Emergency Action Levels:**

1. Uncontrolled water level decrease in the reactor refueling cavity with level at 619 inches and lowering by Floodup Level Indicator or 20 feet and lowering by visual indication, with all irradiated fuel assemblies remaining covered by water
2. Uncontrolled water level decrease in the spent fuel storage pool with level at 21.5 feet and lowering by visual indication, with all irradiated fuel assemblies remaining covered by water
3. Valid direct Area Radiation Monitor readings which exceed the Maximum Normal Operating Level of 29.100.01, Sheet 5, Table 14, inside secondary containment, or which have increased by a factor of 1000 over normal\* levels in other areas of the plant

\* Normal levels can be considered as the highest reading in the past twenty-four hours excluding the current peak value.

**TABLE D-1**

**ABNORMAL RAD LEVELS/RADIOLOGICAL EFFLUENT**

**ALERT**

**AA2 Major Damage to Irradiated Fuel or Loss of Water Level That Has or Will Result in the Uncovering of Irradiated Fuel Outside the Reactor Vessel**

**OPERATING MODE APPLICABILITY: All**

**Emergency Action Levels:**

1. An unplanned valid alarm of ARM Channel 18, Refuel Area High Radiation Monitor, reading  $\geq 1000$  mR/hr
2. An unplanned valid alarm of ARM Channels 15 and 17, Fuel Storage Pool and Refuel Area Low Range Radiation Monitors, and a valid trip of the Fuel Pool Area Ventilation Exhaust Radiation Monitor indicated by annunciator 3D35, DIV I/II FP VENT EXH RADN MONITOR UPSCALE TRIP
3. Report of visual indication of irradiated fuel uncovered
4. Spent Fuel Pool Water Level below the bottom of the Spent Fuel Pool Gates and lowering indicating a loss of inventory which will result in uncovering irradiated fuel

**TABLE D-1**

**ABNORMAL RAD LEVELS/RADIOLOGICAL EFFLUENT**

**ALERT**

**AA3 Releases of Radioactive Material or Increases in Radiation Levels Within the Facility That Impede Operation of Systems Required to Maintain Safe Operations or to Establish or Maintain Cold Shutdown**

**OPERATING MODE APPLICABILITY: All**

**Emergency Action Levels:**

1. Valid reading on ARM Channel 6, Control Room Direct Area Radiation Monitor, GREATER THAN 15 mR/hr
2. Valid, unplanned, direct Area Radiation Monitor readings which exceed the Maximum Safe Operating Level of 29.100.01, Sheet 5, Table 14

**TABLE D-1**

**FISSION PRODUCT BARRIER DEGRADATION**

**OPERATING MODE APPLICABILITY:** 1, 2, 3

**UNUSUAL EVENT**

**FU1** Any Loss or Any Potential Loss of Primary Containment

**ALERT**

**FA1** Any Loss or Any Potential Loss of Either Fuel Clad or Reactor Coolant System

**SITE AREA EMERGENCY**

**FS1** Loss or Potential Loss of Any Two Barriers

**GENERAL EMERGENCY**

**FG1** Loss of Any Two Barriers and Potential Loss of Third Barrier

TABLE D-1

FISSION PRODUCT BARRIER DEGRADATION

FUEL CLAD BARRIER EALS

LOSS	POTENTIAL LOSS
1. RPV Water Level	1. RPV Water Level
RPV Water Level less than value specified in EP-101, TAB F	RPV Water Level less than 0 inches
2. Containment Radiation	
CHRRM reading greater than 2,500 R/hr	
3. Primary Coolant Activity Level	
Primary coolant activity level greater than 300 $\mu$ Ci/gm DE I-131 (see SU4 also)	
4. Determination of release of at Least 5% of the Gap Activity from the Fuel	
5. Emergency Director Judgment	5. Emergency Director Judgment
Any condition in the judgment of the Emergency Director that indicates Loss of the Fuel Clad Barrier	Any condition in the judgment of the Emergency Director that indicates a Potential Loss of the Fuel Clad Barrier



**TABLE D-1**

**FISSION PRODUCT BARRIER DEGRADATION  
REACTOR COOLANT BARRIER EALS**

<b>LOSS</b>	<b>POTENTIAL LOSS</b>
<p>1. <b>RPV Water Level</b></p> <p>RPV Water Level less than 0 inches</p>	<p>2. <b>Reactor Coolant Leak Rate</b></p> <p>Reactor Coolant unidentified leakage greater than 50 gpm inside the Drywell, or Unisolable Primary System leakage outside Drywell (as may be indicated by isolation mimic, or exceeding maximum safe operating Secondary Containment temperature or radiation level of 29.100.01, Sheet 5, Table 12 or 14) (see SU5 and SA6 also)</p>
<p>3. <b>Drywell Pressure</b></p> <p>Drywell pressure greater than 1.68 psig</p>	
<p>4. <b>Containment Radiation</b></p> <p>CHRRM reading greater than 5 R/hr two minutes after reactor shutdown or beyond</p>	
<p>5. <b>Emergency Director Judgment</b></p> <p>Any condition in the judgment of the Emergency Director that indicates Loss of the Reactor Coolant Barrier</p>	<p>5. <b>Emergency Director Judgment</b></p> <p>Any condition in the judgment of the Emergency Director that indicates a Potential Loss of the Reactor Coolant Barrier</p>

TABLE D-1

FISSION PRODUCT BARRIER DEGRADATION

PRIMARY CONTAINMENT BARRIER EALS

LOSS	POTENTIAL LOSS
	1. <b>RPV Water Level</b>  RPV Water Level cannot be restored and maintained above the value specified in EP-101, TAB F, or unknown
2. <b>Containment Isolation Status</b>  Failure of both valves in any one line to close and downstream pathway to the environment exists, or  Containment venting requiring trip defeat per EOPs, or  Unisolable Primary System Leakage Outside Drywell (as may be indicated by isolation mimic or exceeding a maximum safe operating Secondary Containment temperature or radiation level of 29.100.01, Sheet 5, Table 12 or 14) (see SA6 also)	
3. <b>Drywell Pressure</b>  Rapid unexplained decrease following initial increase,  or  Drywell Pressure response not consistent with LOCA conditions	3. <b>Containment Pressure or Gas Mix</b>  Torus Pressure cannot be maintained below the Primary Containment Pressure Limit, or  Drywell or Torus Hydrogen concentration $\geq 6\%$ and Drywell or Torus Oxygen concentration $> 5\%$
	4. <b>Containment Radiation</b>  CHRRM reading greater than 10,000R/hr
	5. <b>Determination of release of at least 20% Gap activity from the fuel</b>
6. <b>Emergency Director Judgment</b>  Any condition in the judgment of the Emergency Director that indicates Loss of the Containment Barrier	6. <b>Emergency Director Judgment</b>  Any condition in the judgment of the Emergency Director that indicates a Potential Loss of the Containment Barrier

**TABLE D-1**

**HAZARDS AND OTHER CONDITIONS AFFECTING PLANT SAFETY**

**UNUSUAL EVENT**

**HU1 Natural and Destructive Phenomena Affecting the Protected Area**

**OPERATING MODE APPLICABILITY:** All

**Emergency Action Levels:**

1. Seismic monitor indicates earthquake greater than 0.01g
2. Report by plant personnel of tornado striking within protected area boundary
3. Vehicle crash into plant structures or systems within protected area boundary
4. Report by plant personnel of an unanticipated explosion within protected area boundary resulting in visible damage to permanent structure or equipment
5. Report of turbine failure resulting in casing penetration or damage to turbine or generator seals
6. Sustained winds greater than 75 mph as measured at the 10 m or 60 m elevations on the meteorological tower
7. External flooding indicated by wave crests exceeding the top of the shore barrier
8. Internal flooding in the Auxiliary Building, Reactor Building, or RHR Complex that has the potential to affect the operation of safe shutdown equipment
9. Assessment by the Control Room that a destructive event affecting the protected area has occurred

**TABLE D-1**

**HAZARDS AND OTHER CONDITIONS AFFECTING PLANT SAFETY**

**ALERT**

**HA1 Natural and Destructive Phenomena Affecting the Plant Vital Area**

**OPERATING MODE APPLICABILITY:** All

**Emergency Action Levels:**

1. Seismic monitor indicates seismic event greater than 0.08 g
2. Report by plant personnel of tornado striking Reactor Building, Auxiliary Building, or RHR Complex
3. Any occurrence that results in visible damage to the Reactor Building, Auxiliary Building, or RHR Complex
4. Control Room indications which in the judgment of Control Room personnel reflect damage to the Reactor Building, Auxiliary Building, or RHR Complex
5. Vehicle crash affecting the Reactor Building, Auxiliary Building, or RHR Complex
6. Turbine failure generated missiles result in any visible structural damage to or penetration of the Reactor Building, Auxiliary Building, or RHR Complex
7. Sustained winds greater than 90 mph as measured at the 10 m or 60 m elevations on the meteorological tower
8. Flooding from internal or external sources that has affected the operation of safe shutdown equipment in the Reactor Building, Auxiliary Building, or RHR Complex

**TABLE D-1**

**HAZARDS AND OTHER CONDITIONS AFFECTING PLANT SAFETY**

**UNUSUAL EVENT**

**HU2 Fire Within Protected Area Boundary Not Extinguished Within 15 Minutes of Detection**

**OPERATING MODE APPLICABILITY: All**

**Emergency Action Level:**

1. Fire in the Auxiliary Building, Reactor Building, Control Center, Turbine Building, Radwaste Building, or RHR Complex not extinguished within 15 minutes of Control Room notification or verification of a control room alarm

**TABLE D-1**

**HAZARDS AND OTHER CONDITIONS AFFECTING PLANT SAFETY**

**ALERT**

**HA2 Fire or Explosion Affecting the Operability of Plant Safety Systems Required to Establish or Maintain Safe Shutdown**

**OPERATING MODE APPLICABILITY: All**

**Emergency Action Level:**

1. Fire not extinguished within 15 minutes of Control Room notification or verification of a Control Room alarm or explosion in any of the following areas:
  - Reactor Building
  - Auxiliary Building
  - Control Center
  - RHR Complex

**AND**

Affected system parameter indications show degraded performance or plant personnel report visible damage to permanent structures or equipment within the specified area

**TABLE D-1**

**HAZARDS AND OTHER CONDITIONS AFFECTING PLANT SAFETY**

**UNUSUAL EVENT**

**HU3 Release of Toxic or Flammable Gases Deemed Detrimental to Safe Operation of the Plant**

**OPERATING MODE APPLICABILITY: All**

**Emergency Action Levels:**

1. Report or detection of toxic or flammable gases that could enter within the site area boundary in amounts that can affect normal operation of the plant
2. Report by Local, County or State Officials for potential evacuation of site personnel based on offsite event

**TABLE D-1**

**HAZARDS AND OTHER CONDITIONS AFFECTING PLANT SAFETY**

**ALERT**

**HA3 Release of Toxic or Flammable Gases Within a Facility Structure Which Jeopardizes Operation of Systems Required to Maintain Safe Operations or to Establish or Maintain Cold Shutdown**

**OPERATING MODE APPLICABILITY:** All

**Emergency Action Levels:**

1. Report or detection of toxic gases within a facility structure in concentrations that will be life threatening to plant personnel
2. Report or detection of flammable gases within a facility structure in concentrations that will affect the safe operation of the plant



**TABLE D-1**

**HAZARDS AND OTHER CONDITIONS AFFECTING PLANT SAFETY**

**UNUSUAL EVENT**

**HU4 Confirmed Security Event Which Indicates a Potential Degradation in the Level of Safety of the Plant**

**OPERATING MODE APPLICABILITY: All**

**Emergency Action Levels:**

1. Attempted unauthorized entry into the protected area
2. Attempted sabotage within the protected area
3. Internal disturbance within the protected area not brought under immediate control or presenting an unknown threat
4. A confirmed credible site-specific security threat notification

**TABLE D-1**

**HAZARDS AND OTHER CONDITIONS AFFECTING PLANT SAFETY**

**ALERT**

**HA4 Security Event in a Plant Protected Area**

**OPERATING MODE APPLICABILITY:** All

**Emergency Action Levels:**

1. Explosive device discovered within the plant protected area but outside the plant vital areas
2. Intrusion into plant protected area by a hostile force
3. Confirmed act of sabotage within the plant protected area

**TABLE D-1**

**HAZARDS AND OTHER CONDITIONS AFFECTING PLANT SAFETY**

**SITE AREA EMERGENCY**

**HS1 Security Event in a Plant Vital Area**

**OPERATING MODE APPLICABILITY: All**

**Emergency Action Levels:**

1. Explosive device discovered in a plant vital area
2. Intrusion into a plant vital area by a hostile force
3. Confirmed act of sabotage within a plant vital area

**TABLE D-1**

**HAZARDS AND OTHER CONDITIONS AFFECTING PLANT SAFETY**

**GENERAL EMERGENCY**

**HG1 Security Event Resulting in Loss of Physical Control of the Facility.**

**OPERATING MODE APPLICABILITY: All**

**Emergency Action Levels:**

1. A hostile force has taken control of plant equipment such that plant personnel are unable to operate equipment required to maintain safety functions (shutdown reactor, maintain core cooling, remove decay heat).

**TABLE D-1**

**HAZARDS AND OTHER CONDITIONS AFFECTING PLANT SAFETY**

**ALERT**

**HA5 Control Room Evacuation has been Initiated**

**OPERATING MODE APPLICABILITY: All**

**Emergency Action Level:**

1. Evacuation of the Control Room ordered by the Shift Manager

**TABLE D-1**

**HAZARDS AND OTHER CONDITIONS AFFECTING PLANT SAFETY**

**SITE AREA EMERGENCY**

**HS2 Control Room Evacuation has been Initiated and Plant Control Cannot be Established**

**OPERATING MODE APPLICABILITY: All**

**Emergency Action Level:**

1. Control Room evacuation has been initiated

**AND**

Control of RPV level and pressure cannot be established per 20.000.18 or 20.000.19 within 15 minutes

**TABLE D-1**

**HAZARDS AND OTHER CONDITIONS AFFECTING PLANT SAFETY**

**UNUSUAL EVENT**

**HU5 Other Conditions Existing Which in the Judgment of the Emergency Director  
Warrant Declaration of an Unusual Event**

**OPERATING MODE APPLICABILITY: All**

**Example Emergency Action Level:**

1. Other conditions exist which in the judgment of the Emergency Director indicate a potential degradation of the level of safety of the plant. No release of radioactive material requiring offsite response or monitoring is expected.

TABLE D-1

**HAZARDS AND OTHER CONDITIONS AFFECTING PLANT SAFETY**

**ALERT**

- HA6 Other Conditions Existing Which in the Judgment of the Emergency Director  
Warrant Declaration of an Alert

**OPERATING MODE APPLICABILITY:** All

**Emergency Action Level:**

1. Other conditions exist which in the judgment of the Emergency Director indicate that an actual or potential substantial degradation of the level of safety of the plant. Any releases are expected to be limited to small fractions of the EPA Protective Action Guidelines (PAG) exposure levels.



**TABLE D-1**

**HAZARDS AND OTHER CONDITIONS AFFECTING PLANT SAFETY**

**SITE AREA EMERGENCY**

**HS3 Other Conditions Existing Which in the Judgment of the Emergency Director  
Warrant Declaration of a Site Area Emergency**

**OPERATING MODE APPLICABILITY: All**

**Emergency Action Level:**

1. Other conditions exist which in the judgment of the Emergency Director indicate actual or likely major failures of plant functions needed for protection of the public. Any releases are not expected to exceed EPA Protective Action Guidelines (PAG) exposure levels except near the site boundary.

**TABLE D-1**

**HAZARDS AND OTHER CONDITIONS AFFECTING PLANT SAFETY**

**GENERAL EMERGENCY**

**HG2 Other Conditions Existing Which in the Judgment of the Emergency Director  
Warrant Declaration of General Emergency**

**OPERATING MODE APPLICABILITY: All**

**Emergency Action Level:**

1. Other conditions exist which in the judgment of the Emergency Director indicate: actual or imminent substantial core degradation or melting with potential for loss of containment, or potential for uncontrolled radionuclide releases which can reasonably be expected to exceed EPA PAG plume exposure levels outside the site boundary.

**TABLE D-1**

**SYSTEM MALFUNCTIONS**

**UNUSUAL EVENT**

**SU1 Loss of All Offsite Power to Essential Busses for Greater Than 15 Minutes**

**OPERATING MODE APPLICABILITY: All**

**Emergency Action Level:**

1. Loss of power to System Service Transformers 64 and 65 for greater than 15 minutes

**AND**

Emergency Diesel Generators are supplying power to all Div. 1 and Div. 2 emergency busses

**TABLE D-1**

**SYSTEM MALFUNCTIONS**

**ALERT**

**SA1 Loss of all Offsite Power and Loss of all Onsite AC Power to Essential Busses  
During Cold Shutdown or Refueling Mode**

**OPERATING MODE APPLICABILITY:** 4, 5, defueled

**Emergency Action Level:**

1. The following conditions exist for the required AC Power Distribution Source:
    - a. Loss of power to System Service Transformers 64 or 65

**AND**

  - b. Failure of Emergency Diesel Generators to supply power to the required division of emergency busses
- AND**
- c. Failure to restore power to at least one required division of busses within 15 minutes from the time of loss of both offsite and onsite AC power sources

**TABLE D-1**

**SYSTEM MALFUNCTIONS**

**ALERT**

**SA5 AC Power Capability to Essential Busses Reduced to a Single Power Source for Greater Than 15 Minutes Such That Any Additional Single Failure Would Result in Station Blackout**

**OPERATING MODE APPLICABILITY: 1, 2, 3**

**Emergency Action Levels:**

1. Loss of Power to System Service 64 and 65 transformers for greater than 15 minutes

**AND**

Onsite ESF power capability has been degraded to one full division of emergency busses

2. Loss of ability to power Div. 1 and Div. 2 emergency busses from Emergency Diesel Generators for greater than 15 minutes

**AND**

Loss of power to System Service Transformer 64 or 65

**TABLE D-1**

**SYSTEM MALFUNCTIONS**

**SITE AREA EMERGENCY**

**SS1 Loss of all Offsite Power and Loss of all Onsite AC Power to Essential Busses**

**OPERATING MODE APPLICABILITY: 1, 2, 3**

**Emergency Action Levels:**

1. Loss of power to System Service Transformers 64 and 65

**AND**

Failure of Emergency Diesel Generators to supply power to one full division of emergency busses

**AND**

Failure to restore power to at least one division of emergency busses within 15 minutes from the time of loss of both offsite and onsite AC power

**TABLE D-1**

**SYSTEM MALFUNCTIONS**

**GENERAL EMERGENCY**

**SG1 Prolonged Loss of all Offsite Power and Prolonged Loss of all Onsite AC Power**

**OPERATING MODE APPLICABILITY:** 1, 2, 3

**Emergency Action Level:**

1. Loss of power to System Service Transformers 64 and 65

**AND**

Failure of Emergency Diesel Generators to supply power to one full division of emergency busses

**AND**

Failure to restore power to at least one division of emergency busses within 15 minutes from the time of loss of both offsite and onsite AC power

**AND**

Restoration of at least one full division of emergency busses within 4 hours is **NOT** likely, or RPV water level less than 0 inches

**TABLE D-1**

**SYSTEM MALFUNCTIONS**

**ALERT**

**SA2 Failure of Reactor Protection System Instrumentation to Complete or Initiate an Automatic Reactor Scram Once a Reactor Protection System Setpoint Has Been Exceeded and Manual Scram Was Successful**

**OPERATING MODE APPLICABILITY: 1, 2**

**Emergency Action Level:**

1. A valid initiating scram signal received, but no automatic scram occurred

**AND**

Manual actions taken at COP H11-P603 were successful in scram of control rods to achieve reactor power < 3%



**TABLE D-1**

**SYSTEM MALFUNCTIONS**

**SITE AREA EMERGENCY**

**SS2** Failure of Reactor Protection System Instrumentation to Complete or Initiate an Automatic Reactor Scram Once a Reactor Protection System Setpoint Has Been Exceeded and Manual Scram Was NOT Successful

**OPERATING MODE APPLICABILITY:** 1, 2

**Emergency Action Level:**

1. A valid initiating scram signal received, but no automatic scram occurred

**AND**

Manual actions taken at COP H11-P603 were not successful in scram of control rods to achieve reactor power < 3%

**TABLE D-1**

**SYSTEM MALFUNCTIONS**

**GENERAL EMERGENCY**

**SG2 Failure of the Reactor Protection System to Complete an Automatic Scram and Manual Scram was NOT Successful and there is Indication of an Extreme Challenge to the Ability to Cool the Core**

**OPERATING MODE APPLICABILITY: 1, 2**

**Emergency Action Level:**

1. A valid initiating scram signal received, but no automatic scram occurred

**AND**

Manual actions taken at COP H11-P603 were not successful in scram of control rods to achieve reactor power < 3%

**AND**

Emergency depressurization is required by any Emergency Operating Procedure

**TABLE D-1**

**SYSTEM MALFUNCTIONS**

**UNUSUAL EVENT**

**SU2 Inability to Reach Required Shutdown within Technical Specification Limits**

**OPERATING MODE APPLICABILITY:** 1, 2, 3

**Emergency Action Level:**

1. Plant is not brought to required operating mode within Technical Specifications  
LCO Action Statement Time

**TABLE D-1**

**SYSTEM MALFUNCTIONS**

**UNUSUAL EVENT**

**SU3 Unplanned Loss of most or all Safety System Annunciation in the Control Room for Greater than 15 Minutes**

**OPERATING MODE APPLICABILITY: 1, 2, 3**

**Emergency Action Level:**

1. Loss of most or all (greater than approximately 75%) annunciators on H11-P601, P602, and P603 for greater than 15 minutes

**AND**

Compensatory non-alarming indications are available

**AND**

In the opinion of the Shift Manager, the loss of the annunciators requires increased surveillance to safely operate the plant

**AND**

Annunciator loss does not result from planned action

**TABLE D-1**

**SYSTEM MALFUNCTIONS**

**ALERT**

**SA4** Unplanned Loss of most or all Safety System Annunciation in Control Room with Either (1) a Significant Transient in Progress, or (2) Compensatory Non-Alarming Indicators Unavailable

**OPERATING MODE APPLICABILITY:** 1, 2, 3

**Emergency Action Level:**

1. Loss of most or all (greater than approximately 75%) annunciators on H11-P601, P602, and P603 for greater than 15 minutes

**AND**

In the opinion of the Shift Manager, the loss of the annunciators requires increased surveillance to safely operate the plant

**AND**

Annunciator loss does not result from planned action

**AND**

A significant plant transient is in progress, or

Compensatory non-alarming indications are unavailable

**TABLE D-1**

**SYSTEM MALFUNCTIONS**

**SITE AREA EMERGENCY**

**SS6 Inability to Monitor a Significant Transient in Progress**

**OPERATING MODE APPLICABILITY: 1, 2, 3**

**Emergency Action Level:**

1. Loss of most or all (greater than approximately 75%) annunciators associated with H11-P601, P602, and P603

**AND**

Compensatory non-alarming indications unavailable

**AND**

Indications needed to monitor safety functions associated with lost annunciators unavailable

**AND**

Significant transient in progress

**TABLE D-1**

**SYSTEM MALFUNCTIONS**

**UNUSUAL EVENT**

**SU4 Fuel Clad Degradation**

**OPERATING MODE APPLICABILITY:** All

**Emergency Action Levels:**

1. Gross radioactivity rate of noble gases measured at the discharge of the 2.2 minute delay piping greater than 340 millicuries/sec after 30 minute delay
2. Reactor scram due to main steam line radiation greater than three times full power value as may be indicated by Annunciator 3D82
3. Dose Equivalent I-131 greater than  $0.2 \mu\text{Ci/gm}$  for more than 48 hours
4. Dose equivalent I-131 greater than  $4.0 \mu\text{Ci/gm}$

**TABLE D-1**

**SYSTEM MALFUNCTIONS**

**UNUSUAL EVENT**

**SU5 RCS Leakage**

**OPERATING MODE APPLICABILITY:** 1, 2, 3

**Emergency Action Levels:**

1. Unidentified or pressure boundary leakage greater than 10 gpm
2. Identified leakage greater than 25 gpm



**TABLE D-1**

**SYSTEM MALFUNCTIONS**

**ALERT**

**SA6 Main Steam Line Break**

**OPERATING MODE APPLICABILITY:** 1, 2, 3

**Emergency Action Level:**

1. Indication of Main Steam Line Break on Isolation Mimic

**TABLE D-1**

**SYSTEM MALFUNCTIONS**

**UNUSUAL EVENT**

**SU6    Unplanned Loss of All Onsite or Offsite Communications Capabilities**

**OPERATING MODE APPLICABILITY:        All**

**Emergency Action Levels:**

1.    Loss of all the following onsite communications capabilities affecting the ability to perform routine operations:

Administrative Telephones  
Hi-Com  
Plant radios

2.    Loss of all the following offsite communications capabilities:

Administrative Telephones  
Emergency Telephones

**TABLE D-1**

**SYSTEM MALFUNCTIONS**

**UNUSUAL EVENT**

**SU7    Unplanned Loss of Required DC Power During Cold Shutdown or Refueling  
Mode for Greater than 15 Minutes**

**OPERATING MODE APPLICABILITY:**        4, 5

**Emergency Action Level:**

1.    Loss of both Div. 1 and Div. 2 130V DC Systems as indicated by DC bus voltage less than:

Div 1: 112.2V DC

Div 2: 107.4V DC

**AND**

Inability to restore voltage on either Div. 1 or Div. 2 130V DC bus within 15 minutes from discovery of loss

**TABLE D-1**

**SYSTEM MALFUNCTIONS**

**SITE AREA EMERGENCY**

**SS3 Loss of All Vital DC Power**

**OPERATING MODE APPLICABILITY:** 1, 2, 3

**Emergency Action Level:**

1. Loss of both Div. 1 and Div. 2 130V DC Systems as indicated by DC bus voltage less than:

Div 1: 112.2V DC

Div 2: 107.4V DC

**AND**

Inability to restore voltage on either Div. 1 or Div. 2 130V DC bus within 15 minutes from discovery of loss

**TABLE D-1**

**SYSTEM MALFUNCTIONS**

**ALERT**

**SA3 Inability to Maintain Plant in Cold Shutdown**

**OPERATING MODE APPLICABILITY: 4, 5**

**Emergency Action Level:**

1. Div. 1 and Div. 2 of the RHR System are not effective in Decay Heat Removal

**AND**

Reactor coolant temperature exceeds 200°F, or

Results in uncontrolled temperature rise approaching 200°F

**TABLE D-1**

**SYSTEM MALFUNCTIONS**

**SITE AREA EMERGENCY**

**SS5 Loss of Water Level in the Reactor Vessel that has or will Uncover Fuel in the Reactor Vessel**

**OPERATING MODE APPLICABILITY: 4, 5**

**Emergency Action Level:**

1. RPV water level cannot be kept above 0 inches

**TABLE D-1**

**SYSTEM MALFUNCTIONS**

**SITE AREA EMERGENCY**

**SS4 Complete Loss of Function Needed to Achieve or Maintain Hot Shutdown**

**OPERATING MODE APPLICABILITY: 1, 2, 3**

**Emergency Action Level:**

1. Any combination of events which would require the plant to be shutdown from normal operating pressure and temperature

**AND**

Torus water temperature and RPV pressure cannot be kept below the Heat Capacity Limit (HCL)

## **E. NOTIFICATION METHODS AND PROCEDURES**

This Plan Section describes the methods for notification of Emergency Response Organizations and the means used to notify and provide instruction to members of the public within the plume exposure pathway 10-mile Emergency Planning Zone (EPZ).

### **E.1 Notification of Onsite Emergency Response Organizations**

Initial notification of Onsite Emergency Response Organizations is made by the Control Room on the plant Hi Com system. Personnel with emergency assignments are ordered to report to their assigned emergency facility. Notification of other plant personnel who are offsite is achieved by the Shift Manager/delegate activating an automatic call out system.

### **E.2 Notification of Offsite Emergency Response Organizations**

The basis for notification of all Offsite Emergency Response Organizations is consistent with the emergency classification action level scheme delineated in Section D. Procedures are established for the notification of applicable State and local response organizations. These procedures include provisions for message verification by plant emergency response personnel.

The notification message to the appropriate state and local Emergency Response Organizations has been standardized and was developed in cooperation with the state and other utilities in Michigan. It contains information concerning the emergency classification, the radioactive releases, potentially affected populations, and protective action recommendations (as necessary). Provisions for initial and follow-up messages contain the following information (if known and if applicable):

- Emergency classification
- Location of incident and name and telephone number (or communications channel identification) of caller
- Date and time of incident
- Type of actual or projected release (airborne, waterborne) and estimated duration time
- Estimate of quantity of radioactive material potentially released or being released and the release points.
- Chemical and physical form of released material, including estimates of the relative quantities and concentration of noble gases, iodines, and particulates, as applicable



- Meteorological conditions at an appropriate elevation, including wind speed, direction (to and from), stability class, and precipitation
- Actual or projected dose rates at site boundary and projected integrated dose at site boundary including sector(s) affected
- Projected dose rates and integrated dose at 2, 5, and 10 miles downwind including sector(s) affected
- Licensee emergency response actions underway
- Protective action recommendations
- Requests made for onsite support from offsite organizations
- Prognosis for escalation or termination of event based on plant information

### **E.3 Notification of the General Public**

Both physical and administrative means have been established for notifying and instructing the population within the plume exposure pathway (10-mile EPZ). Notification will be made by a system of 62 electro-mechanical sirens situated throughout the 10-mile EPZ (Table E-1 and Figure E-1). The siren signals alert the population to tune to a local radio or television station affiliated with the Emergency Alert System (EAS) (Appendix 2). County officials are responsible for activating the siren notification system and EAS. Activation of these systems is based on the emergency classification declared by the licensee.

The licensee will provide offsite authorities with supporting information for their messages to the public. Such messages, consistent with the emergency classification scheme and with the American Industrial Hygiene Association, Respiratory Protection Devices Manual, will provide the public with instructions regarding protective actions to be taken by occupants of affected areas. Initial information to the public will state, at a minimum, that an emergency has occurred at Fermi 2 and further instructions will be provided. Detroit Edison will continue to coordinate planning with the responsible offsite authorities to assure that administrative means exist to promptly notify the public during rapidly developing emergency situations.

A small (224 acres) section of the 10-mile EPZ includes Canada and is sparsely populated. The Province of Ontario (Canada) is notified only once at each initial classification of an Unusual Event, Alert, Site Area Emergency, or General Emergency. The Michigan State Police will provide all subsequent communications and information.

**TABLE E-1:  
PROMPT NOTIFICATION SYSTEM SIREN LOCATIONS**

**MONROE COUNTY**

**Frenchtown Township**

1. 4210 Avenue B, Avenue B and Lakeview in Stoney Point Beach
3. 2985 Nadeau, North Dixie and Nadeau behind Fire Station
4. 1340 Waterworks, northeast corner State Park Road and Waterworks (Sterling State Park)
5. 6019 N. Monroe, north Monroe and Nadeau
6. 3110 Heiss, west of Exeter
7. 2200 Bluebush, crossroad of Bluebush and Stewart
33. 3922 Mentel, south of Nadeau Rd
40. 505 Buhl, Buhl Road between Grafton and Telegraph
43. 5501 Toll Road, 1/4 mile South of Leroux
44. 6600 Williams, south of Post at the railroad crossing
62. 1249 Bates Ave., south of 1255 Bates
63. 1952 Heiss, east of Stumpmier adjacent to 1946 Heiss
69. 2314 Newport Road, east of I-275
70. 1401 Post, 250' east of the corner of War and Post Roads
71. 2018 Sandy Creek, west side across from 2015 Sandy Creek
72. 230 Mall Road, 150' west of M-125

**City of Monroe**

8. 1801 W. Lorain Street, west of Dane Drive - at Manor School
9. 2 Port Avenue, crossroad of East Front and Port Avenue
10. 1249 N. Macomb Street, N. Macomb at Monroe Public Schools Admin. Building
38. 1424 E. Front Street, east of Link Street
48. 123 Cass Street, crossroad of Second and Cass

**Ash Township**

11. 11108 Grafton Road, north of Sigler
12. 2450 Sigler Road, east of Telegraph
13. 9994 Exeter Road, south of South Stony Creek
14. 9055 North Stony Creek Road, north of Newport Road at C & O Railroad
15. 14132 Romine Road, north of Newburg
16. 3950 Carleton - Rockwood Rd, west of Berlin Road
52. 3520 Labo Road, northeast corner of Labo and Swan Creek Road
56. 3740 Newburg Road, west of Telegraph (Wilson Substation)
61. 2850 Newberg Road, across from 2855 Newberg
64. 2441 W. Sigler Road, southside and east of Burns across from 2438 Sigler
65. 10192 Otter Road, westside north of Labo Rd across from 10190 Otter
66. 12460 Calkins Road, north of Ready Road across from 12477 Calkins
67. 2950 Ready Road, corner of Ready Road and Telegraph

**Raisinville Township**

74. 2419 N. Raisinville Road, between 2433 and 2411 N. Raisinville

**Village of Carleton**

17. 12900 Horan, north of Ash at Ash Carleton Park

**Village of South Rockwood**

55. 6118 Park Blvd., corner of Park and Edwards  
68. 7391 Ready Road, southwest corner of Ready Road and South Huron River Drive

**Berlin Township**

2. 7005 N. Dixie Highway, northeast corner Post Road and Dixie Highway  
19. 9786 U.S. Turnpike, south of Labo Road  
20. 9929 Armstrong, south of Labo  
32. 8454 South Newport Road, at Niedermeier Elementary School  
41. 8559 Strong Road, crossroad near U. S. Turnpike  
42. 8022 Swan Creek Road, northeast corner North Dixie Hwy. and Swan Creek Road  
53. 11490 Armstrong Road, southeast corner, Armstrong and Mattison  
54. 6824 Sigler Road, west of Hagerman

**Village of Estral Beach**

22. 7194 Lakeview, crossroad of Lakeview and Superior near fire station

**Monroe Township**

24. South Telegraph and Albain at Monroe Public Schools Garage  
25. Albain Road, west of LaPlaisance  
39. Dunbar, west of South Monroe  
49. 700 Western Avenue, crossroad of Western and Erie at Waterloo School  
73. 3553 S. Custer Road, at fairgrounds, behind brick building east of fence  
75. Lake Street, crossroads of Miami and Biscayne

**Exeter Township**

51. 4298 Heiss, northeast corner of Heiss and Finzel Roads

**WAYNE COUNTY**

**Brownstown Township**

- 26. 15282 Lee Road, east of West Jefferson
- 28. 20377 Gibraltar Road, Gibraltar road, west of Fort Street near fire station
- 58. 32353 West Jefferson , behind Brownstown Fire Station #2

**City of Gibraltar**

- 27. 29430 Munro, crossroad of Munro and Bayview near fire station

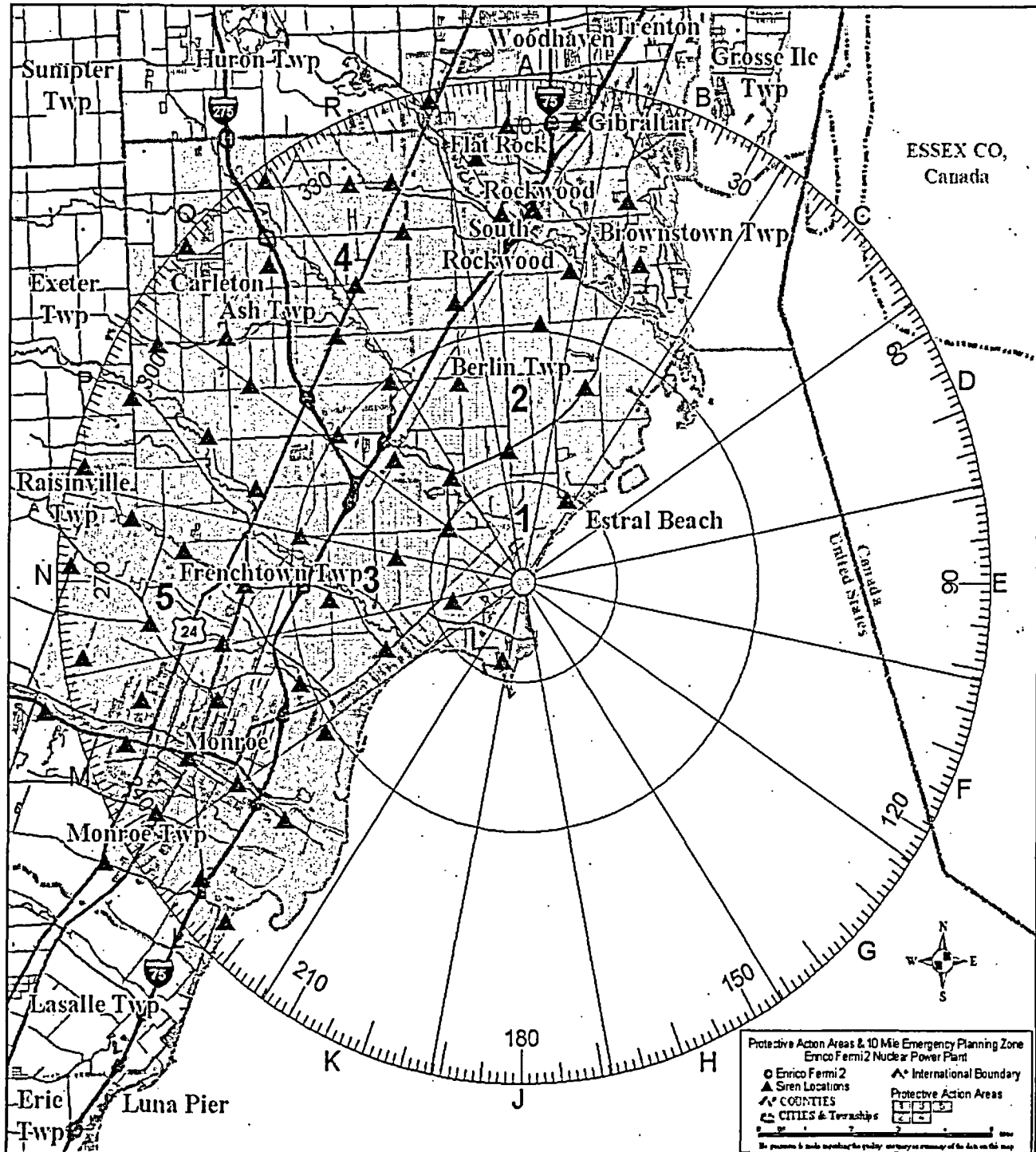
**City of Flat Rock**

- 30. 28101 Arsenal Road, north of Huron River Drive
- 31. 24680 Woodruff, Woodruff and Alders in Elementary School yard
- 60. 28951 Hall Road, 100' north of Gibraltar Road.

**City of Rockwood**

- 59. 32785 Wood Street, north of Huron River Drive at Rockwood Department of Public Works

Figure E-1  
SIREN LOCATIONS



## **F. EMERGENCY COMMUNICATIONS**

### **F.1 Telephone Communications**

The emergency telephone communications network (Figures F-1 and F-2) established for the Emergency Response Facilities combines Direct-Inward-Dialing (DID) lines provided by Southern Bell Communications (SBC) Ameritech with dedicated lines on a separate Edison-owned Private Branch Exchange (PBX) telephone system (Lucent G3SIC). An Edison-owned microwave system is also installed to provide back-up emergency communications from the Fermi 2 site. Figure F-1 illustrates the interface of these systems between the various Emergency Response Facilities.

- F.1.1 PBX Lines** - Extensions on the Lucent system are divided into two series. One series allows communication between the Emergency Response Facilities and features DID capability, which allows an outside caller to be connected directly to an extension by prefixing the four-digit extension number with a three-digit number. The second series is unrestricted for outgoing calls; however, these extensions do not accept direct incoming calls. Sufficient PBX lines are distributed among the Emergency Response Facilities to provide adequate communications both internal and external to the site.
- F.1.2 Automatic Ring Lines** - Automatic ring lines are provided between key positions within the Emergency Response Facilities and also with Offsite Emergency Response Organizations. These extensions are programmed for automatic dialing.
- F.1.3 NRC Telephones** - FTS-2001 extensions for the Emergency Notifications System are available in the Control Room, TSC, and EOF. FTS-2001 extensions for the Health Physics Network, Protective Measures Counterpart Link, Reactor Safety Counterpart Link, Management Counterpart Link, and Local Area Network Access are available in the TSC and EOF.
- F.1.4 Microwave System** - An Edison-owned microwave system is installed at Fermi 2 to provide back-up emergency telephone communications. Through use of the microwave system, telephone communications are routed from the Fermi site to the General Offices in Detroit and transferred by land lines through the SBC Ameritech Telephone central office system to any desired location. The microwave system may be accessed from the Lucent system extensions. Offsite or remote locations may be accessed via the microwave system from all telephone locations.
- F.1.5 Medical Support Facilities** - The Control Room maintains responsibility throughout an emergency for all communications to hospitals. Ambulance/hospital communication system maintenance is the responsibility of the ambulance and hospital services.
- F.1.6 Joint Public Information Center (JPIC)** - The telephone network for the JPIC, located in Monroe, is served by SBC Ameritech as the local telephone company. The interface between the JPIC and the Onsite Emergency Response Facilities is provided through off premises stations that are switched at SBC Ameritech Monroe and passed through Century Telephone switchgear at Newport. These provide 13 site extensions from the Onsite Emergency Response Facilities. In addition, over 30 general business lines on the SBC Ameritech system have been installed, 10 (credit card only) of which are for use by media representatives. Provisions have been made at the JPIC to expand the number of lines for media representatives within 48 to 120 hours of notifying SBC Ameritech of additional emergency needs.

**F.1.7 Telephone Equipment Maintenance** - If an emergency occurs at Fermi 2, the emergency response staff can be augmented by Detroit Edison personnel from Information Systems Organization, and a representative from Century Telephone; to serve as technical advisors to effect repairs or open additional lines for use by the Emergency Response Organization.

**F.1.8 General Information**

All single-line instruments in the Emergency Response Facilities have muted rings to reduce ambient noise levels.

Headsets are provided for positions where heavy telephone use is anticipated.

The Lucent G3 system has many special features available to users that include, but are not limited to, the following:

- Internal conferencing capability for up to six parties
- Meet-me conference bridge for 6 party and 12 parties
- Station call forwarding, which allows a party to direct incoming calls to another work area
- Consultation hold, whereby a user can temporarily place a person on hold, consult with a third party, then return to the original call

The entire emergency communication system is tested on a periodic basis, consistent with communications drill requirements.

**F.2 Radio Communications**

The communications network at Fermi 2 also involves several radio systems to effect communications within the plant with radiological monitoring teams, maintenance teams, and Nuclear Security personnel, as well as provide backup communication modes to essential Offsite Emergency Response Organizations in the event of telephone equipment malfunctions or traffic congestion.

**F.2.1 Operations and Maintenance System** - There are two radio consoles in the Control Room. One is installed in panel H11-P700 to establish communication using Plant Radio, Zone 1 (Control Room Group) to hand-held portable radios (Operations Channel 1 or 2) via the plant's radio repeater system. This radio base station provides for control room panel microphone and ceiling speaker operation.

An additional radio console is located in panel H11-P703 to allow for backup Control Room communication to hand-held portable radios on various other user group channels via the Plant Radio, Zone 1 repeater system. Maintenance channel's 1, 2, or 3 can also be selected at this station. This console also provides a backup radio communication selection into Security, Zone 3 that provides another two repeaters for radio operation.

In addition to radio communications with Operations and Maintenance personnel as noted above, hand-held portable radio units utilizing the group RERP-1 and RERP-2 (located on Plant Radio, Zone 1) are used by the Damage Control and Rescue Teams, Fire Brigade, or Onsite Radiological Emergency Teams (RETS) to communicate with the Control Room and/or Radiation Protection personnel in the OSC and other remote parts of the plant via the Zone 1 radio repeater system. Back Up, Zone 2 is a selection that can be made on the radio console located in panel H11-P703. This zone can be used in the event that there is a partial loss of the Plant Radio, Zone 1.

- F.2.2 Offsite Radiological Emergency Teams** - The radio control console for directing the actions of Offsite RETs is located in the EOF/RET Dispatch Room. Each RET vehicle is equipped with a radio to provide mobile communications within a range of 20 miles. Radio communications with Offsite RETs are carried over customer service UHF frequencies assigned to Western Wayne Center.
- F.2.3 Nuclear Security System** - The Nuclear Security System provides communications with Nuclear Security personnel within the Owner-Controlled Area through the use of hand-held portable radios operating through Security, Zone 3 and two associated repeater systems. The primary location of the radio console is the Security Building Secondary Alarm Station (SAS); however, this console is also duplicated at the Office Services Building Security annex Central Alarm Station (CAS).

Communications with the Monroe County and Wayne County Sheriff departments from the Emergency Response Facilities are through the installation of direct ring lines as described in Section F.1.2. In addition to using general business phones as a backup, the EOF Security Advisor has direct radio contact with the Michigan State Police or the Monroe County Sheriff when telephones are inoperative. The CAS and SAS have telephone-to-radio patching capability which also allows a telephone caller to be relayed to the Monroe County Sheriff or the Michigan State Police via radio.

**F.3 Facsimile Transmission**

Facsimile machines are provided in the Control Room, the TSC, the EOF, and the JPIC for use by emergency response and NRC personnel.

**F.4 Public Address System**

Public address systems are available in the TSC and the EOF to allow dissemination of information to emergency response personnel within these facilities.

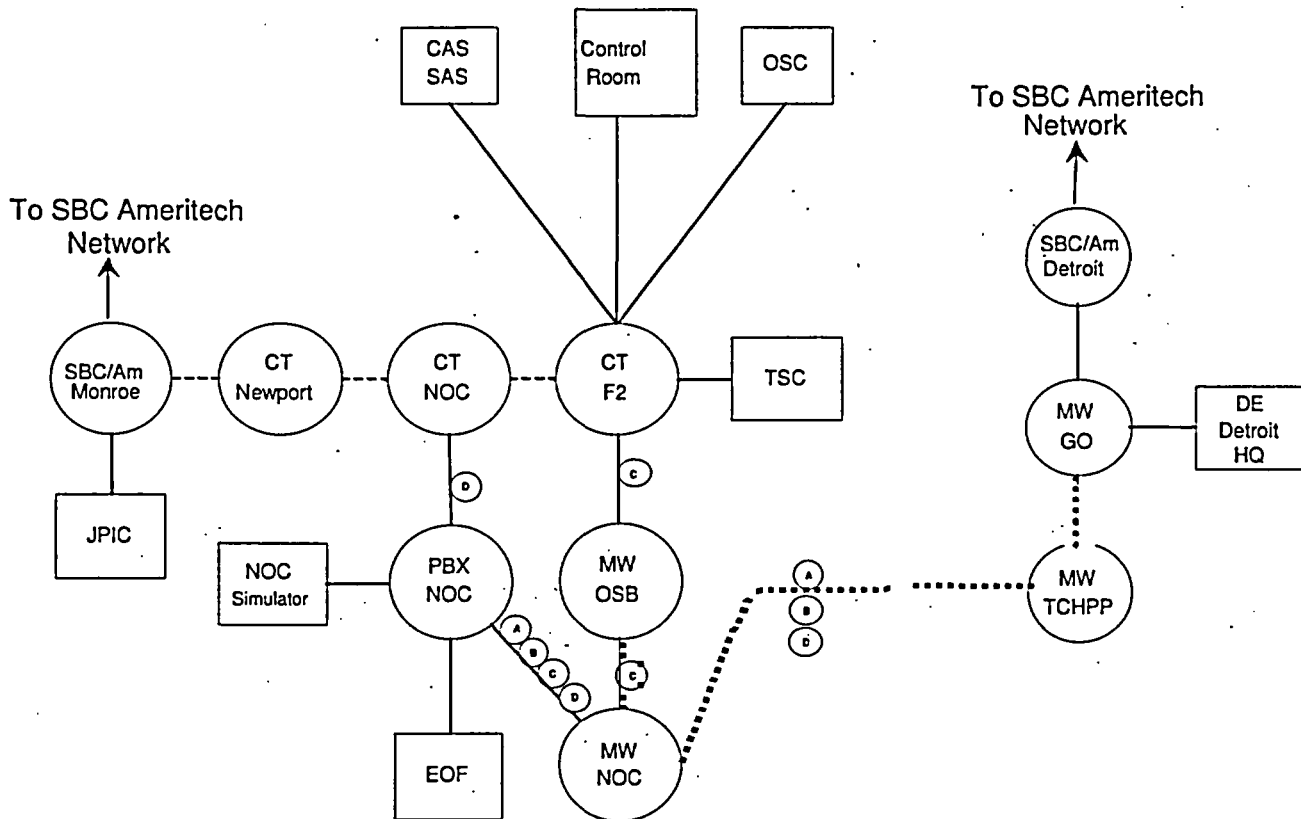
**F.5 Plant Intercom System**

Extensions of the plant intercom (HiCom) system used for general plant operations are located in the TSC, the OSC, and the Control Room. Announcements made from the control room using the override feature are broadcast in all normally occupied buildings onsite.



Figure F-1

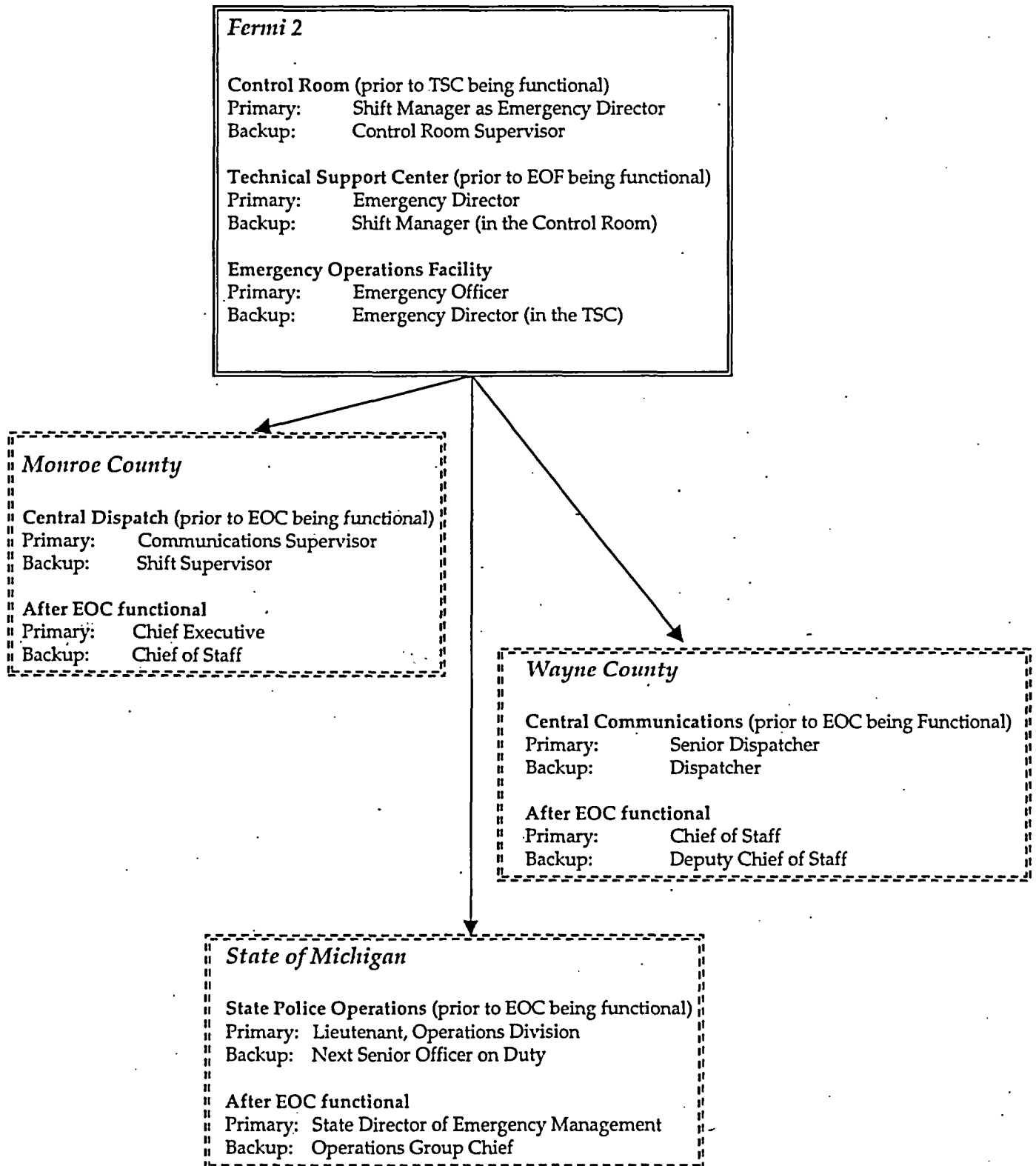
EMERGENCY COMMUNICATIONS TELEPHONE NETWORK



CT Century Telephone  
PBX Private Branch Exchange  
SBC/Am Southern Bell Communications/Ameritech Telephone  
TCHPP Trenton Channel Power Plant

Figure F-2

*Personnel in charge of Communications Links at Fermi 2, Monroe County,  
Wayne County and the State of Michigan*



## **G. PUBLIC EDUCATION AND INFORMATION**

This Plan Section describes Detroit Edison's Public Education and Information Program, the type of information that will be distributed, and the procedures for coordinated dissemination of information to the public concerning Radiological Emergency Response Preparedness (RERP) in the Fermi 2 10-mile Emergency Planning Zone (EPZ).

### **G.1 Education and Information Program**

Detroit Edison provides information to the public at least annually regarding how they will be notified in the event of an emergency and what their actions should be in such an emergency. This information includes, but is not limited to, the following:

- Educational information on radiation
- Phone numbers to call for additional information
- Protective measures (sheltering information, evacuation route maps, reception/congregate care center locations, and respiratory protection information)
- Any special instructions for the handicapped

This information is prepared by Detroit Edison and is jointly reviewed and approved by the state, the counties, and Detroit Edison. It is provided at least annually to each occupiable and addressable dwelling within the 10-mile EPZ. Other forms of information may include, but are not limited to, such activities as school program presentations, speeches at meetings of community groups, booth displays at the Monroe County Fair and tours of Fermi 2. The tour programs include exhibits, lectures, and the opportunity to ask questions about all aspects of plant operations.

### **G.2 Public Awareness**

Detroit Edison's Public Information Program provides the permanent, as well as the transient, population with an adequate opportunity to become aware of the information that is available. Notices refer the transient to the appropriate radio and/or television stations for information in the event of an emergency. These notices are prepared from approved material contained in the information provided to permanent residents. Copies of this information are made available annually to hotels, highway rest areas, and state recreation areas within the 10-mile EPZ.

### **G.3 News Centers**

The Joint Public Information Center (JPIC) is activated to coordinate the dissemination of information to the public during an emergency. The JPIC is located at the Monroe County Community College and can accommodate approximately 500 members of the news media. A multichannel telephone trunk is available near the cafeteria to provide a means for the local telephone company to prepare adequate communications on short notice as described in Section F. The college is located outside the EPZ approximately 12 miles west-southwest of Fermi 2. The JPIC will be staffed by representatives from Detroit Edison, Monroe County, Wayne County, the Province of Ontario, and the State of Michigan. This team reviews information, coordinates all news releases, and holds press conferences.

Detroit Edison also has an Onsite News Center that can accommodate 20 to 50 news media personnel in the Nuclear Training Center (NTC) Auditorium. The Onsite News Center serves as a briefing area for the media when appropriate. The NTC is approximately one mile southwest of the plant and is within the Owner-Controlled Area.

### **G.4 Information Sources During an Emergency**

Plant operations and technical staff must remain isolated from tasks that distract them from their immediate responsibility of mitigating the emergency and restoring the plant to normal operating conditions. For this reason, additional Detroit Edison personnel are assigned to organize and implement all communication measures that serve the news media, the public, company employees, and public officials from Federal, State, and local levels.

Designated public telephone lines are reserved at the JPIC for use by the public wishing to obtain specific information about the emergency. These telephone numbers will be widely publicized at the time of the emergency. The lines usually will be staffed by representatives from local government. Rumors should be kept to a minimum through the use of this one authenticated source of information. The rumor control center is described in the Public Information Annex of the Monroe County Emergency Management Plan.

A Company officer has been designated as the spokesperson for Detroit Edison on the Joint Public Information Team (JPIT) in the event of an emergency at Fermi 2. This spokesperson and his/her staff have communications capability with the Emergency Operation Facility (EOF) and Corporate Communication in the General Office Complex, located in downtown Detroit, Michigan. In addition, this spokesperson or alternate is responsible for the briefing of news media members who are present at the Onsite News Center, when it is activated, to serve for media briefings in emergencies involving nonradioactive releases.

#### **G.5 News Media Acquaintance Program**

Detroit Edison, with the assistance of State and local authorities, conducts an annual program to acquaint the news media with emergency planning and procedures. These programs cover radiation and radiological effects of nuclear plants, as well as offer information to enhance the media's ability to communicate radiological events to the public.

## **H. EMERGENCY FACILITIES AND EQUIPMENT**

This Plan Section identifies and briefly describes the functions and location of the Emergency Response Facilities (ERFs) and equipment that will be used and maintained by Edison in coordinating and performing emergency response activities.

### **H.1 Emergency Response Facilities**

The ERFs that have been established at Fermi 2 to assist Control Room personnel in mitigating the consequences of accidents and responding to abnormal operating conditions are the Technical Support Center (TSC), the Operational Support Center (OSC), and the Emergency Operations Facility (EOF).

The ERFs are staffed by the emergency organization as described in Section B. The minimum staffing for the ERFs varies, as described in Section B, depending upon the class of emergency as determined by the emergency action levels discussed in Section D. The ERFs are activated as soon as possible after an emergency is declared.

The ERFs are linked by a comprehensive communications network to provide reliable and timely communications between the Control Room, the ERFs and offsite Emergency Response Organizations. The communications network provides dedicated telephone lines, general business lines, intercoms, public address speakers, microwave communications, data transmission, and radio link capabilities. Detailed information on the communication capabilities is provided in Section F.

The emergency response function of the Integrated Plant Computer System (IPCS) is provided to gather, store, and display data in the Control Room, OSC, TSC, and EOF. This enables personnel to analyze plant conditions and to make appropriate recommendations regarding protective actions for emergency personnel and the public. The emergency response function of the IPCS is described in Section H.4 and in greater detail in the Fermi 2 Updated Final Safety Analysis Report (UFSAR).

The TSC and the EOF have information centers containing the necessary up-to-date plant records, procedures, Technical Specifications, and as-built drawings to aid emergency personnel in their technical analysis and evaluation of emergency conditions. Procedures have been developed for ensuring that the most current revisions of these controlled documents are being maintained.

The ERFs provide adequate space to accommodate assigned emergency response personnel. There is sufficient space for the operation and maintenance of communications and data transmission equipment, data acquisition and display equipment, and other instrumentation required at the respective facilities. Storage space is provided for the necessary emergency supplies, protective equipment, plant documentation, and administrative materials.

The TSC and EOF each provide a consultation room and provisions for a small staff of Nuclear Regulatory Commission (NRC) personnel. Provisions include desks, chairs, and telephone lines.

The following sections describe the individual ERFs and their corresponding specific functions. Additional detailed information regarding the design, construction, and habitability of the ERFs is provided in the UFSAR.

**H.1.1 Control Room** - The Control Room is located on the third floor of the Auxiliary Building and is designed to meet 10 CFR 50, Appendix A, Criterion 19. The habitability standards are described in Chapter 6 of the UFSAR. The Control Room contains instrumentation, controls, and displays for monitoring and controlling the plant operating and safety systems during emergency events and for mitigating the consequences of an emergency. Safe operation of the reactor and plant manipulations are performed by licensed Control Room personnel under the supervision of the Shift Manager.

Initial emergency response measures, as shown below, are exercised from the Control Room under the direction of the Emergency Director (Shift Manager).

- Plant operations
- Direction and control
- Accident assessment/meteorology
- Corrective actions
- Radiological assessment
- Protective actions (onsite; offsite until TSC is functional)
- Communications (licensee/offsite response organizations)

The Control Room is the initial onsite communications center during an emergency. It has a reliable communications system providing communication capabilities to the NRC, Offsite Emergency Response Organizations, OSC, TSC, EOF, and all areas of the plant.

**H.1.2 Technical Support Center** - When emergency conditions escalate to an Alert status, coordination of the emergency response measures shifts from the Control Room to the Technical Support Center under the direction of the Emergency Director (Plant Manager/alternate). The Emergency Director coordinates activities in the TSC and interfaces with the Control Room, the OSC, and the EOF.

The TSC is the emergency operations work area for senior technical, engineering, and management personnel; other licensee designated technical and administrative support personnel; and a small staff of NRC personnel. The TSC provides plant management and technical support to Control Room personnel and relieves the reactor operators of peripheral duties not directly related to reactor system manipulations during an emergency. The TSC may also be used to provide technical support during recovery operations following an emergency. TSC personnel perform the following functions for an Alert, Site Area Emergency, and General Emergency until the EOF is functional.

- Direction and control
- Accident assessment
- Corrective actions
- Plant system engineering
- Radiological assessment
- Protective actions (onsite; offsite until EOF is functional)
- Site access control
- Communications (licensee/offsite response organizations)

When functional, the TSC becomes the primary onsite communications center during an emergency. It has a reliable communications system providing communication capabilities with the Control Room, the OSC, the EOF, the NRC, and other offsite agencies. The system provides for the immediate exchange of information on plant status and operations, notifications to Federal, State, and local agencies, and inter-communications within the TSC. The communications system consists of dedicated and general business telephone lines, a microwave system, the plant intercom, a public address system, and data transmission equipment.

The TSC is located at the southeast end of the plant within the Protected Area on the ground floor of a two-story Office Building Annex. The TSC is habitable during postulated radiological emergencies to the same degree as the Control Room (Design Criteria 19), with the exception of redundant filter systems. TSC construction provides special shielding and a HVAC system designed to facilitate the occupation of all necessary personnel for winter and summer environmental radiological accident conditions. Portable airborne and area radiation monitors that alarm locally are provided. In the event that the TSC becomes uninhabitable, TSC functions are divided between the Control Room and an alternate facility such as the EOF as directed by the Emergency Director.

- H.1.3 Operational Support Center** - The OSC is a designated assembly point near the Control Room. It is located at the north end of the third floor of the Turbine Building. The OSC provides an area for the coordination of shift personnel to support emergency response operations without causing congestion in the Control Room. Personnel reporting to the OSC may include the Fire Brigade, Damage Control and Rescue Teams, Onsite Radiological Emergency Teams, instrument technicians, and general maintenance personnel.

The OSC is activated for an Alert, Site Area Emergency, or General Emergency. The OSC Coordinator integrates OSC activities and dispatches emergency personnel on assignments as directed by the Emergency Director.

The OSC has dedicated telephone lines to both the Control Room and the TSC and a dial telephone for communications with other onsite and offsite locations. Portable radios are also available to complement or serve as backup to the telephones and for onsite emergency teams.

In the event that the OSC becomes uninhabitable, an area of the machine shop is designated as the Alternate OSC. The machine shop is located on the first floor of the Office Services Building.



H.1.4 **Emergency Operations Facility** - The EOF is a command post for the overall management of the offsite emergency response including the coordination of radiological and environmental assessments, the determination of protective actions for the public, and the management of the recovery operations stated below:

- Radiological assessment
- Offsite protective actions
- Offsite radiological monitoring
- Environmental sample analysis
- Public information
- Communications (licensee/offsite response agencies)

The EOF is on the first floor of the Nuclear Operations Center (NOC) and is approximately 6000 feet southwest of the Fermi 2 Plant on owner-controlled property. Supporting facilities at the NOC include the plant simulator, plant training offices, training classrooms, space for news reporters, etc. Access is available to the facility from two directions via roads under the control of Edison.

The EOF has been designed for habitability in the event of a postulated accidental radioactive release from Fermi 2. The design includes shielding (protection factor of 20), HVAC system with HEPA filters, and portable airborne radioactivity and area radiation monitors that alarm locally to assure that personnel exposures to radiological hazards do not exceed 10 CFR 20 limits.

The EOF is activated for a Site Area Emergency or General Emergency. The Emergency Officer is responsible for the integration of EOF activities and the offsite emergency response.

The Radiological Emergency Team (RET) Coordinator coordinates the Offsite RET field surveys by radio, as directed by the Radiation Protection Coordinator, from the RET Dispatch Room in the EOF.

The EOF counting laboratory is available for the qualitative analysis of environmental samples collected by the RET, as well as a backup facility to the inplant laboratories. Laboratory facilities are described in Section H.3.2.2.

An extensive communications system is provided in the EOF, which includes communications to the TSC, the Offsite RETs, the NRC, the State Emergency Operations Center (EOC), and intercommunications within the EOF. The system consists of dedicated and general business telephone lines, a microwave system, radios, plant HiCom monitor, a public address system, and data transmission equipment.

The State of Michigan and the Province of Ontario may dispatch representatives to the EOF as they deem necessary to support emergency response activities. The EOF contains provisions such as desks, chairs, telephones, and data transmission equipment to support these representatives. The EOF provides a consultation room and provisions for a small staff of NRC personnel.

An Alternate EOF is located at the Western Wayne Center, approximately 22 miles northwest of Fermi 2. The facility has adequate communications equipment and sufficient space to accommodate the additional personnel required for continuity of dose projection and decision making capability, including coordination of the offsite teams. Portable equipment is provided for the personnel to perform their assigned functions. Procedures are in place which describe the activation and support functions.

## H.2 Onsite Monitoring Systems

Onsite monitoring systems used to initiate emergency measures in accordance with Section D, as well as those for conducting ongoing assessment, include geophysical phenomena monitors, radiological monitors, process monitors, and fire and combustion product detectors.

### H.2.1 Geophysical Phenomena

#### H.2.1.1 Meteorological Monitoring - The meteorological monitoring system at Fermi 2 presently meets the requirements of Regulatory Guide 1.23.

The onsite 60-meter meteorological tower has meteorological sensors that include a temperature differential network, a sigma theta signal conditioner, and a precipitation gauge capable of real-time data acquisition. A secondary meteorological system consists of redundant sensors mounted on the 60-meter tower that are independent of the primary system and require redundant signal conditioners, digital data acquisition systems, and power supplies. A block diagram of the modified system is shown in Figure H-1, Block Diagram of Detroit Edison Meteorological Data Acquisition System, and Table 1, Meteorological Parameters, indicates the parameters measured.

The meteorological system is capable of providing the following types of data upon request from dial-up terminals in the Control Room, TSC, and EOF:

- Instantaneous values
- One-minute blocked averages
- Fifteen-minute blocked averages
- Fifteen-minute rolling average
- One-hour blocked average
- Twelve-hour, fifteen-minute blocked historical file

In addition, the system has the capability of being remotely interrogated on a simultaneous basis by multiple users.

The IPCS provides real-time meteorological data for calculating offsite radiological dose assessment as described in Section I.

#### H.2.1.2 Hydrological Monitoring – The National Oceanic and Atmospheric Administration (NOAA) has an official gauging station in the Fermi 2 intake canal that records Lake Erie water levels.

#### H.2.1.3 Seismic Monitoring - Strong motion triaxial accelerographs are installed in different locations of the reactor/auxiliary building to measure the basic ground motion/time history acceleration, as well as the seismic motion. Passive earthquake recording instrumentation has been provided to measure various ground motion and in structure response spectra. The passive instruments serve as backup for the active sensors.

**H.2.2 Radiological Monitoring** - The area, effluent, portable, and post-accident radiation monitors are listed in Table H-2 through Table H-5:

- Table H-2, Typical Area Radiation Monitors
- Table H-3, Radiological Effluent Monitors
- Table H-4, Typical Portable Monitors
- Table H-5, Post-Accident Process and Effluent Radiation Monitors

**H.2.3 Process Monitors** - The process monitors are listed in Table H-6, Process Radiation Monitors.

**H.2.4 Fire and Combustion Product Detectors** - Fire and combustion product detectors are installed throughout the plant to monitor various vital areas. These are classified as ionization, photoelectric, thermal fixed-temperature, and thermal rate-of-rise detectors.

### **H.3 Offsite Monitoring Systems**

#### **H.3.1 Geophysical Phenomena**

**H.3.1.1 Meteorological Monitoring** - The meteorological monitoring system at Fermi 2 is operated to NRC standards. Sufficient redundancy is built into the system so only under the most unusual circumstances would site data be unavailable. Should any of the parameters required for dose assessment become unavailable, supplementary meteorological data is available via the corporate computer system. Corporate meteorology personnel maintain a contract with a vender that provides various weather and forecast data. Also, National Weather Service (NWS) data is available by contacting the nearest NWS office via telephone.

**H.3.1.2 Hydrological Monitoring** - NOAA has gauging stations at Gibraltar, Michigan, about 10 miles north-northeast of the plant on the Detroit River, and Toledo Ohio, about 22 miles south-southwest of the plant on Lake Erie. Data will be obtained from the Toledo station by calling the Toledo Coast Guard should the gauge at Fermi 2 become inoperable.

**H.3.1.3 Seismic Monitoring** - Seismic data will be obtained from the University of Michigan at Ann Arbor, Michigan as a backup resource.

### H.3.2 Radiological Monitoring

H.3.2.1 **Offsite Monitoring** - An ongoing Radiological Environmental Monitoring Program (REMP) is consistent with the Fermi 2 Technical Specifications. The program is described in detail in the Fermi 2 Offsite Dose Calculation Manual.

H.3.2.2 **Laboratory Facilities** - The EOF laboratory is the designated facility for the receipt and analysis of environmental samples during emergencies. The inplant Chemistry and Rad Protection laboratories are also available for the analysis of environmental samples.

The calibration and operational readiness of all laboratory equipment is assured in accordance with plant procedures. Typical equipment capabilities for all laboratory facilities are listed in Table H-7, Typical Laboratory Capabilities.

Provisions for analyses of environmental samples have also been established with the contractor or vendor who conducts the routine REMP program.

### H.4 Integrated Plant Computer System (IPCS)

The emergency response function of the IPCS is to scan plant instrumentation and gather, display, and store data needed to analyze and exchange information on plant conditions between emergency response facilities. IPCS computer terminals are located in the Control Room, OSC, TSC, EOF (i.e. all emergency facilities) as well as other onsite locations. The functions of IPCS are described in detail in the UFSAR.

The emergency response function of the IPCS interfaces with the Meteorological Data Acquisition System (MDAS) to provide and retain the data needed to project offsite doses.

The following information can be acquired or determined through the IPCS:

- Plant status and dynamics prior to and during the accident
- Safety Parameter Display System (SPDS)
- Records and trends various plant parameters
- Quantity of radioactive gases released to the environment
- Prevailing meteorological status
- Radiological accident assessment (impact of dose on public health and safety)
- Record of monitored parameters for the duration of an emergency

## H.5 Emergency Equipment and Supplies

Equipment and supplies needed to support the emergency response effort fall in general categories:

- Communications equipment
- Protective clothing
- Respiratory protection equipment
- Radiological monitoring equipment
- Environmental sampling equipment
- Decontamination supplies
- Miscellaneous tools and equipment
- Data and reference material

Radiation Protection emergency equipment and supplies are listed in Radiation Protection Procedure 67.000.405. Backup equipment and supplies are available at designated plant storage locations.

The operational readiness of Radiation Protection emergency equipment and supplies is ensured by conducting inventories at least quarterly in accordance with Radiation Protection Procedure 67.000.405. Kits containing decon or protective clothing supplies only are inventoried at least annually in accordance with Radiation Protection Procedure 67.000.405. Equipment/instruments will be physically checked at the time of the inventory and those instruments that require calibration prior to the next inspection are replaced with calibrated ones. Calibration intervals are based on the recommendations of the manufacturer and previous operational history. Perishable supplies, such as batteries, are replaced as required at the time of the inventory.

**TABLE H-1: METEOROLOGICAL PARAMETERS**

**10-Meter Level**

Wind Speed  
Wind Direction  
Air Temperature  
Dew Point <sup>(a)</sup>  
Sigma Theta

**60-Meter Level**

Wind Speed  
Wind Direction

**Miscellaneous**

Temperature Difference (60-10M)  
Precipitation at Ground Level <sup>(a)</sup>  
Pasquill Stability Class

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a. Available from the primary system only.

TABLE H-2: TYPICAL AREA RADIATION MONITORS (a)

I.D. Number(b)	Location(c)	Range	Function
D21-N106	G-13-3-AB	$10^{-2}$ - $10^2$ mR/hr	Main Control Room Monitor
D21-N107	F-9-SB-RB	$10^{-1}$ - $10^3$ mR/hr	SE Corner Monitor
D21-N108	B-10-SB-RB	$10^{-1}$ - $10^3$ mR/hr	SW Corner Room Monitor
D21-N109	B-15-SB-RB	$10^{-1}$ - $10^3$ mR/hr	NW Corner Room Monitor
D21-N110	G-17-SB-RB	$10^{-1}$ - $10^3$ mR/hr	NE Corner Room Monitor
D21-N111	G-11-SB-RB	$10^{-1}$ - $10^3$ mR/hr	HPCI Room Monitor
D21-N115	F-15-5-RB	$10^{-2}$ - $10^2$ mR/hr	Water Activity & Criticality Monitor
D21-N123	M-17-1-RWB	$10^{-2}$ - $10^2$ mR/hr	Radwaste Control Room
D21-N128	G-11-4-AB	$10^{-2}$ - $10^2$ mR/hr	Personnel Protection- Stand-by Gas Treatment System (SGTS)
D21-N132	G-13-1-AB	$10^0$ - $10^4$ mR/hr	Operating Information
D21-N145	C-12-1-RB	$10^{-1}$ - $10^3$ mR/hr	Drywell Maintenance Monitor

- 
- (a) Table H-2 does not include all the Area Radiation Monitors (ARM) in the plant, but is typical of those available.
- (b) Detector and/or channel number
- (c) Locations by column-row-floor-building  
RB = Reactor Building; AB = Auxiliary Building; RWB = Radwaste Building; SB = Sub  
Basement

**TABLE H-3: RADIOLOGICAL EFFLUENT MONITORS**

<b>I.D. Number(a)</b>	<b>Location(b)</b>	<b>Type</b>	<b>Function</b>
D11-P293	E-3-1-CWPH	Liquid Effluent	Monitor Liquid Discharges to Lake Erie
D11-P281	NP-17-3-TB	Gaseous Effluent	Monitor Gaseous Discharges from RW Building
D11-P279	N-3-3-TB	Gaseous Effluent	Monitor Gaseous Discharges from Turbine Building
D11-P275	H-15-5-AB	Gaseous Effluent	Monitor Gaseous Discharges from SGTS
D11-P276	G-13-5-AB	Gaseous Effluent	Monitor Gaseous Discharges from SGTS
D11-P280	F-10-5-AB	Gaseous Effluent	Monitor Gaseous Discharges from Reactor Building

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(a) Panel number, detectors located in panels.

(b) Locations by column-row-floor-building

Buildings are CWPH = Circulating Water Pump House; AB = Auxiliary Building; TB = Turbine Building; RWB = Radwaste Building



**TABLE H-4: TYPICAL PORTABLE MONITORS(a)**

- Contamination (personnel, wounds, equipment, areas) -  
Friskers (hand-held and PCM 1A) GM detectors/Gas flow proportional
- Radiation detection and measurement -  
GM survey meter/ion chamber survey meters
- High range radiation -  
GM survey meter with range to 1000 R/hr
- Airborne Radioactivity (particulates, radioiodine gaseous)  
Continuous Air Monitors  
Long Term Air Samplers (>24 hrs)  
Short Term Air Samplers (<24hrs)

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(a) The Fermi 2 Updated Final Safety Analysis Report provides a description of portable monitors in Chapter 12.

**TABLE H-5: POST-ACCIDENT PROCESS AND EFFLUENT  
RADIATION MONITORS**

<b>I.D. Number</b>	<b>Location</b>	<b>Type</b>	<b>Function</b>
D11-N443A <sup>(a)</sup>	Drywell	Post-Accident ARM	Monitor Post-Accident Radiation Level in Containment
D11-N443B <sup>(a)</sup>	Drywell	Post-Accident ARM	Monitor Post-Accident Radiation Level in Containment
D11-P300A <sup>(b)</sup>	G-12-5-AB	Post-Accident Effluent PRM	Monitor Post-Accident SGTS Effluent
D11-P300B <sup>(b)</sup>	G-12-5-AB	Post-Accident Effluent PRM	Monitor Post-Accident SGTS Effluent

- 
- (a) Detector and/or channel number  
(b) Panel numbers, detectors located in panels.

TABLE H-6: PROCESS RADIATION MONITORS(a)

I.D. Number(b)	Location(c)	Type	Range	Function
D11-N004A,B	M-0-3-TB	PRM	$10^0$ - $10^6$ mR/hr Info	Monitor Off-Gas-Advisory
D11-N006A,B	G-12-1-RB	PRM	$10^0$ - $10^6$ mR/hr	Limit Fission
D11-N006C,D	G-11-1-RB	PRM	$10^0$ - $10^6$ mR/hr	Product Carryover
D11-N008	J-8-1-TB	PRM	$10^{-1}$ - $10^6$ cps	Detect In-leakage to GSW
D11-N009	G-13-1-AB	PRM	$10^{-1}$ - $10^6$ cps	Detect In-Leakage to RBCCW
D11-N010A,B	F-13-3-RB	PRM	$10^{-2}$ - $10^2$ mR/hr	Monitor Fuel Pool
D11-N010C,D	B-13-4-RB	PRM	$10^{-2}$ - $10^2$ mR/hr	Exchange & Initiate SGTS
D11-N400A	A-13-2-RB	PRM	$10^1$ - $10^7$ cpm	Monitor In-leakage
D11-N400B	D-10-2-RB	PRM	$10^1$ - $10^7$ cpm	to EECW
D11-N401A	B-15-2-RB	PRM	$10^1$ - $10^7$ cpm	Monitor to in-leakage
D11-N401B	B-10-2-RB	PRM	$10^1$ - $10^7$ cpm	to RHR Service water
D11-N408	F-10-4-AB	PRM	$10^1$ - $10^7$ cpm	Monitor Reactor Building Vent for Fission Products
D11-N410	G-10-4-AB	PRM	$10^1$ - $10^7$ cpm	Monitor Reactor Building Vent for Fission Products

- (a) The Fermi 2 Updated Final Safety Analysis Report provides a detailed description of the Process Radiation Monitoring System in Chapter 11.
- (b) Detector and/or channel number
- (c) Locations by column-row-floor-building  
Buildings are: RB = Reactor Building; AB = Auxiliary Building; TB = Turbine Building

**TABLE H-7: TYPICAL LABORATORY CAPABILITIES**

**Inplant Chemistry Capabilities**

- Gamma emitting isotopic analyses
- Low energy Beta (H-3) emitting isotopic identification
- H<sub>2</sub> and O<sub>2</sub> determination in air
- Trace metals determination
- pH determination
- Conductivity determination
- Boron determination
- Chlorides specification determination
- Lubricants identification
- Dissolved gas determination

**EOF Chemistry Capabilities**

- Gamma emitting isotopic analyses
- H<sub>2</sub> and O<sub>2</sub> determination in air
- pH determination
- Boron determination

**Radiation Protection**

- Gamma emitting isotopic analyses
- Alpha/Beta detection

**FIGURE H-1:**  
**BLOCK DIAGRAM OF DETROIT EDISON  
METEOROLOGICAL DATA  
ACQUISITION SYSTEM**

See UFSAR Figure 2.3-47

## **I. ACCIDENT ASSESSMENT**

This Plan Section indicates the methods, systems, and equipment for assessing and monitoring actual or potential offsite radiological consequences resulting from an emergency event.

### **I.1 In-Plant Monitoring Capability**

Fermi 2 has appropriate equipment, systems, and plant designs to provide the capability to monitor and sample releases from the plant or radioactivity contained in key areas of the plant. These include post-accident sampling capability, radiation effluent monitors, in-plant iodine instrumentation, and containment radiation monitors in accordance with NUREG-0737. These monitors are listed in Tables H-3 through H-6. In all cases where monitoring instrumentation indicates that an actual or potential emergency event exists, steps shall be immediately taken to assess and confirm the validity of the indications. Section D includes vital plant parameters and correlation to emergency action levels, as appropriate.

### **I.2 Source Terms**

- I.2.1 Monitoring Instruments Operable** - Accident assessment methodology has been developed that incorporates the calibration of the monitor with a known radionuclide. If possible during an emergency event, the mix of radionuclides will be determined by isotopic analysis. If this information is not available, a conservative radionuclide spectrum is assumed. In the case of effluent source term determinations, the conservative (in terms of offsite dose per quantity of radioactivity released) postulated accident radionuclide spectra is stated in the Fermi 2 Updated Final Safety Analysis Report (UFSAR), Chapter 15. Both the spectrum of radionuclides and magnitude of accident source terms can be correlated to actual monitor readings in a conservative manner.

Based upon readings from accident assessment instrumentation (such as the containment high range radiation monitors), estimates of the magnitude of potential releases are developed. Post-accident sampling can provide the isotopic analysis for these release values.

- I.2.2 Monitoring Instruments Inoperable** - In the unlikely event that instrumentation used for accident assessment is offscale or inoperable, methods and supporting procedures have been established to provide estimates of radioactive releases.

The normal operating release paths (reactor building ventilation, turbine building ventilation, and radwaste building ventilation) are designed to isolate at setpoints associated with 10 CFR 20 and 10 CFR 50, Appendix I design objectives. If the isolation fails, either a default accident radionuclide mix or the most recent analysis (of the isotopic mix of radionuclides) is used with design air flow rates. If possible, samples will be obtained and analyzed.

The accident range Containment High Range Radiation Monitors (CHRRMs) in the drywell and the Accident Range Monitoring System (AXMS) in the standby gas treatment system have redundant systems. It is not postulated that these monitors would all become inoperable or offscale at any one given time. However, specific methods for handling the above occurrences, or combinations thereof, are established in procedures to correlate survey meter readings with monitor readings. In all cases, where and when available, field monitoring data will be used in conjunction with dose projection data.

### **I.3 Dose Assessment**

Dose Assessment is the process that enables Fermi 2 emergency workers to predict the level and location of radiation exposure in the event of a release or potential release of radioactivity to the environment.

- I.3.1 Airborne Releases** – The capability for projecting offsite dose and dose rates due to actual or potential airborne releases is via a computer program (Raddose-V) interfaced with IPCS. Raddose-V is available in the Control Room, TSC, and EOF.

- I.3.1.1 Methodology** - The basic methodology used to calculate the offsite radiological dose and dose rates was developed by and agreed upon by Detroit Edison (Fermi 2), Nuclear Management Company (Palisades), and American Electric Power (D.C.Cook) and accepted by the State of Michigan's Department of Environmental Quality for use in emergency planning. This methodology carried out by a computer program (Raddose-V) determines the Total Effective Dose Equivalent (TEDE) dose and dose rate due to noble gases and the Committed Dose Equivalent (CDE) adult thyroid dose and dose rate due to airborne radioiodine. Projected doses are compared against Protective Action Guidelines (EPA-400) as part of Protective Action Recommendation decision making for members of the public. A detailed description of the dose assessment computer model is included in the section below.

Dose calculations are proportional to the relative downwind concentration of a radioactive release. Dose calculations are a function of atmospheric stability class, wind speed, and downwind distance from the plant. The present model uses a variable trajectory, puff advection dispersion model. Releases are modeled as "ground level" releases and downwind building wake (turbulent mixing) effects have been incorporated. The finite cloud methodology is used for computation of doses for these ground level releases.

A lake breeze study was conducted at Fermi 2 which resulted in a site specific lake breeze equation. A dose adjustment factor was calculated based on the lake breeze equation and applied to dose and dose rates during lake breeze conditions. The possible existence of a lake breeze is based on the following criteria:

- Date - April 1 to October 31
- Time - daylight hours between time of sunrise and sunset
- Wind Direction - Between 57° and 168°
- Stability Class - A, B, or C

- I.3.1.1.1 Dose Assessment Computer Model** – A computer dose assessment program (Raddose-V) has been incorporated into the Integrated Plant Computer System (IPCS). The IPCS provides the Raddose-V program with meteorological and effluent radiation monitoring data to calculate a release rate. If IPCS data is not available, the user enters data manually.

Raddose-V provides the capability of evaluating up to two concurrent release pathways during each calculational step. A third release pathway referred to as the potential projection (LOCA accidents only) is based on an assumed containment leak rate and activity. Release pathways are associated with the following accident types:

- LOCAC - Loss Of Coolant Accident (LOCA) in Primary Containment (pathway via Standby Gas Treatment System (SGTS))
- LOCAX - LOCA outside Primary Containment (pathway via SGTS)
- FHA - Fuel Handling Accident (pathway via SGTS)
- RXBLG - Reactor Building Accident (pathway via Reactor Building HVAC exhaust)
- RWBLG - Radwaste Building Accident (pathway via Radwaste Building HVAC exhaust)
- TRBLG - Turbine Building Accident (pathway via Turbine Building HVAC exhaust)
- PCV - Primary Containment Vent (Torus/Drywell atmosphere via torus hardened vent pipe)

For each available accident type, the program maintains an initial isotopic inventory. Initial inventories for each accident type, except FHA, are designated by three source types (Coolant, Gap, or Core). A specific inventory is used for the FHA. Once reactor shutdown occurs, the source type inventories are adjusted for radiological decay and parent in-growth. The program can also model accidents with an operating (ATWS) reactor. In this case, the applicable source type is used with no radiological decay.

The Coolant source type reflects a mix of noble gases and iodines due to normal plant operation (i.e. assumes no fuel damage). The Gap source type assumes noble gas to iodine ratio of 5 to 1 and the Core source type 50 to 1. The user selects the appropriate source type based on actual or projected plant status and core conditions.

#### 1. Determination of the Radionuclide Release

The program determines a radionuclide release rate based on the following:

- Age of the radionuclide mix
- Monitor readings
- Plant parameters pertinent to airborne transport of radionuclides



From this, the program provides dose information through the current time step as well as the projection period. The default projection period is four hours.

a. Release Based on CHRRMs readings.

LOCA-type releases can be evaluated on the basis of CHRRMs. Such modeling assumes a release of noble gases and iodines to the drywell atmosphere. The release fraction is determined by the selected source type. Using the source type to represent the potential drywell airborne mix at the time of shutdown, the program calculates a time decay of the mix to determine the mix of nuclides at the time of the monitor reading. This, combined with the monitor reading and the monitor response characteristics, is then used to determine the actual radionuclide inventory of the drywell atmosphere at the time of the monitor reading.

The release of these radionuclides to the reactor building from the drywell is assumed to be at the Technical Specifications leak rate (0.5% of volume per day). As such, this is a potential release. The actual leak rate could be higher or lower depending on containment pressure, integrity of penetration seals, or any number of other conditions.

Releases from the primary containment are next assumed to enter the reactor building and processed through the SGTS. The SGTS has no effect on noble gases, but is assumed to have a 99% removal efficiency for iodines. Those radionuclides passed through to the environment represent the potential radionuclide release.

b. Releases Based on Effluent Monitor Readings

Releases that are measured by effluent monitors can be handled much more directly than those based on CHRRM readings. The accident type determines the release pathway and the associated effluent radiation monitor. Just as in the case of the potential release based on CHRRMs, the selected source type (radionuclide mix) is corrected for decay between the time of shutdown and the time of the monitor reading. This information, combined with knowledge of the monitor response characteristics and the release path flow, allows the radionuclide release rate to be determined.

c. User Input of the Nuclide Mix

If knowledge of the radionuclide mix and release rates is available from post-accident sample analyses or any other source, it can be entered manually by the user.

2. Modes of Operation

Raddose-V has the capability to operate in an automatic or manual mode. In automatic mode, once the user selects an accident type and source type, current meteorological and radiation monitoring data is automatically obtained from the IPCS. If data is not available from IPCS, the user can enter data manually. Further, Raddose-V has the capability to calculate dose and dose rates based on several other data options. They are:

Back Calculation Using Field Dose Rates  
Isotopic Sample Analyses  
Direct Entry (of release rates)  
Monitor Override (worse case Design Base Analyses)

1.3.2 **Liquid Releases** - The primary method for determining doses from the liquid pathway involves the analysis of a sample for isotopic content and a calculation using the Offsite Dose Calculation Manual (ODCM).

1.3.3 **Long Term Dose Assessment** - For long term analysis, field monitoring data can be used to calculate the dose to the population.

1.4 **Field Monitoring**

The Radiological Emergency Teams (RETs) perform field monitoring within the plume exposure pathway. These teams are trained to conduct field surveys, obtain air samples, and collect environmental samples. At the onset of an emergency with potential for actual radiological releases in excess of ODCM limits, RET members can be dispatched to field positions. Each team is provided with air-sampling equipment, personnel dosimetry, radiological survey instruments, procedures, and radios (see Section H). From one to three teams are available and can be dispatched within 30 to 60 minutes of the emergency declaration.

The RETs are deployed in a manner that provides preliminary estimates of plume location and exposure rates. Established sampling and monitoring locations, based on prevailing wind directions, may be utilized. The information collected is forwarded to the TSC or EOF when activated. When activated, the EOF assumes responsibility for the direction of environmental assessment activities. The EOF laboratory may be used for the receipt and qualitative analysis of all environmental sample media.

If necessary, supplemental teams trained in field survey and monitoring techniques can be called out or may be requested through the mutual assistance agreements. They are also equipped with appropriate monitoring and sampling equipment. When the EOF is functional, the Radiation Protection Coordinator directs the activities of the offsite RETs. Data from the supplemental field monitoring team(s) is reported to the EOF.

## **J. PROTECTIVE RESPONSE**

This Plan Section describes the range of protective actions developed for plant workers and the general public within the plume exposure pathway, the 10-mile Emergency Planning Zone.

### **J.1 Onsite Notification**

The Protected Area is the zone within the Owner-Controlled Area bounded by the Protected Area security fence. The plant itself is located within this zone. In the event of an emergency situation at Fermi 2, methods are established for notifying personnel within the Protected Area. These people include the following:

- Employees not having emergency assignments
- Visitors
- Contractor personnel

Methods are also established for notifying personnel outside the Protected Area yet still in facilities within the Owner-Controlled Area (site boundary). These facilities include the following:

- Fermi Information Center
- General Training and Orientation Center (GTOC)
- Technical Assistance Center (TAC)
- Nuclear Operations Center (NOC)
- Fermi 1

The primary means of notification within the Protected Area is the emergency alarm system. This system provides an audible signal that alerts personnel to the existence of an emergency event. The following emergency events have specific audible alarm signals:

- Fire - yelp
- Tornado - siren
- Plant area - steady

Following the alarm, personnel are advised of the nature of the emergency via the plant intercom (HiCom) system.

Activation of the emergency alarm system and the subsequent announcement is the responsibility of the Emergency Director. The activation and the appropriate announcement are performed immediately upon classification of an Alert, Site Area Emergency, or General Emergency. If an Unusual Event occurs, notification announcements are performed on a timely basis consistent with the nature of the event. Following activation of the emergency alarm system, all personnel within the Protected and Owner-Controlled Areas are notified and advised within 15 minutes of an emergency situation.

All personnel working within the Protected Area (including contractors, vendors, and visitors) are either trained in emergency procedures or escorted at all times by an authorized individual. Within the Protected Area, a visitor is anyone who has not been issued an unescorted access keycard for the Protected Area. Within the Owner-Controlled Area, a visitor is defined as anyone whose work location is not Fermi 2. The cognizant supervisor is responsible for visitors inside the Owner-Controlled Area but outside the Protected Area.

Authorized escorts are trained in emergency procedures and in the appropriate steps to be taken by visitors in an emergency. Visitors entering the Protected Area meet their assigned escorts at the Security Access Building and are promptly escorted back if an emergency event requiring accountability occurs.

The Fermi Information Center, GTOC, TAC, NOC, and Fermi 1 will be notified of an emergency by Hi-Com announcement.

## **J.2 Evacuation**

A Plant Area Evacuation is defined as the supervised evacuation of all nonessential personnel from a specific area of the plant to another designated safe area. A Protected Area Evacuation is defined as the supervised evacuation of all nonessential personnel from the Protected Area. A Site Area Evacuation is defined as the supervised evacuation of all nonessential personnel from all Owner-Controlled Areas of the site, including but not limited to the Protected Area, the Fermi Information Center, the GTOC, the TAC, Fermi 1, and the NOC. Evacuated personnel will be directed to assemble at the Newport Service Center, Monroe Power Plant, Trenton Channel Power Plant or will be sent home.

Figure J-1 identifies the Owner-Controlled Area. The evacuation routes and the relocation and monitoring centers for persons leaving Fermi 2 are shown in Figure J-2. The directions of travel and the off-site assembly area(s) (Edison's Newport Service Center, Monroe Power Plant, and Trenton Channel Power Plant) are determined by the Emergency Director based on the current meteorological and emergency conditions. An announcement will be made over the HiCom system in the Protected Area, Fermi Information Center, GTOC, TAC, NOC, and Fermi 1. Nuclear Security is responsible for traffic direction and control of persons leaving Fermi 2, including special provisions for a coordinated evacuation under severe conditions such as inclement weather, large groups of personnel to be evacuated, or a high level radioactive release. Assembly, accountability, and evacuation are conducted in accordance with established procedures.

- J.2.1 Monitoring and Decontamination** - In the event of a Site Area Evacuation, all nonessential personnel exiting the Protected Area are monitored for contamination by passing through passive portal radiation monitors. Personnel in the Fermi Information Center, the GTOC, the TAC, the NOC, and Fermi 1 are directed to offsite assembly areas and monitored, if emergency conditions warrant, by individuals trained in the operation of personnel monitoring equipment. Vehicles are monitored, as necessary, depending on the amount and direction of the radioactivity released.

Facilities will be available at the offsite assembly areas should it be necessary to decontaminate individuals and/or vehicles. Decontamination equipment is listed in Radiation Protection Procedure 67.000.405. Personnel monitoring and decontamination is performed using techniques described in Radiation Protection Procedure 67.000.400. Vehicle monitoring and decontamination is performed in accordance with EP-220.

- J.2.2 Accountability** - As individuals exit the Protected Area, they leave their identification badges with the Nuclear Security personnel. Nuclear Security will account for each person inside the Protected Area, using either the security computer system or by visual inspection using the badge exchange system.

Either method provides for accountability of all individuals within 30 minutes of the start of an assembly and accountability and continuously thereafter for all individuals remaining within the protected area.

The accountability of tour groups is the responsibility of the guides who are escorting each group. Persons leaving the NOC, TAC, and Fermi 1 are accounted for by their work supervisors. Assembled groups report to the senior person at each assembly area.

### **J.3 Radiation Protection Equipment**

Adequate supplies of radiation protection equipment including protective clothing are maintained for persons remaining in or entering the Protected Area or the Emergency Response Facilities. This emergency equipment is listed, maintained, and inspected in accordance with Radiation Protection Procedure 67.000.405.

Onsite Medical maintains adequate amounts of potassium iodide (KI) to support the Onsite Emergency Response Organization for emergency situations at Fermi 2. The Emergency Director is responsible for authorizing the distribution and use of KI. Protective clothing and respiratory protection equipment are used as directed by the Emergency Director (or delegate).

#### J.4 Protective Actions

In a radiological emergency, an estimate must be made of the radiation dose that affected population groups may potentially receive. A protective action is taken to avoid or reduce the effects of this projected radiation dose. The Protective Action Guideline (PAG) is a predetermined level of projected dose to individuals in the population at which protective actions are warranted.

Procedures are in place to recommend plume exposure protective actions to State and local offsite emergency response agencies. Prompt notification of protective action recommendations is made to State and local agencies. The Nuclear Regulatory Commission is informed of these recommendations.

The implementation of protective actions taken offsite to protect the health and safety of the general public is the responsibility of the State of Michigan in conjunction with local emergency response agencies.

The Michigan Emergency Management Plan, Monroe County Emergency Management Plan, and Wayne County Emergency Operations Plan describe the provisions to implement measures for the plume exposure pathway EPZ for State and local emergency response personnel and the public. Provisions include the following:

- Maps showing evacuation routes, evacuation areas, congregate care centers, and shelter areas
- Maps showing the population distribution around the nuclear facility
- Methods for notifying all segments of the transient and resident population
- Means for protecting handicapped, institutionalized, or confined individuals whose mobility may be impaired
- Methods for registering and monitoring evacuees at reception centers
- Means of relocation, including reception centers, access control, and evacuation routes and methods
- Methods for protecting the public from consumption of contaminated foodstuffs

- J.4.1 Basis for Recommending Protective Actions** - The Manual of Protective Action Guides and Protective Actions for Nuclear Incidents (EPA 400-R-92-001) and NUREG-0654 are used as the basis for recommendations for protective actions for the offsite public. Table J-1 summarizes possible protective actions to be implemented by State and local agencies during an emergency. As a further aid in determining appropriate protective actions, Table J-2 contains representative shielding factors provided by typical structures against direct exposure from the plume.
- J.4.2 Evacuation Time Estimates** - When evacuation is being considered, the time required to implement the evacuation may be an important factor in reaching a protective action recommendation. Evacuation time estimates in the plume exposure EPZ are contained in a separate study "Evacuation Time Estimate Analyses for the Enrico Fermi Atomic Power Plant Unit No. 2 Plume Exposure Pathway Emergency Planning Zone," revised December, 2002. Advent Engineering Services, Inc., Ann Arbor, Michigan, performed this study for Detroit Edison. The evacuation time estimate study includes considerations for periods of peak traffic congestion, adverse weather conditions, and the evacuation of institutionalized population.
- J.4.3 Population Distribution** - The 10-mile and 50-mile EPZs are shown in Figures A-1 and A-2. The population distribution in the 10-mile EPZ is given in Table J-3. There are approximately 5.5 million people in the 50-mile EPZ.
- J.4.4 Offsite Monitoring** - The locations of the offsite environmental monitoring stations are listed in the Offsite Dose Calculation Manual.

TABLE J-1: EXPOSURE PATHWAYS, INCIDENT PHASES,  
AND PROTECTIVE ACTIONS (a)

POTENTIAL EXPOSURE PATHWAYS AND INCIDENT PHASES		PROTECTIVE ACTIONS
1. External radiation from facility	Early (b)	Sheltering Evacuation Control of access
2. External radiation from plume		Sheltering Evacuation Control of access
3. Inhalation of activity in plume		Sheltering Administration of stable iodine Evacuation Control of access
4. Contamination of skin and clothes	Intermediate (c)	Sheltering Evacuation Decontamination of persons
5. External radiation from ground deposition of activity		Evacuation Relocation Decontamination of land and property
6. Ingestion of contaminated food and water	Late (d)	Food and water controls (e)
7. Inhalation of resuspended activity		Relocation Decontamination of land and property

- (a) Reference: U.S. Environmental Protection Agency, "Manual of Protective Action Guides and Protective Actions for Nuclear Incidents," EPA 400-R-92-001.
- (b) Period at the beginning of a nuclear incident when immediate decisions for effective protective actions are required and must therefore usually be based primarily on the status of the facility and the prognosis for worsening conditions.
- (c) Period beginning after the source and releases have been brought under control and reliable environmental measurements are available for use as a basis for decisions on additional protective actions.
- (d) Period beginning when recovery actions designed to reduce radiation levels in the environment to acceptable levels for unrestricted use are commenced.
- (e) The use of stored animal feed and uncontaminated water to limit the uptake of radionuclides by domestic animals in the food chain can be applicable in any of the phases.



TABLE J-2: REPRESENTATIVE SHIELDING FACTORS FROM GAMMA CLOUD SOURCE (a)

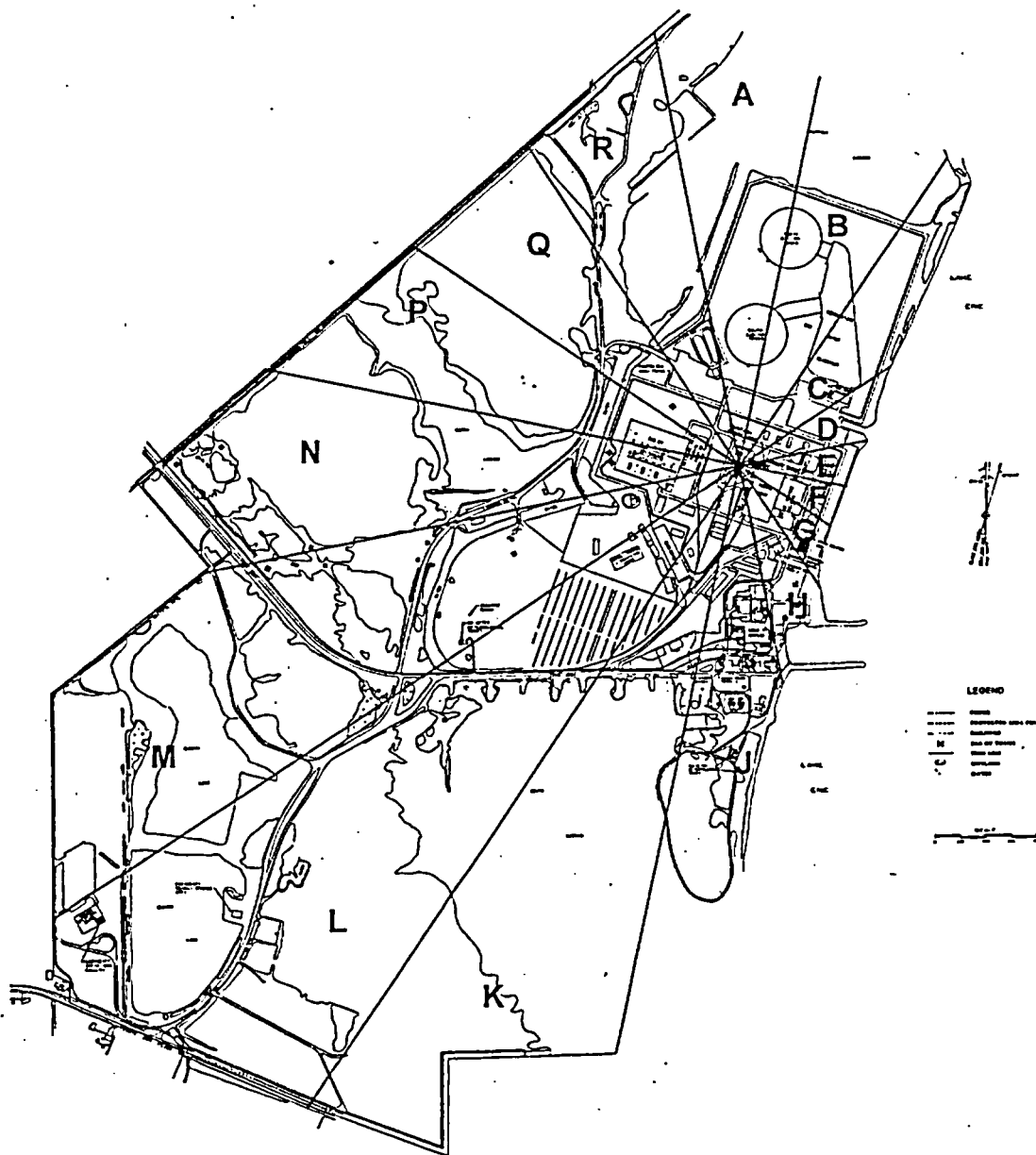
<i>Structure or Location</i>	<i>Representative Shielding Factor (b)</i>	<i>Representative Range</i>
Outside	1.0	---
Vehicles	1.0	---
Woodframe house (c) (no basement)	0.9	---
Basement of wood house	0.6	0.1 to 0.7 (d)
Masonry house (no basement)	0.6	0.4 to 0.7 (d)
Basement of masonry house	0.4	0.1 to 0.5 (d)
Large office or industrial building	0.2	0.1 to 0.3 (d, e)

- (a) Taken from SAND 77-1725 (Unlimited Release)
- (b) The ratio of the dose received inside the structure to the dose that would be received outside the structure.
- (c) A wood-frame house with brick or stone veneer is approximately equivalent to a masonry house for shielding purposes.
- (d) This range is mainly due to different wall materials and different geometries.
- (e) The shielding factor depends on where the personnel are located within the building (for example, the basement or an inside room).

**TABLE J-3: DISTRIBUTION OF 2000 POPULATION IN EMERGENCY  
PLANNING ZONE RINGS AND SECTORS, MONROE AND WAYNE COUNTIES, MICHIGAN**

Sector	Ring (One-Mile)										Total
	1	2	3	4	5	6	7	8	9	10	
A	0	118	242	179	195	201	873	3656	4367	4658	14489
B	0	214	62	21	54	249	779	1002	835	3761	6977
C	0	191	98	0	0	1	5	0	0	0	295
D	0	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0
F	0	0	0	0	0	0	0	0	0	0	0
G	0	0	0	0	0	0	0	0	0	0	0
H	0	0	8	0	0	0	0	0	0	0	8
J	3	782	103	0	0	0	0	0	0	0	888
K	4	621	0	0	0	0	0	0	0	0	625
L	3	245	44	144	876	144	17	560	406	2703	5142
M	3	76	807	2035	1355	1036	3353	10182	11075	7370	37292
N	5	73	105	219	358	776	1080	1131	781	685	5213
P	2	45	103	107	240	3334	601	499	490	590	6011
Q	1	165	467	340	707	265	1093	337	809	2862	7046
R	1	110	393	137	137	150	187	495	745	2556	4911
Total	22	2640	2432	3182	3922	6156	7988	17862	19508	25185	88897

\* Includes 583 persons who live outside the ten mile EPZ boundary but are included for protective action decision implementation.



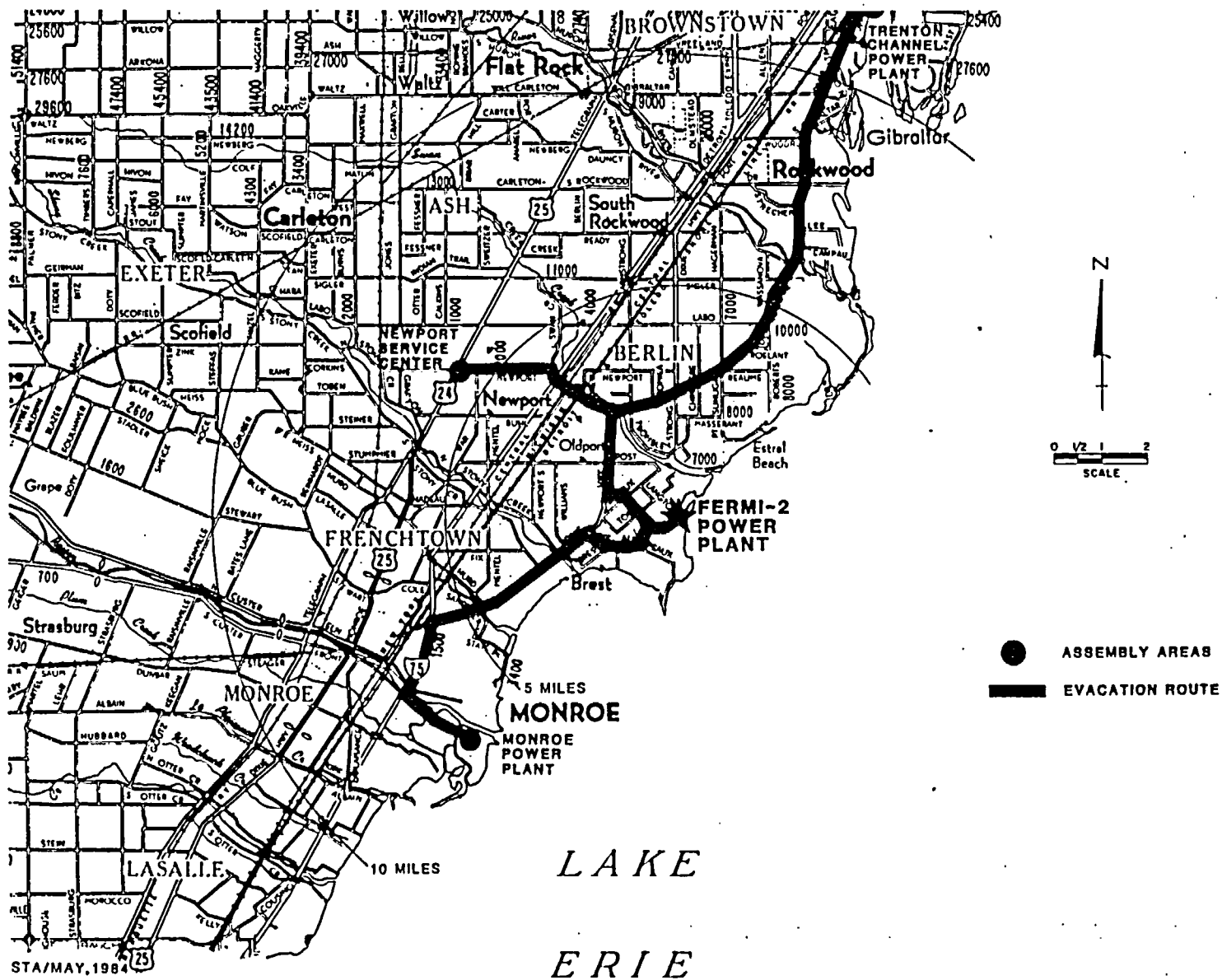


Figure J-2  
EVACUATION ROUTES AND ASSEMBLY AREAS

## **K. RADIOLOGICAL EXPOSURE CONTROL**

This Plan Section describes the means for controlling radiation exposure for emergency workers at Fermi 2.

### **K.1 Exposure Guidelines**

In an emergency situation, all reasonable measures will be taken to maintain the radiation exposure of emergency personnel providing rescue, first aid, decontamination, ambulance, medical treatment services, or performing corrective or assessment actions within applicable limits specified in 10 CFR.20.

The Emergency Director will evaluate any emergency response exposures in excess of 10 CFR 20 limits. The Emergency Director is responsible for authorizing emergency personnel to exceed the 10 CFR 20 dose limits, if deemed necessary. The Emergency Director will consult with Radiation Protection personnel to the greatest extent possible before granting this authorization.

Table K-1 contains the basis for emergency exposure criteria. The guidelines for these exposures are consistent with EPA Guidance on Dose Limits for Workers Performing Emergency Services (EPA 400-R-92-001).

#### **K.1.1 Control of Personnel Radiation Exposure - Every reasonable effort will be made to ensure that during an emergency no worker exceeds the exposure limits stated in Table K-1.**

Emergency response personnel who must enter radiation areas where they might be expected to receive higher than normal doses will be fully briefed regarding their duties and expected actions, expected dose rates, stay time and other hazards. All such individuals will be adequately trained in appropriate Radiation Protection procedures. Personnel will use respiratory protective devices (if required) in accordance with MRP09.

When authorized by the Emergency Director, administration of radioprotective drugs such as potassium iodide (KI) may mitigate the consequences of the inhalation of radioiodines. Section J discusses the KI authorization requirements to Detroit Edison and contract personnel.

## K.2 Dosimetry

In an emergency, dosimetry service for all emergency personnel will be provided on a 24-hour basis. As a minimum, personnel are issued secondary dosimetry (that is, either a direct reading dosimeter (DRD) or an electronic dosimeter) and a thermoluminescent dosimeter (TLD). These personnel monitoring devices are issued at the Radiation Protection (RP) access control point, or an alternate designated area. Dosimetry records that document radiological exposures are evaluated and maintained in accordance with RP procedures.

In-plant emergency response personnel will normally use electronic dosimeters (along with their TLDs) which have alarming and LED readout capabilities. Alarm set points for dose and dose rates are preset by RP personnel that can be changed based on radiological conditions. If electronic dosimeters become inoperable or unavailable, RP will issue DRDs commensurate with known or anticipated dose rates and approximate time needed to complete tasks.

Offsite emergency responders who enter the Protected Area (ambulance/rescue personnel, medical, fire department, police, etc) along with Offsite RETs will be issued DRDs and TLDs from emergency kits.

If DRDs are used, they are typically zeroed prior to use and frequently read by the individual. Personnel exposures, as determined from DRDs, are totaled and evaluated in accordance with RP procedures.

In instances where the extremity dose may pose a greater hazard than the whole-body exposure, personnel are issued extremity dosimeters, such as TLD ring badges.

A permanent record of radiation exposure is provided by the TLD. TLDs are read promptly by qualified Radiation Protection (RP) personnel using equipment located in the Radiological Health/Dosimetry Office. Further, personnel may be required to receive a whole body count at the direction of RP personnel to assess any internal dose.

### **K.3 Decontamination Criteria**

Personnel contamination is minimized to the greatest extent feasible by following established Radiation Protection practices and procedures. These include the proper use and removal of protective equipment and clothing, followed by personnel contamination surveys. Any transferable contamination that is above background requires decontamination. Facilities for onsite personnel decontamination are available in the Radwaste Building and include provisions such as decontamination supplies, spare clothing, and contamination survey instrumentation.

### **K.4 Contamination Control**

Contaminated areas will be designated and clearly identified to minimize personnel contamination or the spread of contamination in the plant. Access to these areas is controlled and personnel will take the required precautionary measures and use the appropriate protective clothing and equipment. Prior to being released for general use, contaminated areas are decontaminated in accordance with Radwaste Decontamination Procedures. Personnel leaving contaminated areas are monitored to ensure that they or their clothing are not contaminated. The Radiation Protection access control point and the primary and alternate access portals are provided with portal monitors and personnel friskers to prevent the spread of loose surface contamination outside the protected area.

In the event that personnel become contaminated, they are decontaminated in accordance with established procedures. If normal decontamination procedures do not reduce contamination to acceptable levels, the case will be referred to an Onsite Medical representative. Extra clothing is available for the replacement of contaminated personal clothing at the decontamination facilities.

Because of the possibility of the presence of radioiodine during emergency situations, particular attention is focused on searching for skin contamination when monitoring personnel during evacuation. Personnel found to be contaminated are directed to the onsite or offsite decontamination facility as appropriate.

Depending on the nature of an injury and the amount and location of contamination, contaminated injured personnel are either treated at Fermi 2 or transported to Mercy-Memorial Hospital or Oakwood Southshore Medical Center for treatment. The treatment of contaminated injured personnel is described in Section L.

All equipment and tools are checked for contamination before being removed from a known contaminated area. If tools or equipment are contaminated, they will be decontaminated in accordance with Radwaste Decontamination Procedures.

Contaminated waste resulting from personnel decontamination and contaminated material that cannot be decontaminated or utilized as controlled contaminated equipment are handled in accordance with Radwaste Decontamination Procedures.

Drinking water and food supplies are not allowed into contaminated or potentially contaminated areas. If a potential for contamination or contamination is discovered in an area already containing drinking water or food, the food and water are surveyed to ensure that they are not contaminated. If contamination is discovered, appropriate actions will be taken based on the level and location of the contamination.

In general, contaminated areas and materials are permitted to be returned to normal use when there is no detectable radiation above the normal background levels. However, some areas and equipment may have to be returned to use above these limits. In such cases, special precautions and measures are taken to prevent personnel contamination and to limit the spread of contamination. These precautions may include using protective clothing or covering the contaminated items or area.



**TABLE K-1: EMERGENCY EXPOSURE CRITERIA (a)**

<i>Dose limit (rem) (b)</i>	<i>Activity</i>	<i>Condition</i>
5	all	
10 (c)	protecting valuable property	lower dose not practicable
25 (c)	life saving or protection of large populations	lower dose not practicable
>25 (c)	lifesaving or protection of large populations	only on a voluntary basis to persons fully aware of the risks involved

(a) Reference: U.S. Environmental Protection Agency, "Manual of Protective Action Guides and Protective Actions for Nuclear Incidents," EPA 400-R-92-001.

(b) Limit for Total Effective Dose Equivalent to non-pregnant adults during the duration of the emergency. Dose to the lens of the eye should be limited to 3 times the stated values. Dose to all other organs, including thyroid, skin, and body extremities, should be limited to 10 times the stated values.

(c) Only the Emergency Director can authorize exposure in excess of 10CFR20 limits.

#### **Additional Criteria**

1. All emergency exposure will be maintained ALARA.
2. Exposure limits are for total exposure received over the duration of an emergency.
3. Emergency exposures will be justified if the maximum risks permitted to workers are acceptably low, and the risks or costs to others that are avoided by their actions outweigh the risks to which the workers are subjected.
4. Declared pregnant workers should be excluded from exposure in excess of 10CFR20 limits.

## **L. MEDICAL SUPPORT**

This Plan Section describes the arrangements made for medical services for contaminated injured personnel.

### **L.1 Offsite Support**

- L.1.1 Hospitals** - Arrangements have been made for medical treatment of Fermi 2 personnel who may have injuries complicated by the presence of radioactive contamination and/or overexposure to radiation. The primary treatment facility is Mercy Memorial Hospital in Monroe, Michigan. A back-up medical facility is established at Oakwood Southshore Medical Center in Trenton, Michigan, located approximately 12 miles from the plant.

Mercy Memorial Hospital and Oakwood Southshore Medical Center are adequately supplied and equipped to receive and treat contaminated patients. Detroit Edison maintains emergency cabinets containing contamination control supplies and dosimeters at both hospitals.

- L.1.2 Services** - In addition, Detroit Edison will coordinate medical emergency activities and ensure the following are provided:

- An emergency medical plan in place for the treatment of radiation-related injuries
- A radiation emergency medical team qualified to implement the emergency medical plan
- Written procedures regarding radiological medical emergencies detailing actions to be taken onsite
- Written procedures regarding radiological medical emergencies detailing actions to be taken onsite for offsite transportation of injured/contaminated individuals and hospital notifications
- Immediate telephone consultation for the hospital staff and/or Fermi 2 personnel with respect to evaluation and treatment of individuals involved in a radiological medical emergency
- Recommendations regarding facilities, equipment, and supplies required for effective implementation of the emergency medical plan
- Annual training of plant, ambulance, and hospital personnel who have responsibilities regarding radiological medical emergencies
- An annual emergency medical drill providing immediate evaluation and critique of the results
- Backup radio-bioassay laboratory services for the evaluation of body burdens and exposure consequence
- Arrangements, as required, for the medical evaluation and/or treatment of radiological casualties at a definitive care center for specialized treatment

**L.2 Onsite First Aid Capability**

A nurse is usually onsite during normal working hours five days a week. In addition, at least two persons qualified in first aid methods equivalent to Red Cross multi-media training will be onsite at all times. First aid to injured personnel can normally be performed in conjunction with any needed decontamination. However, if immediate treatment of the injury is vital, medical treatment takes precedence over decontamination efforts. This philosophy also extends to offsite emergency care involving radioactive contamination.

**L.3 Transportation Arrangements**

Contractual arrangements have been made with an authorized emergency transport carrier (ambulance service) for the transportation of patients from Fermi 2 who may have injuries complicated by the presence of radioactive contamination or who may have exceeded personnel exposure limits.

**M. REENTRY AND RECOVERY PLANNING AND POST-ACCIDENT OPERATIONS PLANNING**

During an emergency, immediate action is directed toward limiting the consequences of the incident in a manner that gives maximum protection to the plant personnel and the general public. Once the situation is under control, the emergency actions shift into the recovery phase. Recovery actions shall be planned and deliberate.

**M.1 Reentry and Recovery**

The actual magnitude of an emergency event will dictate the extent of personnel involvement in the recovery operations.

- a. For events of a minor nature, the normal on-shift organization should be adequate to perform recovery actions (Unusual Event classifications).
- b. For events involving significant damage to plant systems required to maintain operation of the plant, the onsite emergency organization should be adequate to coordinate the necessary recovery actions (Alert classifications).
- c. For events involving damage to plant systems required to maintain safe shutdown of the reactor, the complete recovery organization should be adequate to manage the necessary recovery actions (Site Area or General Emergency classifications).

The Emergency Director has the responsibility for implementing this procedure if the emergency classification is at the Unusual Event or Alert level.

The Emergency Officer has the responsibility for authorizing recovery operations for events classified as a Site Area or General Emergency.

The Manager, Nuclear Outage Management has the overall responsibility as Recovery Manager to coordinate and manage all recovery operations.

Once the Emergency Officer has determined that the Site Area or General Emergency event has terminated or is stable, the Manager, Nuclear Outage Management (or alternate) becomes the Recovery Manager and activates the Recovery Organization. The Recovery Manager will order a meeting of the Recovery Organization. All recovery actions are developed via evaluation of plant conditions and data acquired throughout the emergency. All planned actions and recommendations to reduce protective action measures will be thoroughly reviewed to minimize radiation exposure or other hazards to recovery personnel and the public. The Recovery Organization will develop, coordinate, and expedite plans and schedules for recovery operations. The Nuclear Safety Review Group (NSRG) will oversee the activities of this team to ensure that all nuclear safety aspects of the recovery operations are satisfied.

The following are typical criteria for declaring an emergency event terminated:

- Radiation levels in all inplant areas are stable and are decreasing with time.
- The reactor is in a shutdown condition with adequate core cooling available.
- The release of radioactive materials to the environment is within ODCM limits and the potential for additional uncontrolled releases is minimal.
- Fire, flooding, or similar emergency conditions which do not effect reactor operation are under control or have ceased.

The recovery plans, from a practical standpoint, must be flexible enough to meet the needs of the existing event. It is not possible to anticipate in advance all the conditions that may be encountered in an emergency situation. The recovery plans will be developed by Detroit Edison and coordinated with federal and local governmental officials.

The following actions will be taken, as required, prior to authorizing reentry into the plant:

- Review available radiation surveillance data and determine plant areas potentially affected by radiation and/or contamination.
- Review radiation exposures of personnel required to participate in the recovery operations and determine the need for additional personnel as well as the source of these additional personnel.
- Review the adequacy of radiation survey instrumentation and equipment (for example, types, ranges, number, calibration, etc.)
- Plan survey team activities to include:
  - Areas to be surveyed
  - Radiation and contamination levels anticipated
  - Radiation survey equipment required
  - Shielding requirements and availability
  - Protective clothing and equipment required
  - Access control procedures
  - Issuance of new Radiation Work Permit
  - Exposure control limits and personnel dosimetry required
  - Decontamination requirements
  - Communication equipment required

The initial reentry into the plant areas should encompass the following activities with task priority determined by the Recovery Manager:

- Determine the initial required recovery operations.
- Observe any hazards or potential hazards associated with recovery operations.
- Make a comprehensive radiation surveillance of plant facilities and designate all radiological problem areas.
- Isolate hazardous areas of the plant by using appropriate warning signs and rope barriers.
- Revise security access lists to prevent unauthorized or inadvertent entry into hazardous areas.

The recovery operation, as defined herein, involves assessing equipment damage and repairs; installing shielding, rope barriers, signs and tags; and decontaminating and cleaning as necessary to place the plant in acceptable, long-term stable condition. Recovery operations will not be initiated until the area(s) affected by the emergency has been defined. Particular attention will be directed toward isolating components and systems as required to control or minimize the hazards. A systematic investigation will be conducted to determine what equipment has been damaged and the extent of the damage.

Recovery operations can be terminated when the plant has been returned to pre-accident levels of radiation and contamination and a condition which is acceptable and controllable for an extended period of time or to normal operating condition.

## **M.2 Recovery Organization**

The Recovery Organization is shown in Figure M-1. The organization is based on the organization and functions recommended by the Atomic Industrial Forum Nuclear Power Plant Emergency Response Plan. Recovery Organization functions are briefly described below:

### **Recovery Manager (Manager – Nuclear Outage Management or Alternate)**

- Determines and declares when a stable condition exists and when the plant is ready to begin reentry and recovery.
- Authorizes funds and the utilization of manpower and equipment necessary to accomplish the recovery operation.
- Notifies offsite authorities, in a timely manner, that a recovery operation will be initiated and indicates any expected or potential offsite impact.
- Authorizes offsite notification whenever recovery operations have potential offsite effects.

**Nuclear Production Coordinator (Director, Nuclear Production or Alternate)**

- Authorizes the start of plant reentry activities.
- Prepares an analysis of the circumstances leading up to and resulting from the emergency, together with recommendations to prevent a recurrence.
- Ensures that As Low As Reasonably Achievable (ALARA) concerns are addressed in Recovery-related operations activities.
- Maintains the plant during the recovery operation.
- Develops implementing and operating procedures to support recovery efforts.
- Assures that plant personnel are trained in recovery-related operating and maintenance procedures.
- Develops post-accident plans and procedures for obtaining solid, liquid, and gaseous samples as required.
- Implements recovery plans and schedules.
- Implements offsite and onsite radiation monitoring programs.
- Authorizes the return to normal operations when approved by the NRC.

**Offsite Activities Coordinator (Regional Manager, Regional Relations or Alternate)**

- Provides recovery information to offsite officials.
- Coordinates offsite activities with onsite activities.

**Nuclear Safety Review Group Coordinator (Manager, Nuclear Licensing or Alternate)**

- Ensures that all nuclear safety aspects of the reentry and recovery operation are satisfied by calling upon the NSRG to review the various recovery organization activities.
- Analyzes and develops input pertinent to plant licensing issues.
- Provides expertise to support offsite radiation monitoring programs and activities.

**Technical and Engineering Support Coordinator (Director, Nuclear Engineering or Alternate)**

- Develops post-accident engineering procedures necessary to maintain a safe reactor shutdown.
- Coordinates activities with Plant Operations group.
- Assures that ALARA concerns are addressed in Recovery-related engineering activities.
- Coordinates A/E or consultant activities if required.
- Advises on plant and engineering technical matters.
- Coordinates the design activities that support recovery activities.
- Analyzes and develops solutions for instrumentation difficulties and the functions controlled by those instruments.

**Quality Assurance Coordinator (Manager, Nuclear Quality Assurance or Alternate)**

- Ensures that quality assurance requirements are met in all aspects of the recovery operations.

**Administration and Planning Support Coordinator (Manager, Nuclear Strategic Planning or Alternate )**

- Provides administrative and clerical support for the recovery operation.
- Establishes schedules and priorities that ensure an orderly and progressive work flow.
- Tracks and expedites vendor contracts, corporate and governmental commitments.

**Public Information Coordinator (Supervisor, Nuclear Information or Alternate)**

- Disseminates information about the recovery operation to the media.

**Outage Management Coordinator (Outage Coordinator or Alternate)**

- Coordinates outage activities with engineering, production, and construction activities.
- Provides input in determining outage activity priorities.



**Nuclear Security Coordinator (Manager, Nuclear Security or Alternate)**

- Coordinates security activities such as personnel accountability and site access control.

**Secretary**

- Documents Recovery meetings including list of meeting(s), participants, action items, status reports, etc.
- Coordinates all information for dissemination to the appropriate recipients.

**M.3 Recovery Operations Notification**

It is the responsibility of the Recovery Manager to notify corporate and offsite authorities, in a timely manner, that a recovery operation is initiated. Additional notifications will be made whenever the operation may have potential offsite effects.

**M.4 Population Exposure Evaluation**

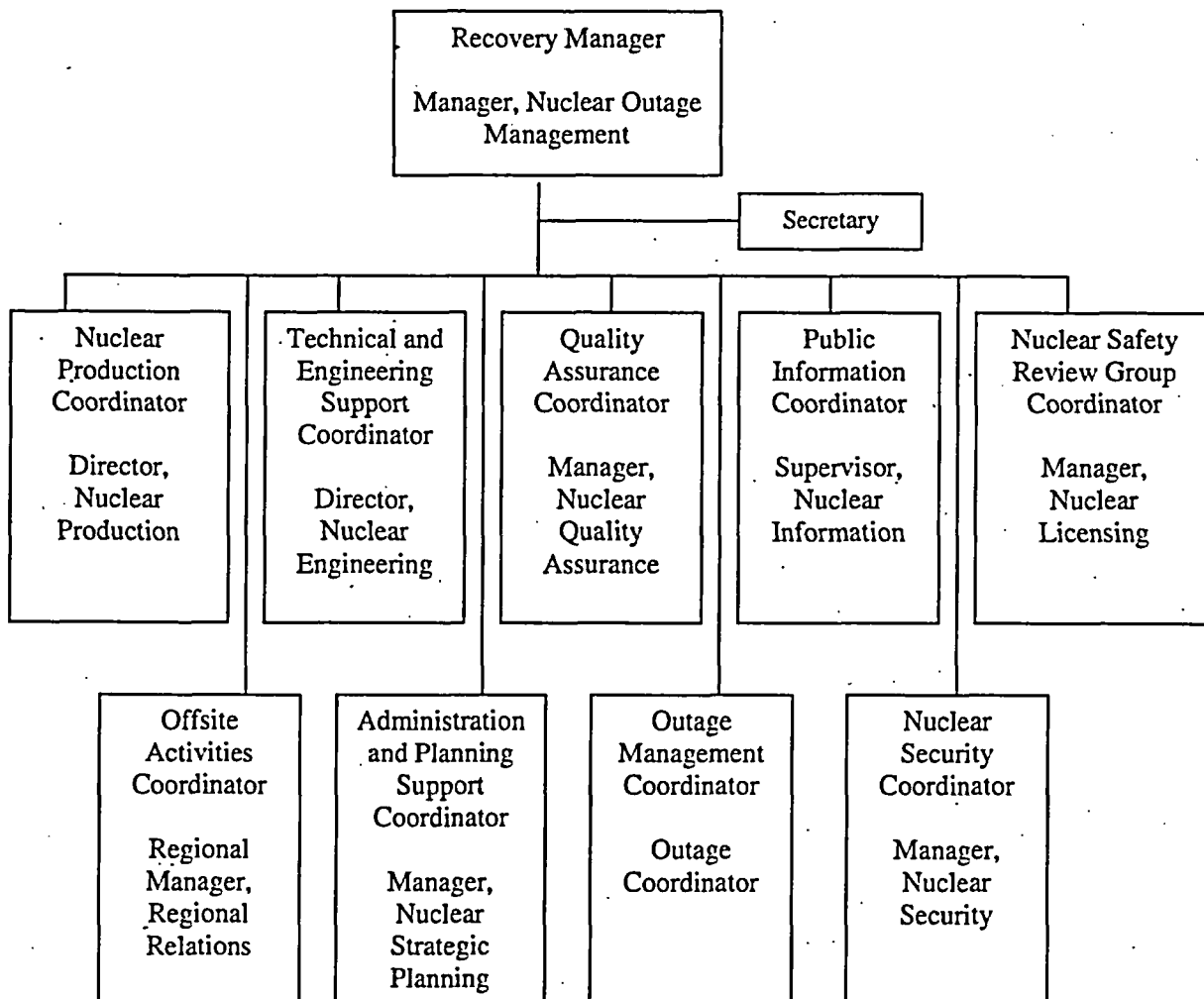
Dose Assessment personnel in the EOF will continue to cooperate with state and federal agencies and periodically update total population exposure estimates. In the event a release of radioactive material is planned, the anticipated offsite dose will be calculated, including an estimate of the total population dose.

**M.5 Recovery Organization Composition**

It is not intended that the Recovery Organization be limited to only those persons/functions identified in Figure M-1. As specific emergency circumstances dictate, additional expertise will be called upon to participate in the Recovery Organization.

Figure M-1

RECOVERY ORGANIZATION



## **N. EXERCISES AND DRILLS**

This Plan Section describes the program of exercises and drills conducted to develop and maintain emergency response preparedness skills and to evaluate emergency response preparedness capabilities.

### **N.1 Exercise Requirements**

An exercise is an event that tests the integrated capability of a major portion of the basic elements existing within emergency response preparedness plans and organizations. Exercises mobilize personnel and resources enough to adequately verify the capability to respond to an accident scenario.

The utility is required to exercise the emergency plan biennially according to 10 CFR 50, Appendix E, Section F. State and local agencies will participate at the frequency specified by 44 CFR 350, unless they choose to participate more often. Exercises are critiqued biennially by licensee evaluators and may be critiqued by Federal and/or State observers.

### **N.2 Drill Requirements**

A drill is a supervised event aimed at evaluating, developing, and maintaining skills in a particular operation. Drills are supervised and evaluated by evaluators/controllers who are knowledgeable in their area of observation and/or have attended a pre-drill briefing. As a minimum, the following drills will be conducted.

#### **N.2.1 Communications**

- Communication equipment between the Fermi 2 Emergency Response Facilities (Control Room, Technical Support Center and Emergency Operations Facility), Michigan State Police, the Monroe County Central Dispatch and Wayne County Central Communications, are tested monthly.
- Communication equipment to the NRC's Emergency Response Organizations is tested monthly.
- Communications between the Fermi 2 Emergency Response Facilities and the appropriate offsite response organizations are tested during annual drills.
- Communications between the EÖF and the Offsite Radiological Emergency Teams (RETs) are tested annually. Annual drills shall also test the ability to understand the content of messages.
- Emergency Telephone Directories are verified and updated if necessary, quarterly.

- N.2.2 Fire** - Fire drills are conducted quarterly. A fire drill involving the Frenchtown Fire Department is conducted annually.
- N.2.3 Medical Emergency** - Medical emergency drills, which involve a simulated contaminated individual and participation by local support agencies (for example, contracted ambulance service, Oakwood Southshore Medical Center or Mercy Memorial Hospital), are conducted annually.
- N.2.4 Radiological Monitoring** - RET drills are conducted annually. These drills will include the collection and analysis of air samples and shall include sample media such as water, grass, and soil from the Owner-Controlled Area or nearby offsite areas. In addition, these drills provide the opportunity for the assessment of communication and record keeping capabilities.
- N.2.5 Radiation Protection** - Radiation Protection drills involving the sampling and analysis of simulated elevated radioactive airborne or liquid samples as well as direct radiation measurements in the plant environment are conducted semiannually. These drills may be conducted in conjunction with the biennial exercise.
- N.2.6 Additional Drills** - Additional drills will be scheduled as necessary to provide adequate training of personnel, provide emphasis on weak areas, and ensure an adequate level of emergency preparedness. In years in which an exercise is not conducted, at least one drill involving a combination of some of the principal functional areas of onsite emergency response shall be conducted.

### **N.3 Drill and Exercise Scenarios**

Drill and exercise scenarios will contain, as a minimum, the following:

- Basic objective(s) of the drill or exercise and appropriate evaluation criteria
- Date, time period, place(s) of the drill or exercise, and participating organizations
- Simulated events
- Time schedule of real and simulated initiating events
- Narrative summary that describes the conduct of the exercise or drill and includes such items as simulated casualties, offsite fire department assistance, rescue of personnel, use of protective clothing, deployment of emergency teams and public information activities
- Detailed data sheets (as required)
- Assignments for qualified controllers/evaluators and provisions for observers from Federal, State, and local organizations as appropriate

#### **N.4 Conducting Drills and Exercises**

Official Federal, State, or local observers are provided advance exercise scenario materials as appropriate:

- The NRC will be provided with advance materials in accordance with FEMA and NRC guidance documents.
- State and local observers will be provided advance materials on an as-needed basis.

All drills and exercises (except communications drills) are preceded by a conference at which personnel conducting or monitoring the drill or exercise obtain instructions and guidance. As soon as practicable following the drill or exercise, a critique is held. A formal evaluation based on the results of the critique is prepared. The Supervisor, RERP is responsible for management review of observer and participant comments and the implementation of appropriate corrective actions.

## **O. RADIOLOGICAL EMERGENCY RESPONSE PREPAREDNESS TRAINING**

Radiological emergency response training is provided to all individuals in the emergency response organization. The integrated training program includes General Employee Training for all persons at Fermi 2 and detailed training for individuals and groups with responsibilities during an emergency. The training program provides initial training and periodic retraining. Drills and exercises constitute a portion of the integrated training program and are discussed separately in Section N.

### **O.1 Qualification Requirements for Onsite Emergency Response Personnel**

All emergency response personnel are initially trained and some receive periodic retraining. Furthermore, each emergency response organization team must participate in a drill or exercise at least annually. The initial and requalification training requirements for emergency response organization positions are specified in Selection, Training, and Qualification Program Description QP-ER-665, RERP Emergency Response Organization. Completion of training activities is recorded in the applicable computer data system(s). The RERP Training Program is conducted in accordance with RERP Implementing Procedures.

During drills, on the spot correction of unsatisfactory performance will be made and demonstration of the proper performance will be offered by the instructor/controller.

Personnel assigned to emergency teams that provide first aid will complete a training course equivalent to Red Cross Multi-Media on a schedule compatible with the Red Cross requirements.

### **O.2 Training Requirements for Offsite Organizations**

Detroit Edison provides specialized training for the contracted ambulance service, the Frenchtown Fire Department and Mercy Memorial Hospital and Oakwood Southshore Medical Center. This training may include topics from the following areas:

- RERP Plan orientation
- Communications and emergency notifications
- Transporting and treating contaminated patients
- Radiation fundamentals
- Protection against radiological hazards
- Emergency equipment
- Site access procedures
- Identification of individuals onsite in control of offsite support activities

In addition to the specific offsite training stated above, Detroit Edison, the Emergency Management Division of the Michigan State Police, and the local counties have developed a four part training program that is presented annually to the local offsite emergency response organizations. The program consists of the four parts listed below:

- Part 1: Plant Operations and Emergency Planning
- Part 2: The Basics of Radiation
- Part 3: Radiological Emergency Response Plans, Organization, and Procedures for the State of Michigan
- Part 4: Emergency Worker Orientation to the County Radiological Emergency Response Plan

Additional specific training programs are available to local organizations through the Emergency Management Division, Michigan Department of State Police.

Detroit Edison also conducts an annual seminar for offsite State and local government personnel who will be involved with the onsite/offsite emergency response facilities, emergency action levels, emergency classification, meteorology, dose assessment, field surveys, and protective action recommendations. This seminar provides a basis for understanding the application, process, and interfaces among Fermi 2 and offsite response organizations. The presentation is made available to the following:

- Michigan State Police Emergency Management Division
- Michigan Department of Environmental Quality
- Province of Ontario, Canada
- Ministry of Solicitor General
- Ministry of Labor
- Monroe County
- Wayne County

**P. RESPONSIBILITY FOR THE PLANNING EFFORT: DEVELOPMENT, PERIODIC REVIEW, AND DISTRIBUTION OF RERP PLANS**

This Plan Section identifies key personnel who are responsible for developing, reviewing, and updating the RERP Plan, discusses the RERP format, and describes the review process.

**P.1 Responsibilities**

The Manager, Licensing has overall authority and responsibility for RERP planning for Detroit Edison. The Supervisor, RERP is responsible for developing and updating the RERP Plan and its implementing and administrative procedures. The Supervisor, RERP coordinates the development and revision of the plan and procedures with other response organizations. The Supervisor, RERP will identify the supporting procedures required by other groups.

The Supervisor, RERP in conjunction with Nuclear Training, is responsible for ensuring that all Emergency Response Organization personnel complete training in emergency preparedness.

The Supervisor, RERP is responsible for the training of individuals responsible for the planning effort.

**P.2 Format of the RERP Plan**

The RERP Plan is written in the following format:

- Each Plan section corresponds to a similarly titled section in NUREG-0654/FEMA-REP-1, Revision 1, November 1980, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants (see Appendix 5).
- A specific table of contents is provided.
- A list of implementing and administrative procedures is found in Appendix 3. A list of supporting procedures and documents is found in Appendix 4.



### **P.3 Review and Revision of the RERP Plan**

The Supervisor, RERP is responsible for ensuring that an annual review of the Plan is conducted. The Letters of Agreement (Appendix 1) between the Fermi 2 Emergency Response Organization and offsite agencies will also be reviewed and updated as required at that time. Changes are recommended based on the following considerations:

- Written critiques and evaluations of drills and exercises, especially recommended corrective actions
- Changes in company or plant organization
- Changes in function or organization of support agencies, including necessary revisions to letters of agreement
- Changes in state or federal regulations or regulatory guidance
- Changes in state or local emergency plans
- Modifications to the plant or site that could affect emergency planning, including modifications to plant systems, emergency equipment, or emergency facilities, etc
- Changes to Technical Specifications
- Recommendations from other organizations, such as state and federal agencies and other utilities
- Significant changes in the areas surrounding the site, such as changes in population density or land usage
- Changes in capabilities of supporting organizations, including local hospitals, ambulance services, fire departments, etc.
- Changes in other plant operating or administrative procedures

Revisions to the RERP Plan are reviewed by affected organizations and approved by the Onsite Review Organization (OSRO). Revised pages indicate where revisions were made and controlled copies are distributed. Documents concerned with review of the RERP Program are retained for at least 5 years.

The Plan shall contain an appendix listing, by number and title those procedures required to implement the Plan. This listing shall cross-reference the RERP Plan Section implemented by each implementing or administrative RERP procedure. The Plan also contains a cross-reference to each section of NUREG-0654 required to be implemented in the Fermi 2 RERP Program in Appendix 5.

**P.4 Review and Revision of RERP Program**

- P.4.1 Independent Review** - An independent audit of the RERP Program is to be conducted in accordance with 10 CFR 50.54 (t). The review will address all aspects of the RERP Program, including the Plan, implementing and administrative procedures, training, readiness, testing, equipment, and interfaces with the state and local government agencies. This independent review may be conducted in conjunction with a scheduled exercise. Recommended correction actions and any proposed revisions to the RERP Plan are documented and reviewed. The Supervisor, RERP, is responsible for recommending revisions to be made to the RERP Plan or other corrective actions as appropriate.

**END OF RERP PLAN TEXT**

**APPENDIX 1:**  
**LETTERS OF AGREEMENT**

## LETTERS OF AGREEMENT

Letters of agreement have been obtained from both government agencies and private industry that have agreed to support the Fermi 2 Emergency Response Organization during an emergency. The Letters of Agreement listed below are included in this Appendix:

Hart Medical, Incorporated	App. 1-3	
Frenchtown Fire Department	App 1-5	
General Electric Company - BWR Emergency Support Program (not a Letter of Agreement)	App. 1-8	
Institute of Nuclear Power Operations (Nuclear Power Plant Emergency Response Voluntary Assistance Agreement)	App. 1-11	
Mercy Memorial Hospital Corporation	App. 1-19	
Monroe County Community College	App. 1-23	
Mutual Assistance Agreement between: Detroit Edison Company Nuclear Management Company Indiana Michigan Power Company	App. 1-29	
Oakwood Southshore Medical Center	App. 1-36	
U.S. Department of Energy (Chicago Operations Office)	App. 1-40	

## RADIOLOGICAL EMERGENCY RESPONSE PLAN

### LETTER OF AGREEMENT

The following document is a description of the arrangements made between Hart Medical, Incorporated, hereinafter called "Hart", and Detroit Edison's Fermi 2 Nuclear Power Plant, hereinafter called "Detroit Edison", of the offsite services provided in support of Detroit Edison's Emergency Plan, in accordance with Code of Federal Regulations 10CFR50.47(b)(12) and 10CFR50 Appendix E, IV.A.6.

### DETROIT EDISON'S PORTION OF THE AGREEMENT

To ensure the availability and quality of the medical services to be provided to Detroit Edison, the following items are the actions and services that Detroit Edison will provide to Hart to the best of their abilities:

- 1.1 In the event of injury to any person(s) on property owned or utilized by Detroit Edison, Hart will be notified by an authorized Detroit Edison representative that ambulance service is required.
- 1.2 Notification to Hart will be made via telephone communication or radio communication routed through the Monroe County Sheriff's department.
- 1.3 At the time of the request for ambulance assistance, Hart will be provided with the location of the injured person(s), a description of the nature of the injury, the extent of radioactive contamination and a status report of the injured person(s) condition as can best be determined.
- 1.4 In the event of a non-radiological related injury, Hart personnel will be responsible for transporting the injured person(s) to an emergency medical facility. A Radiation Protection Technician will not accompany the injured person(s) in the ambulance.
- 1.5 If the injury has radiological implications, the injured party will be decontaminated at the Fermi 2 site prior to being transported to the medical facility by Hart personnel. However, if immediate medical treatment of an injury is required, that treatment will take precedence over decontamination. The radiologically contaminated injured person(s) will be transported to either Mercy Memorial Hospital (primary) or Oakwood Southshore Medical Center (backup). These facilities have been equipped to handle a radiologically contaminated injury. Under these circumstances, a Radiation Protection Technician will accompany the injured person(s) with the ambulance.
- 1.6 If an injured person(s) is in an area which has been determined to be unsafe due to the presence of high radiation levels, it will be the responsibility of Detroit Edison to transport the injured person(s) to an area which is determined safe, at which point Hart will continue transport of the injured party as outlined in paragraph 1.5 preceding.
- 1.7 Detroit Edison will take precautions to prevent contaminating any of Hart's personnel, ambulances, and/or equipment. Detroit Edison will be responsible for the radiological monitoring and decontamination of personnel, ambulances, and/or equipment owned by Hart. If decontamination cannot be accomplished, Detroit Edison shall be responsible for the costs of any and all replacement equipment. This includes clothing, bedding, and other sundry items.

- 1.8 Detroit Edison will provide Hart response personnel with proper radiological monitoring equipment upon arrival on site, if required.
- 1.9 Detroit Edison will make available annual training for Hart personnel in the handling of radiologically related injuries. Arrangements for this training will be coordinated between Detroit Edison and Hart personnel to ensure maximum benefit is accomplished.
- 1.10 Detroit Edison will conduct periodic emergency medical drills that will involve Hart ambulances and personnel. This will allow Detroit Edison and Hart personnel to practice their knowledge and skills in the handling of contaminated injured personnel. Arrangements for Hart's participation in these drills will be coordinated between Detroit Edison and Hart personnel to ensure maximum benefit is accomplished. After these drills Detroit Edison will provide Hart with a copy of the written evaluation.

#### **HART'S PORTION OF THE AGREEMENT**

Hart provides ambulance transport services to injured persons in the County of Monroe, Michigan, and surrounding localities to local medical facilities. To ensure the availability of adequately trained and experienced emergency personnel in the event of a medical emergency at Fermi 2 the following items are the actions and services that Hart will provide to Detroit Edison to the best of their abilities:

- 2.1 Emergency ambulance service will be provided to Detroit Edison on a 24-hour per day, seven days a week basis. If, due to unforeseen circumstances, Hart will not be able to provide ambulance services, they will communicate this to Detroit Edison immediately so secondary means of transporting the injured person(s) to medical facilities can be accomplished in an expeditious manner.
- 2.2 Hart will staff each ambulance in accordance with State of Michigan law.
- 2.3 Hart will be responsible for communicating all necessary medical information to the individual medical facility through Hart's radio equipment once the Hart ambulance team has arrived on the scene.
- 2.4 Hart personnel will attend annual training in the handling of radiologically related injuries. Arrangements for this training will be coordinated between Detroit Edison and Hart personnel to ensure maximum benefit is accomplished.
- 2.5 Hart ambulances and personnel will participate in periodic emergency medical drills. This will allow Detroit Edison and Hart personnel to practice their knowledge and skills in the handling of contaminated injured personnel. Arrangements for Hart's participation in these drills will be coordinated between Detroit Edison and Hart personnel to ensure maximum benefit is accomplished.

#### **CHANGES TO AGREEMENT**

- 3.1 Any modifying or supplementing of the items in this agreement shall be in writing, and shall be stored in the Detroit Edison Radiological Emergency Response Preparedness correspondence files for future reference. These changes shall be incorporated into the RERP Plan during the next Plan Revision.

## **RADIOLOGICAL EMERGENCY RESPONSE PREPAREDNESS**

### **LETTER OF AGREEMENT**

This Agreement, made between Frenchtown Fire Department and The Detroit Edison Company (hereinafter called "Detroit Edison"):

#### **WITNESSETH:**

Whereas, Frenchtown Fire Department is a full time and paid on-call organization providing fire protection services

Whereas, the parties desire to help assure the availability of adequately trained and experienced emergency personnel in the event of an emergency situation at the Fermi 2 plant site,

Now, Therefore, It is Agreed between the Parties as follows:

### **ARTICLE I**

#### **Request for Emergency Assistance**

- 1.1 In the event of a fire occurring at the Fermi 2 site owned and utilized by Detroit Edison, Frenchtown Fire Department will be notified by an authorized employee of Detroit Edison at Fermi 2 that fire fighting assistance is required.
- 1.2 The Fermi 2 Control Room will request fire fighting assistance by calling Monroe County Central Dispatch. Control Room will designate proper gate.
- 1.3 At the time of the request for fire fighting assistance, Monroe County Central Dispatch will be provided with necessary information relative to the location and nature of the fire and the designated gate for access to the fire department staging area located in the owner-controlled area.
- 1.4 Detroit Edison will provide Frenchtown Fire Department with a map identifying the location of access gates, hydrants, drafting locations, hose houses and similar connections.

## ARTICLE II

### Scope of Assistance

- 2.1 Frenchtown Fire Department will provide fire fighting assistance on a 24-hours per day, seven days per week basis and will draw upon personnel and equipment resources from any of the four fire stations in the area.
- 2.2 Frenchtown Fire Department will ensure that adequate fire fighting equipment is properly maintained and readily available.
- 2.3 Frenchtown Fire Department will equip its fire fighting personnel with portable breathing apparatuses. Detroit Edison will ensure that compressed air and adapter fittings, if necessary, are available on site for recharging breathing tanks. Frenchtown Fire Department will immediately notify Detroit Edison in writing if a change is made in its type of threaded hose connections.
- 2.4 Training in fire fighting techniques will be the responsibility of Frenchtown Fire Department. Detroit Edison will make training available to members of the Frenchtown Fire Department in site access procedures, overview of the plant fire protection systems, and review of hazardous materials located onsite.
- 2.5 Periodic, at least annually, drills will be held in cooperation with Frenchtown Fire Department to exercise emergency response procedures and effectiveness.
- 2.6 Both parties agree that Frenchtown Fire Department is trained in proper fire fighting techniques and Detroit Edison personnel are trained in the unique operating and safety characteristics at a nuclear power plant. Therefore, firefighting at Fermi 2 is a cooperative effort between Frenchtown Fire Department personnel and Fermi 2 personnel. Prior to activation of any fire extinguishing systems by Frenchtown Fire Department personnel, the Detroit Edison Fire Brigade leader (or delegate) will authorize such activation to assure that the safety of plant and personnel will not be jeopardized.

## ARTICLE III

### Security Procedures

- 3.1 A security guard will be stationed at the designated access gate to provide access for fire department personnel and vehicles to the owner-controlled property..
- 3.2 A Security guard will escort fire department response personnel and vehicles directly to the location of the fire if it is outside the protected area.
- 3.3 If the fire is located within the protected area, the Security guard will escort fire department personnel and vehicles to the truck lock gate at the perimeter of the protected area. Personnel will be provided with an identification badge, thermoluminescent dosimeter and/or pocket dosimeter and will proceed under Security escort to the Fire Brigade staging/assembly area. Only emergency vehicles will be allowed to enter the protected area.



- 3.4 If emergency conditions do not allow security personnel to respond to the access gate, Frenchtown Fire Department personnel are to remove the lock, access the site and proceed to the fire location or Protected Area access point if the fire is in the Protected Area.

#### ARTICLE IV

##### Reimbursement for Expenses

- 4.1 Pursuant to this Agreement, Detroit Edison will call upon the Frenchtown Fire Department to participate in a variety of drills, training and exercises which are non-emergency situations and Frenchtown Fire Department agrees to participate in such drills, training and exercises.

#### ARTICLE V

##### Term of Agreement

- 5.1 This agreement shall continue indefinitely from the date of signing unless and until terminated as provided for in Section 5.2 following.
- 5.2 Either party to this agreement may, upon sixty (60) days written notification to the other party, terminate this Agreement.

IN WITNESS WHEREOF, the parties hereto cause this Agreement to be executed by their duly authorized officers.

THE DETROIT EDISON COMPANY

By: Louis H Pomerville/s/

Title: Procurement Manager

Date: 10/19/01

FRENCHTOWN FIRE DEPARTMENT

By: Ronald A. Whipple/s/

Title: Fire Chief

Date: 11/01/01



GE Nuclear Energy

## SIL

Services Information Letter

### BWR Nuclear Emergency Support Program

**SIL No. 324** GE Nuclear Energy has made changes to the BWR  
**Revision 6** Emergency Support Program. These changes are  
intended to improve GE Nuclear Energy responsiveness to site emergency drills or real plant nuclear emergencies. The emergency phone number is continuously monitored by the Security Operations Center at GE Nuclear Energy headquarters in San Jose.

September 18, 1998

*The Duty Manager responsibility within GE Nuclear Energy has been transferred to an engineering group which has the direct capability to handle all requests for emergency services. For drills, the Security Officer answering the phone is now authorized to confirm contact with GE Nuclear Energy without requiring a return phone call from the GE Nuclear Energy Duty Manager. The Duty Manager will only be contacted if services from GE Nuclear Energy are requested.*

*Contact with GE Nuclear Energy for matters outside the scope of the Nuclear Emergency Support Program should not be made using the telephone number noted in this SIL.*

The purpose of this Revision 6 to SIL No. 324 is to furnish a current description of GE Nuclear Energy's BWR Nuclear Emergency Support Program and to identify the method for requesting nuclear emergency assistance from GE. The information that appears in this Revision 6 should be incorporated into applicable BWR plant procedures as soon as practicable. This SIL No. 324 Revision 6 voids SIL No. 324 Revision 5.

#### Discussion

The GE Nuclear Energy BWR Nuclear Emergency Support Program provides expedited assistance to owners and operators of GE BWRs to minimize the effect of nuclear emergencies which potentially could affect the health and safety of the public or plant personnel. This program has access to the full resources of GE's engineering organizations in San Jose, California as well as GE personnel located elsewhere.

*Please note that GE's Nuclear Emergency Support Program should be activated (i.e., the duty manager contacted) only during nuclear emergencies at GE BWRs, or during site emergency drills for which services from GE Nuclear Energy are required. Expedited services not related to such nuclear emergencies are available through the local GE Nuclear Energy Service Representatives.*

*GE Nuclear Energy BWR Nuclear Emergency Support Program description*

#### 1. Dedicated Emergency Communications Coverage

Dedicated emergency telephone communications coverage is available to owners and operators of GE BWRs 24 hours a day, 365 days a year for requesting assistance from GE for actual BWR nuclear emergencies or site emergency drills. The telephone number to call for GE's BWR Nuclear Emergency Support Program is (408) 971-1038. This number is monitored continuously by the Security Operations Center at GE Nuclear Energy, San Jose, CA.

During the telephone call to the Security Operations Center, the caller should give the Security Officer his or her name, telephone number, the name of the BWR utility and the name of the affected BWR.

(For an actual nuclear emergency, BWR owners and operators may wish to dedicate a specific telephone number for communications exclusively with GE.)

*If the call is for a drill, no further action will be taken.* If the BWR Nuclear Emergency Support Program is to be activated, the GE Security Officer will immediately contact a GE Nuclear Emergency Support Program Duty Manager by telephone.

#### 2. Initial Telephone Contact

As soon as possible after a call concerning an actual BWR nuclear emergency, a GE Duty Manager will telephone the number provided by the BWR utility to the Security Officer. During this initial telephone contact, the BWR utility representative should define the scope of assistance desired from GE.

### **3. BWR Nuclear Emergency Support Program activation**

Upon activation of the BWR Nuclear Emergency Support Program, GE will perform the following, if requested:

- a. Form and dispatch to the affected site, by chartered jet aircraft (if required), a GE Emergency Response Team composed of GE personnel from the technical disciplines requested by the BWR utility representative. It is GE's intention that the Team arrive at the affected BWR site within 24 hours after the time of the request. The BWR utility representative will arrange for the GE Emergency Response Team to pass through road blocks and plant security posts in a timely manner. GE will furnish to the BWR utility the name and social security number of each member of the Emergency Response Team.
- b. Form a Technical Support Team in San Jose composed of GE personnel from appropriate technical disciplines, and establish dedicated telephone communications with utility personnel at the affected BWR and with local GE Nuclear Energy personnel.
- c. Instruct local GE Nuclear Energy personnel to proceed immediately to the BWR site to establish dedicated communications with GE's Technical Support Center in San Jose, collect information requested by the Technical Support Team, and support the BWR utility as directed by the Technical Support Team until the Emergency Response Team arrives at the BWR site.
- d. Assist BWR utility personnel in recovering from the nuclear emergency.

### **4. GE Nuclear Energy Participation**

GE Nuclear Energy maintains the BWR Nuclear Emergency Support Program in a standby mode at no cost to BWR utilities. If BWR utility personnel request GE's participation in a drill beyond the initial telephone contact, or request GE's assistance during an actual nuclear emergency, GE will provide such services in accordance with the terms and conditions under which GE Nuclear Energy routinely provides services to the BWR utility.

### **Recommended actions**

GE Nuclear Energy recommends that owners and operators of GE BWRs implement the following to facilitate activation and coordination of GE's BWR Nuclear Emergency Support Program:

1. Inform GE Nuclear Energy in writing that BWR Nuclear Emergency Support Program services may be desired and that such services, when furnished by GE, will be furnished in accordance with the terms and conditions under which GE Nuclear Energy routinely provides services to the BWR utility.
2. Confirm that the BWR Nuclear Emergency Support Program telephone number (408) 971-1038 appears in site emergency procedures for initial telephone contact with GE's BWR Nuclear Emergency Support Program.
3. Provide instructions to GE Nuclear Energy describing site admission procedures during an actual nuclear emergency and identifying the conduct expected of local GE Nuclear Energy personnel and the Emergency Response Team while at the BWR site.
4. In the event an Emergency Response Team is dispatched to a BWR site:
  - a. Provide to the Technical Support Center in San Jose the name and telephone number of the BWR utility person assigned to coordinate the arrival of the Emergency Response Team. Arrival coordination activities should include the following:
    1. Identify the landing location for the aircraft on which the Emergency Response Team will arrive (if a chartered jet aircraft is required).
    2. If the affected BWR is located outside the United States and a chartered jet aircraft is required, secure overflight clearances as required by countries along the flight path of the aircraft as well as necessary landing and Customs clearances, such as visas, for the Emergency Response Team.
    3. Provide local transportation and escort for the Emergency Response Team to minimize delays in arriving at its assigned work location at the BWR site.

*SIL No: 324 Revision 6 • page 3*

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b. Assure that site procedures exist to permit local GE Nuclear Energy personnel and Emergency Response Team members to pass through security posts to the assigned work location in a timely manner.

c. Provide appropriate administrative support and physical facilities at the BWR site for the

Emergency Response Team, including communication facilities, health physics services and equipment, access to plant documents and living accommodations if the Emergency Response Team is to remain at the BWR site.

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To receive additional information on this subject or for assistance in implementing a recommendation, please contact your local GE Nuclear Energy Service Representative.

This SIL pertains only to GE BWRs. The conditions under which GE Nuclear Energy issues SILs are stated in SIL No. 001 Revision 4, the provisions of which are incorporated into this SIL by reference.

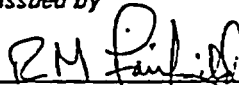
**Product Reference**

A71 — Plant recommendations

**Technical source**

K. Faynshtein

**Issued by**



R. M. Fairfield, Project Manager  
Service Information Communications  
GE Nuclear Energy  
175 Curtner Avenue, San Jose, CA 95125

**Nuclear Power Plant Emergency Response  
Voluntary Assistance Agreement**

This Nuclear Power Plant Emergency Response Voluntary Assistance Agreement (hereinafter "Agreement") has been entered into by and among electric utilities which have responsibility for the construction or operation of commercial nuclear power plants under a license issued by the U.S. Nuclear Regulatory Commission pursuant to Title 10 of the Code of Federal Regulations (hereinafter "nuclear power plants") and which have subscribed counterpart signature pages in the form attached hereto (hereinafter "Parties").

The Parties wish to set forth herein their understanding and agreement with respect to their mutual undertaking to each other in the situation wherein an emergency occurs at a nuclear power plant under the control of or operated on behalf of a Party and a request for assistance is issued to another Party hereto in respect to such emergency and such assistance is provided. This Agreement is intended only to define the terms and conditions under which such assistance, if volunteered, will be rendered and received. It is understood that this Agreement does not impose any obligation on any Party to render or continue to render any such assistance but this Agreement does record the understanding of the Parties with respect to the rights and obligations which will be incurred in responding to requests for assistance.

NOW, THEREFORE, it is agreed, that:

1. Assistance rendered by a Party as described hereunder shall be entirely voluntary and, when given in response to a request by any Party for help following an emergency arising at a nuclear power plant shall be rendered in accordance with the terms and conditions herein.
2. The Party that requests assistance shall be known as the "Requesting Company" and the Party furnishing assistance shall be known as the "Responding Company." Attachment A is a suggested letter confirming an agreement whereby assistance will be furnished pursuant to this Agreement.

3. (a) Requesting Company shall notify Responding Company of the type of assistance requested and the anticipated duration during which such assistance is desired. Responding Company shall furnish such assistance as it may decide. Except as such companies may agree otherwise, Requesting Company shall be responsible for determining the procedures to be followed relative to the furnishing of such assistance, directing the work and making any reports to governmental authorities and the news media regarding the emergency or the furnishing of assistance pursuant to this Agreement. Requesting Company shall notify Responding Company when its assistance is no longer needed.
- (b) The furnishing of assistance hereunder shall be deemed to have commenced when personnel of the Responding Company are assigned to other than normal duties or transportation of equipment commences pursuant to a determination by the Responding Company to provide assistance to a Requesting Company under this Agreement and shall be deemed to have terminated when the transportation of such personnel or equipment back to their working base, or home (for personnel returning at other than regular working hours), is completed.
- (c) The Responding Company shall make all arrangements for the transportation of its personnel and equipment from and to their working base or home.
4. (a) Employees of Responding Company shall at all times continue to be employees of the Responding Company and shall at no time and for no purpose be deemed to be servants, agents, employees, or representatives of the Requesting Company.
- (b) Wages, hours and other terms and conditions of employment applicable to personnel of the Responding Company shall be those of the Responding Company. Work procedures, security and safety rules for such personnel shall be those of the Requesting Company.
- (c) Unless otherwise agreed, all personnel of the Responding Company shall be equipped by the Responding Company with such normal working and protective equipment as shall be compatible with the circumstances under which said personnel shall function hereunder; Requesting Company shall inform Responding Company of any specific equipment which may be required in a particular situation.

5. (a) Responding Company shall furnish the requested personnel and equipment to the extent that the Responding Company may determine to do so in its sole judgment and discretion.
  - (b) Any information which Responding Company may provide to Requesting Company (including drawings, reports and analyses), or which Requesting Company provides to Responding Company, which either the Responding Company or the Requesting Company considers proprietary or confidential, shall be so designated. Such proprietary information shall be held in confidence and shall be used exclusively in connection with the emergency at the nuclear power plant at which the emergency has occurred (including necessary disclosures on a proprietary basis to others in that connection) and shall not be published or otherwise disclosed to others, except as may be required by law.
  - (c) Responding Company shall have the right, at any time and in its sole judgment and discretion, to withdraw personnel and equipment furnished to the Requesting Company and return such personnel and equipment to its working base. Without limiting Responding Company's rights under the preceding sentence, Responding Company shall attempt to schedule any such withdrawal of its personnel or equipment to accommodate the needs of Requesting Company. Responding Company shall give written notice at least 24 hours in advance to Requesting Company of the permanent withdrawal of personnel or equipment furnished. Responding Company's withdrawal of personnel or equipment shall not affect any obligations which may have been incurred hereunder prior to such withdrawal or which may arise out of events occurring prior to such withdrawal.
6. All time sheets and work records pertaining to Responding Company personnel and equipment shall be kept by the Responding Company. The Responding Company shall furnish the Requesting Company with a detailed statement of all costs and expenses paid or incurred by the Responding Company in connection with the furnishing of assistance to the Requesting Company, which statement shall be paid by Requesting Company within thirty (30) days after receipt.
  7. The Requesting Company shall reimburse Responding Company for all direct and indirect costs and expenses, not including a profit, incurred by Responding Company in giving assistance pursuant to this Agreement, including but not limited to costs and expenses related to or resulting from compliance with governmental requirements such as Title 10 of the Code of Federal Regulations Part 20. Such costs and expenses shall be computed in accordance with Responding Company's standard rates and accounting practices including such overheads as are determined by Responding Company to be applicable to such direct and indirect costs and expenses incurred by Responding Company. Requesting Company shall have the right to audit the records of Responding Company relative to work performed pursuant to this agreement.

8. (a) In addition, and subject to the provisions of paragraph 8 (b) hereof, Requesting Company shall indemnify and hold Responding Company, its officers, directors and employees, jointly and severally, harmless from and against any and all liability or loss, damage, cost or expense which any of them may incur by reason of bodily injury, including but not limited to death, to any person or persons, or by reason of damage to or destruction of any property, including but not limited to any property located at the site of the Requesting Company's nuclear power plant or the loss of use of any property, which results from furnishing assistance pursuant to this Agreement, whether due in whole or in part to any act, omission, or negligence of Responding Company, its officers, directors or employees.
- (b) Where payments are made by Responding Company or its insurers to Responding Company's officers, directors, or employees or their beneficiaries for bodily injury or death resulting from furnishing assistance pursuant to this Agreement, including but not limited to workers' compensation, disability, pension plan, medical and hospitalization, or other such payments, Requesting Company shall make reimbursement to Responding Company to the extent such payments increase the Responding Company's employee-related costs, whether such increase in costs occurs in the form of an increase in premiums or contributions, a reduction in dividends or premium refunds, or otherwise. Requesting Company shall also reimburse Responding Company for any deductible amounts or for any amounts paid by Responding Company as a self-insurer. Responding Company will request its insurer to waive any right of subrogation it may have against Requesting Company as a result of any payment described in paragraph 8 (b) which such insurer may make on behalf of Responding Company because of Responding Company's furnishing of assistance pursuant to this Agreement.
- (c) Responding Company makes no warranty with respect to any goods or services provided to Requesting Company and NO WARRANTY, EITHER EXPRESS OR IMPLIED, ORAL OR WRITTEN, SHALL APPLY TO THE GOODS OR SERVICES PROVIDED, INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF MERCHANTABILITY AND OF FITNESS FOR SPECIFIED OR INTENDED PURPOSE. All equipment and services furnished pursuant to this Agreement are furnished as is.
- (d) In the event any claim or demand is made or suit, action or proceeding is filed against Responding Company, its officers, directors or employees, jointly or severally, alleging liability for which Requesting Company shall indemnify and hold harmless Responding Company, its officers, directors and employees under this paragraph 8 hereof, Responding Company shall promptly notify Requesting Company thereof, and Requesting Company, at its sole cost and expense, shall settle, compromise or defend the same in such manner as it in its sole discretion deems necessary or prudent. Responding Company shall cooperate with Requesting Company in the resolution of any such matter.



- (e) Each party to this Agreement agrees to carry the amount of financial protection required by the Atomic Energy Act of 1954, as amended, and self-insurance or comprehensive liability insurance, including contractual liability coverage, covering the indemnification and defense obligations set forth herein, subject to such types and amounts of self-insurance, retentions or deductibles as are consistent with good business practice in the industry.
  - (f) In the event a Responding Company provides assistance pursuant to this Agreement through an affiliate or subsidiary, the indemnification provided in this paragraph 8 to the officers, directors and employees of that Responding Company shall apply with equal force to the officers, directors and employees of that affiliate or subsidiary.
9. Each Party shall provide the Institute of Nuclear Power Operations ("hereinafter INPO") with an executed counterpart signature page to this Agreement and to any amendments hereto. This Agreement shall become effective when counterpart signature pages executed by at least two Parties shall have been received by INPO. This Agreement shall remain in effect as to any Party until such Party has withdrawn from the Agreement as provided below. Any electric utility with responsibilities for the construction or operation of a nuclear power plant may become a Party upon execution of the Agreement.
10. (a) INPO may provide certain administrative and emergency response support services in furtherance of this Agreement, such as maintaining and distributing to the Parties a roster of the signatories to this Agreement; providing copies of the Agreement and any amendments thereto to all Parties; and preparing and distributing to the Parties other documents, such as a list of sources of emergency manpower and equipment. INPO may provide such other services as may be requested of INPO from time to time by the Parties. The Parties recognize that INPO shall not be responsible for implementing, enforcing or interpreting this Agreement.
- (b) The Parties shall defend, indemnify and hold harmless INPO, its officers, directors and employees, jointly and severally, from and against any and all liability or loss, damage, cost, or expense which results from performance of INPO's functions described in paragraph 10(a) of this Agreement, except as may result from the sole negligence or willful misconduct of INPO, its officers, directors or employees. Each Party hereby expressly waives any right it may have to assert any claim against INPO, its officers, directors, or employees arising out of its or their performance of INPO's functions described in paragraph 10(a), except as may result from the sole negligence or willful misconduct of INPO, its officers, directors or employees.

- (c) Following an emergency at a nuclear power plant, INPO may, if asked to do so by a Requesting Company, help to locate sources of emergency manpower and equipment which the Requesting Company may contract for assistance. The Requesting Company may ask INPO to furnish personnel or equipment following an emergency arising at a nuclear power plant. If INPO does furnish such assistance and unless otherwise agreed by INPO and the Requesting Company, the Requesting Company and INPO shall have the same rights and obligations as if INPO were a Responding Company (including but not limited to the Requesting Company's obligations to INPO, its officers, directors and employees under paragraph 8 hereof), except that paragraphs 6 and 7 shall not apply either to Requesting Company or INPO and paragraph 8(e) shall not apply to INPO.
11. This Agreement will not create any rights or defenses in favor of any entity or person not a signatory to this Agreement except to the extent provided in paragraphs 8 and 10 of this Agreement. This agreement shall be binding upon and inure to the benefit of each signatory to this Agreement and the subsidiaries and affiliates of each such signatory.
12. Except as otherwise provided in paragraph 13, any Party may withdraw from this Agreement upon at least thirty (30) days prior written notice to INPO with a copy to all of the other Parties. Notice of withdrawal shall not affect any obligations which may have been incurred hereunder prior to the effective date of such notice or which may arise out of events occurring prior to that date. No Party may withdraw from this Agreement while it is receiving assistance pursuant to this Agreement.
13. This Agreement may be amended by the agreement of a majority of the Parties hereto. Such amendment shall be effective and binding upon all Parties thirty (30) days after INPO has received counterpart signature pages for the amendment executed by at least a majority of the Parties to the Agreement. INPO shall notify all Parties when at least a majority of the Parties have executed an amendment to the Agreement. No amendment shall affect any obligation which may have been incurred hereunder prior to the effective date of such amendment or which may arise out of events occurring prior to that date. Notwithstanding the first sentence of paragraph 12, any Party may withdraw from this Agreement by submitting written notice to INPO at any time during the thirty (30) day period prior to the effective date of such amendment with a copy to all of the other Parties.
14. If any provision of this Agreement is determined to be invalid or unenforceable as to any Party or otherwise, such determination shall not affect the validity or enforceability of the other provisions of this Agreement as to that Party or otherwise.
15. In the event (i) an emergency occurs at a nuclear power plant under the control of or operated on behalf of a Party; (ii) a request for assistance is issued to another Party hereto in respect to such emergency; and (iii) such assistance is provided, this Agreement shall be construed in accordance with the law of the State in which the nuclear power plant is located with respect to all rights and obligations arising out of such emergency.

COUNTERPART SIGNATURE PAGE

The undersigned company hereby agrees to become a Party to the Fixed Facility Emergency Response Voluntary Assistance Agreement dated July 1, 1982.

Date May 15, 1986

Company The Detroit Edison Co.

By Frank E. Agosti /s/  
Corporate Officer Signature

**ATTACHMENT A**

**Requesting Company Letterhead**

Date \_\_\_\_\_, 20\_\_

(Name and Address of  
responding organization)

This letter confirms the telephone conversation on (insert date and time) between our \_\_\_\_\_ and your \_\_\_\_\_ in which our company requested assistance pursuant to the terms of the Nuclear Power Plant Emergency Response Voluntary Assistance Agreement dated \_\_\_\_\_ and your organization agreed to provide assistance pursuant to that Agreement.

Please acknowledge your agreement to the foregoing by signing and returning to me the enclosed copy of this letter.

\_\_\_\_\_  
Requesting Company Name and Address

\_\_\_\_\_  
Corporate Officer Signature

\_\_\_\_\_  
Responding Organization Name and  
Address

\_\_\_\_\_  
Corporate Officer Signature and Date

LETTER OF AGREEMENT  
between  
MERCY MEMORIAL HOSPITAL CORPORATION  
and  
THE DETROIT EDISON COMPANY  
for  
EMERGENCY MEDICAL ASSISTANCE

THIS AGREEMENT made and entered into as of the 26 day of October, by and between Mercy Memorial Hospital Corporation, (the "Hospital") and Detroit Edison, a Michigan Corporation.

WITNESSETH:

WHEREAS, the Hospital is the owner and operator of Mercy Memorial Hospital (the "Hospital") located in the County of Monroe, Michigan; that maintains JCAH accreditation and provides emergency medical service including facilities for the treatment of radiologically contaminated patients and,

WHEREAS, Detroit Edison owns electric facilities, including Fermi 2, a Nuclear Generating Station, and

WHEREAS, the parties desire to have available adequately trained and experienced personnel in the event of a medical emergency at the Fermi 2 power plant.

NOW, THEREFORE, it is agreed between the parties as follows:

**I. REQUESTS FOR EMERGENCY ASSISTANCE:**

- 1.1 In the event of injury to any person(s) on property owned or utilized by Detroit Edison, the Hospital will be notified by an authorized person of Detroit Edison, or any authorized emergency transport carrier, that an injured person(s) is (are) being transported to the Hospital needing emergency medical attention.

- 1.2 If the injury is non-radiologically related, notification to the Hospital will be made through procedures established for responding to any normal request for emergency medical service by Detroit Edison at 242-6500 and authorized emergency transport carrier on their hospital compatible radio frequency .
- 1.3 If the injured person(s) is radiologically contaminated, the request for medical attention will be made by calling 242-6500 for Detroit Edison, and authorized emergency transport carrier can call on their hospital compatible radio frequency. This notification will provide for implementation of the Hospital's radiological contingency emergency plan. The injured person(s) will normally undergo decontamination procedures on the Fermi 2 site prior to transport to the hospital. However, if immediate treatment of the injury is vital, that treatment will take precedence over decontamination. A person trained in radiation protection monitoring techniques will accompany a radiologically contaminated individual in the ambulance enroute to the hospital and remain at the Hospital as needed to continue radiation protection monitoring.
- 1.4 At the time of the request for emergency medical services, the Hospital will be provided with necessary information relative to the injured person(s) status as defined in mutually agreed upon operating procedures.

## II. SCOPE OF ASSISTANCE:

- 2.1 Emergency medical service should be made available to Detroit Edison on a 24-hour, per day, seven days a week basis.
- 2.2 The Hospital will have at least one physician and one nurse available within about 2 hours who can supervise the evaluation and treatment of radiologically contaminated injured members of the general public, resulting from an emergency event at Fermi 2.
- 2.3 The Hospital, as part of their qualifications for treating radiologically contaminated injured persons, will ensure that emergency equipment for treatment of a radiological contaminated person(s) is continuously available at the hospital emergency facility.
- 2.4 Detroit Edison will provide the Hospital with an emergency supply cabinet which will contain the items listed in mutually agreed upon operating procedures. This cabinet will be located on the Hospital's premises and should be locked when not in use. A master key to this cabinet will be retained by the Hospital.

- 2.5 Detroit Edison will be responsible for disposal of all radiologically contaminated waste material (for example, cleansing liquids) on the Hospital's premises resulting from treatment of a contaminated person(s) from Fermi 2.
- 2.6 Detroit Edison or its contractor will conduct annual training sessions for personnel who have emergency medical responsibilities defined in the emergency medical plan.
- 2.7 Detroit Edison will make available technical information and treatment protocols for contaminated injured personnel.
- 2.8 Detroit Edison or its contractor will conduct annual emergency medical drills and will provide the Hospital with a copy of the written drill evaluations.
- 2.9 Detroit Edison will be responsible for maintenance of the supply cabinet.
- 2.10 Detroit Edison will be responsible for payment of services rendered to its employees.

### III. MODIFICATION

- 3.1 At any time after the date of this Agreement either party, by giving not less than thirty days written notice to the other party, may call for reconsideration of the terms and conditions of this Agreement. If such reconsideration is called for, the authorized representatives of the parties shall meet as promptly as convenient and discuss any of the terms and conditions of this Agreement. No party shall be under any obligation to agree to any modification or supplement not satisfactory to it. Any agreement modifying or supplementing such terms and conditions shall be in writing, signed by both parties, and shall specify the date such modification or supplement shall become effective.

### IV TERM OF AGREEMENT

- 4.1 This agreement shall continue indefinitely from the date of signing unless and until terminated as provided for in Section 4.2 following.

4.2 Either party to this agreement may, upon sixty (60) days written notification to the other party, terminate this Agreement.

IN WITNESS WHEREOF, the parties hereto cause this Agreement to be executed by their duly authorized representatives.

THE DETROIT EDISON COMPANY

MERCY MEMORIAL HOSPITAL  
CORPORATION

BY Louis H Pomerville/s/ 10/19/01

BY G. Montgomery/s/ 10/26/01

Title Procurement Manager

TITLE Vice President



## EMERGENCY RESPONSE PREPAREDNESS PLAN

### Letter of Agreement

This Agreement, made between the Community College District of Monroe County, Michigan, hereinafter called "Monroe County Community College", and The Detroit Edison Company, hereinafter called "Detroit Edison":

#### WITNESSETH:

Whereas, Monroe County Community College, is an educational institution located in the county of Monroe, Michigan, and

Whereas, Detroit Edison, owns electric facilities, including the Fermi 2 Nuclear Power Plant, and

Whereas, the parties desire to help assure the provision of adequate emergency preparedness for the residents of Monroe County in the event of an emergency situation at Fermi 2.

Now, Therefore, it is Agreed between the parties as follows:

### ARTICLE I

#### Use of Physical Facilities

- 1.1 Monroe County Community College will make available to Detroit Edison the use of designated rooms in the Student Services-Administration Building as the operating location for the Joint Public Information Center on a 24-hours per day, seven days per week basis upon notification to authorities at Monroe County Community College that an emergency has been declared at Fermi 2 and for use in periodic drills of the Joint Public Information Center.
- 1.2 Designated rooms in the Student Services-Administration Building will include the cafeteria dining area and conference rooms A173a, A173b, A173c, and A173d. The hallway corridor outside of these rooms will be shared by Detroit Edison and Monroe County Community College unless other arrangements are agreed upon by both parties. See Attachment A for building diagram. Parking lot 4 (east of Administration building) will be available for parking.

## ARTICLE I

### Use of Physical Facilities (con't.)

- 1.3 If the volume of media representatives exceed the capacity of the designated area or if the scope of the emergency warrants additional facilities, officials of Monroe County Community College may designate additional facilities for the Joint Public Information Center.
- 1.4 In the case of an announced drill, Detroit Edison will notify the Administrator in the Corporate and Community Services Department to arrange for room reservations.
- 1.5 In the case of an unannounced drill or actual emergency, Detroit Edison will notify Monroe County Community College as per Attachment B.

## ARTICLE II

### Security

- 2.1 During operation of the Joint Public Information Center, Detroit Edison security personnel will control access to and within all rooms as designated in paragraph 1.2 and other rooms and/or buildings as designated in paragraph 1.3.
- 2.2 Authorized entrants to any Monroe County Community College facility utilized for emergency purposes by Detroit Edison will be identified by a badge issued by Detroit Edison Security personnel stationed at the Monroe County Community College campus.

## ARTICLE III

### Services

- 3.1 Food Services - Provision of food services for emergency response personnel and media representatives will be the responsibility of Detroit Edison. A separate contractual agreement between Food Service Vendor and Detroit Edison may be arranged if the kitchen facilities of Monroe County Community College are to be utilized. If kitchen facilities are not utilized, provision of food services will be contracted by Detroit Edison through an outside organization.
- 3.2 Custodial Services - Detroit Edison will be responsible for providing custodial services and supplies at Monroe County Community College for the duration of any declared emergency which activates the Joint Public Information Center. At the close of the emergency, the facilities will be cleaned and furniture returned to its original position. Also, Detroit Edison will provide for custodial services and supplies for any drills.

## ARTICLE IV

### Communications and Equipment

- 4.1 Telephone service for use by personnel in the Joint Public Information Center will be provided by Detroit Edison through a system installed by Michigan Bell Telephone which is separate from Monroe County Community College's telephone system.
- 4.2 Monroe County Community College will be responsible for deactivating the college telephone system if college personnel vacate the premises. Deactivating will mean either shutting off the system completely or setting the system in either a night mode or a special message mode.
- 4.3 Public pay telephones and credit card phones located in the hallway of the Student Services-Administration Building will be available for use by Joint Public Information Center personnel.
- 4.4 Detroit Edison will provide all audio-visual and copying equipment to be utilized by Joint Public Information Center personnel, with the exception of the projection screen and lectern located in the cafeteria.
- 4.5 Locked cabinets for storage of Detroit Edison telephone instruments and audio-visual equipment will be located in the telephone equipment room and room B-15 in the basement of the Student Services-Administration Building. Keys to these cabinets will be retained by Detroit Edison.

## ARTICLE V

### Charges

- 5.1 In an effort to promote and ensure public safety, Monroe County Community College agrees that it will not charge Detroit Edison for any of the aforementioned services.
- 5.2 At its option, however, Monroe County Community College may elect to charge Detroit Edison for any, or all, of the following:
  - 5.2.1 Property or equipment damage resulting from Joint Public Information Center's activities.
  - 5.2.2 Any services or costs incurred by Monroe County Community College beyond the scope of this Agreement incurred as a result of the Joint Public Information Center's activities.
  - 5.2.3 Any loss of revenue due to the cancellation of scheduled luncheons, dinners, or other programs that Monroe County Community College may incur or be responsible for as a result of the Joint Public Information Center's activities.

## ARTICLE VI

### Term of Agreement

- 6.1 This agreement shall continue indefinitely from the date of signing unless and until terminated as provided for in Section 6:2 or 6.3.
- 6.2 Either party to this agreement may, upon sixty (60) days written notification to the other party, terminate this Agreement.
- 6.3 In the event that Monroe County Community College begins any facility construction or renovation of any of the rooms or areas that are used for or affected by the Joint Public Information Center, alternative arrangements will have to be made based on the availability of facilities.

IN WITNESS WHEREOF, the parties hereto cause this Agreement to be executed by their duly authorized officers.

#### DETROIT EDISON COMPANY

By Louis H Pomerville/s/  
Title Procurement Manager  
Date 11/09/01

#### MONROE COUNTY COMMUNITY COLLEGE

By Timothy S. Bennett/s/  
Title V. P. Business Affairs & Treasurer  
Date 11/16/01

S ) Security

**ATTACHMENT B**

**Monroe County Community College  
Joint Public Information Center Agreement**

**COLLEGE CONTACTS  
FOR  
UNANNOUNCED DRILL OR ACTUAL EMERGENCY**

This attachment contains confidential phone numbers which will not be published. The information contained in Attachment B is available in the original Letter of Agreement which is on file.

MUTUAL ASSISTANCE AGREEMENT

BETWEEN

DETROIT EDISON COMPANY,

NUCLEAR MANAGEMENT COMPANY (NMC),

AND

INDIANA MICHIGAN POWER COMPANY

- 0.1 Nuclear Management Company, a Michigan corporation; Detroit Edison, a Michigan and New York corporation; and Indiana Michigan Power Company, an Indiana corporation;

**WITNESSETH**

- 0.2 WHEREAS, Nuclear Management Company, Detroit Edison, and Indiana Michigan Power Company own electric facilities, including nuclear generation stations, and are engaged in the generation, transmission, distribution and sale of electric power and energy in Michigan; and
- 0.3 WHEREAS, the parties desire to help assure the availability of adequately trained and experienced emergency personnel in the event of an emergency situation at any of their nuclear generating stations;
- 0.4 NOW, THEREFORE, in consideration of the promises and mutual covenants herein set forth, the parties agree as follows:

**ARTICLE I  
DEFINITIONS**

- 1.1 "Alert" shall be defined as a situation in which events are in process or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant.
- 1.2 "Emergency" shall be defined consistent with the definition of "site area emergency" as set forth in NUREG 0654 as a situation in which events are in process or have occurred which involve actual or likely major failures of plant functions needed for protection of the public.
- 1.3 "Requesting party" shall be defined as any party to this Agreement who, upon the occurrence of an emergency at one of its nuclear generating stations, seeks emergency assistance, pursuant to this Agreement, from one or more of the parties hereto.
- 1.4 "Responding party" or "responding parties" shall be defined as any party or parties to this Agreement who are presented with a request for emergency assistance pursuant to this Agreement.



**ARTICLES II  
REQUESTS FOR EMERGENCY ASSISTANCE**

- 2.1 In the event of an alert at one of its nuclear generating stations, any party to this Agreement may notify any or all of the other parties that an alert exists and that their emergency assistance may be required.
- 2.2 In the event of an emergency at one of its nuclear generating stations, any party to this Agreement may request emergency assistance from any or all of the other parties.
- 2.3 Requests for emergency assistance shall be made between and among the following party personnel:

Nuclear Management Company

Senior Vice President, NMC

Detroit Edison

Vice President  
Nuclear Generation

Indiana Michigan Power Company

Vice President  
Nuclear Generation

**ARTICLE III  
EXCUSED FAILURE TO RESPOND**

- 3.1 Failure to respond to a request for emergency assistance pursuant to this Agreement shall be excused if, in order to respond, the requested party or parties would be forced in its or their sole judgments to:
- 3.1.1 Violate its duties relating to the care and staffing at its own nuclear generating stations; or
- 3.1.2 Jeopardize the public health or safety at a location other than the location of the requesting party's emergency.

#### **ARTICLE IV SCOPE OF ASSISTANCE**

- 4.1 If requested under this Agreement, the responding party or parties will provide trained and experienced personnel to perform off-site radiation protection activities to the requesting party. All equipment intended for use by the responding personnel, except personal dosimeters and certification documents (such as certifications of Health Physics training, instrument training and dose exposure records), shall be the responsibility of the requesting party to provide. The responding party or parties may use their own equipment if agreeable to the requesting party. However, use by the responding party or parties of their own equipment shall in no way alter the duties and obligations imposed upon the parties by this Agreement.
- 4.2 Emergency assistance provided by the responding party or parties shall continue until their personnel are dismissed by the requesting party, or are recalled by the responding party to support operations at its own facilities.
- 4.3 Responding party or parties' personnel exposure shall be limited to off-site radiation, and such exposure shall not exceed federal requirements as set forth in 10CFR20.
- 4.4 Wages, hours and other terms and conditions of employment applicable to loaned personnel shall be those of the party providing such personnel.
- 4.5 Personnel provided by responding party or parties shall, at all times during the period in which emergency assistance is being provided, continue to be employees of the responding party or parties. The responding party, and not the requesting party, shall be liable to loaned personnel for any wages, salaries, cost and expenses associated with the provision of emergency assistance.

#### **ARTICLE V REIMBURSEMENT FOR EMERGENCY ASSISTANCE RENDERED**

- 5.1 The requesting party shall reimburse each responding party for all costs and expenses incurred by each responding party in providing emergency assistance hereunder. Such costs and expenses shall include:
  - 5.1.1 Salaries and wages paid to loaned personnel (including supervisors) for paid time spent in the requesting party's service area, and paid time for travel to and from such service area;
  - 5.1.2 A percentage of the total of such wages and salaries, as determined by the responding party, reflecting expenses incurred for:
    - 5.1.2.1 Compliance with Worker's Compensation laws;

- 5.1.2.2 Payroll taxes;
- 5.1.2.3 Hospitalization, surgical and medical coverage;
- 5.1.2.4 Pensions and life insurance;
- 5.1.2.5 Vacation, holiday and sick pay;
- 5.1.2.6 Travel accident insurance;
- 5.1.3 Transportation to and from the requesting party's service area, including the cost of travel accident insurance purchased expressly for coverage during such transportation;
- 5.1.4 Food and lodging;
- 5.1.5 Personal expenses specifically agreed to between the requesting and responding parties;
- 5.1.6 Charges, at the rates internally used by the responding party, for the use of transportation equipment and other equipment requested; and
- 5.1.7 Any further costs specifically agreed to between the requesting and responding parties.
- 5.2 All time sheets and work records pertaining to loaned personnel shall be maintained by the responding party.
- 5.3 All charges shall be paid by the requesting party to each responding party within ten (10) days after receipt of an invoice, itemized to the satisfaction of the requesting party.

#### ARTICLE VI INDEMNIFICATION

- 6.1 The requesting party shall indemnify and hold harmless each responding party from and against any and all liability for loss, damage cost or expense which the responding party shall incur by reason of bodily injury, including death, to any person or persons, or by reason of damage to or destruction of any property, including the loss of use thereof, arising out of or in any manner connected with the giving of emergency assistance to the requesting party.
- 6.2 In the event of bodily injury, including death, to any employee of the responding party, or in the event of damage to or destruction of any property of the responding party, the requesting party shall indemnify the responding party for such loss in the following manner:

- 6.2.1 If such loss is covered by an insurance policy purchased by the responding party from a third party carrier, the requesting party shall make reimbursement to the extent such losses increase the responding party's insurance costs;
- 6.2.2 If such loss is not covered by an insurance policy purchased by the responding party or exceeds such coverage, the requesting party shall make reimbursement to the extent of the claims or benefits actually paid or the losses sustained by the responding party.

## **ARTICLE VII MODIFICATION**

- 7.1 At any time after the date of this Agreement any party, by giving not less than thirty days written notice to the other parties, may from time to time call for reconsideration of the terms and conditions of this Agreement. If such reconsideration is called for, the authorized representatives of the parties shall meet as promptly as convenient and discuss any of the terms and conditions of this Agreement. No party shall be under any obligation to agree to any modification or supplement not satisfactory to it. Any agreement modifying or supplementing such terms and conditions shall be in writing, signed by all parties, and shall specify the date such modification or supplement shall become effective.

## **ARTICLE VIII PLAN EXERCISING**

- 8.1 The parties agree to provide, at their own expense, personnel to observe or assist in demonstrating the effectiveness of a nuclear generating station's emergency plan as may be required by that nuclear generating station's NRC approved emergency plan.

## **ARTICLE IX TERM OF AGREEMENT**

- 9.1 This Agreement shall continue indefinitely from the date of signing unless and until terminated as provided for in Section 9.2 below.
- 9.2 Any party, upon sixty (60) days prior written notice to all other parties, may terminate this Agreement.

IN WITNESS WHEREOF, the parties hereto cause this Agreement to be executed by their duly authorized officers on duplicate original pages attached hereto and made a part hereof.

NUCLEAR MANAGEMENT COMPANY

\_\_\_\_\_/s/\_\_\_\_\_  
\_\_\_\_\_  
J. P. Cowan  
Senior Vice President, NMC  
6/28/01  
Date

DETROIT EDISON COMPANY

\_\_\_\_\_/s/\_\_\_\_\_  
\_\_\_\_\_  
W. T. O'Connor  
Vice President  
Nuclear Generation  
6/20/01  
Date

INDIANA MICHIGAN POWER COMPANY

\_\_\_\_\_/s/\_\_\_\_\_  
\_\_\_\_\_  
R. P. Powers  
Vice President  
6/8/01  
Date

MEMORANDUM OF AGREEMENT  
between  
OAKWOOD HEALTHCARE INCORPORATED  
and  
DETROIT EDISON COMPANY  
for  
RADIOLOGICAL EMERGENCY RESPONSE PREPAREDNESS PLAN

This Agreement made and entered into by and between Oakwood Healthcare Incorporated, a Michigan non-profit corporation ("Corporation") and Detroit Edison, a Michigan Corporation ("Detroit Edison").

WITNESSETH:

WHEREAS, Corporation is the owner and operator of Oakwood Southshore Medical Center ("Hospital") located in Wayne County, Michigan; and

WHEREAS, Hospital maintains accreditation from the Joint Commission on the Accreditation of Healthcare Organizations ("JCAHO") and provides emergency medical service including facilities for the treatment of radiologically contaminated patients; and

WHEREAS, Detroit Edison owns electric facilities including Fermi 2 Nuclear Generating Station ("Fermi 2"); and

WHEREAS, the parties desire to have available adequately trained and experienced emergency personnel in the event of a medical emergency at the Fermi 2.

NOW, THEREFORE, it is agreed between the parties as follows:

I. REQUESTS FOR EMERGENCY ASSISTANCE:

1.01 In the event of injury to any person(s) on property owned or utilized by Detroit Edison wherein the injured party is to be transported to Hospital, Hospital will be notified by an authorized person of Detroit Edison or any authorized emergency transport carrier, that an injured person(s) is (are) being transported to the Hospital and, if known, pertinent information respecting the person's suspected injuries. Notification to Hospital will be made by Detroit Edison calling Hospital at mutually agreed upon telephone numbers, or by any authorized transport carrier calling on their Hospital compatible radio frequency. In the event the patient is radiologically contaminated necessitating implementation of radiological contingency emergency plans, notice will include the need to implement said plan. As routine Detroit Edison practice, injured person(s) will normally undergo decontamination procedures on the Fermi 2 site prior to transport to the Hospital. However, if Detroit Edison believes immediate treatment of the injury is vital, treatment will take precedence over decontamination. A person trained in radiation protection monitoring techniques will accompany a radiologically contaminated individual in the ambulance enroute to the Hospital and remain at the Hospital as needed to continue radiation protection monitoring.

- 1.02 At the time of the request for emergency medical services, the Hospital will be provided with necessary information relative to the injured person's medical status as defined in mutually agreed upon operating procedures.

## II. SCOPE OF ASSISTANCE

- 2.01 Hospital emergency medical service should be made available to Detroit Edison on a 24-hour per day, seven day per week basis.
- 2.02 Hospital will have at least one physician and one nurse available within about two (2) hours who can supervise the evaluation and treatment of an individual who is radiologically contaminated as a result of an emergency event at Fermi 2.
- 2.03 The Hospital, as part of its qualifications for treating radiologically contaminated injured persons, will use its best efforts to provide emergency equipment for treatment of a radiologically contaminated person(s) at Hospital's emergency facility. Said equipment shall include that normally available in an emergency facility of a similar type and size as Hospital's facility.
- 2.04 Detroit Edison will provide Hospital with an emergency supply cabinet which will contain the items listed in mutually agreed upon operating procedures. This cabinet will be located on Hospital's premises and should be locked when not in use. A master key to this cabinet will be retained by Hospital.
- 2.05 Detroit Edison will be solely responsible for proper handling (including, without limitation, transportation and disposal) of all radiologically contaminated waste material (for example, cleansing liquids) resulting from Hospital treatment of a contaminated person(s) from a Fermi 2 accident. "Proper handling" shall require Detroit Edison to comply with all federal and state laws and regulations affecting (as applicable) radioactive waste and medical waste. Detroit Edison shall further indemnify and hold Hospital, its directors, officers, employees and subcontractors harmless from and against all liability associated with the handling of said waste. "Liability" for purposes of this Section 2.05 shall include, but is not limited to, claims, actions, causes of action, damages, judgments, losses, settlement amounts, costs and expenses including attorneys' fees.
- 2.06 Detroit Edison or its contractor will conduct annual training sessions for Hospital personnel who have emergency medical responsibilities defined in the emergency medical plan.
- 2.07 Detroit Edison will provide technical information and treatment protocols for contaminated injured personnel.
- 2.08 Detroit Edison or its contractor will conduct required emergency medical drills and will provide the Hospital with drill evaluations.
- 2.09 Detroit Edison will be responsible for maintenance and replacement of supplies in the supply cabinet and shall check said supplies for currency and quantity on an annual basis.
- 2.10 Detroit Edison will make payment of services rendered to its employees, and shall serve as the guarantor of last resort for Hospital and physician services provided to such other persons as may have been injured at Fermi II.

- 2.11 Detroit Edison shall provide Hospital with all reasonable assistance in decontaminating Hospital and Hospital equipment as a result of Hospital providing emergency health care services to persons injured from an emergency event at Fermi 2.

### III. MODIFICATION

- 3.01 At any time after the date of this Agreement either party, by giving not less than ninety (90) days written notice to the other party, may call for reconsideration of the terms and conditions of this Agreement. If such reconsideration is called for, the authorized representatives of the parties shall meet as promptly as convenient and discuss any of the terms and conditions of this Agreement. No party shall be under any obligation to agree to any modification or supplement not satisfactory to it. Any agreement modifying or supplementing such terms and conditions shall be in writing, signed by both parties, and shall specify the date such modification or supplement shall become effective.

### IV. TERM OF AGREEMENT

- 4.01 This Agreement shall continue indefinitely from the date of approval unless and until terminated as provided for in Section 4.02.
- 4.02 Either party to this Agreement may, upon ninety (90) days written notification to the other party, terminate this Agreement with or without cause.
- 4.03 Continuing Duties After Termination. Notwithstanding the termination of this Agreement, the parties shall be required to carry out any provisions hereof which contemplate performance by them subsequent to such termination and such termination shall not affect any liability or any other obligation which may have accrued prior to such termination.

### V. INDEPENDENT CONTRACTOR STATUS

- 5.01 In the performance of the services to be rendered pursuant to this Agreement, it is mutually understood and agreed that each party shall be and at all times is acting and performing as an independent contractor, and not as employee of or joint venturer with the other. Consistent with status as an independent contractor, each party shall have complete control and responsibilities over the services it renders and each shall practice according to its own means and methods of work. Neither party shall exercise any direct supervision or control over the other. Nothing contained herein is intended to nor shall establish an employer-employee, master-servant, a partnership or a joint venture between Hospital and Detroit Edison, nor authorize Hospital or Detroit Edison to act as a general or special agent of the other party in any respect, except as specifically set forth in this Agreement.



**VI. APPLICABLE LAW, MERGER, WAIVER AND ASSIGNMENTS**

6.01 This Agreement shall be governed by Michigan law. If any term or provision hereof is illegal, invalid or unenforceable, the remainder of this Agreement shall not be affected thereby. This is the entire agreement of the parties and all prior agreements between the parties, whether written or oral, are merged herein and shall be of no force and effect. The captions have no legal significance in the interpretation of this Agreement. A waiver by either party of any provision shall not waive any other. No person or entity, except the parties shall be beneficiaries of any kind of the consideration or terms of this Agreement. Nothing contained in this Agreement shall be construed to permit the assignment or delegation by Hospital or Detroit Edison of any rights or obligations hereunder and such assignment is expressly prohibited.

IN WITNESS WHEREOF, the parties hereto cause this Agreement to be executed by their duly authorized officers.

"THE DETROIT EDISON COMPANY"

By Louis J. Kasmer /s/  
Title Manager-Energy Resources Procurement  
Date 12/17/2002

"OAKWOOD HEALTHCARE INC."  
(Oakwood Southshore Medical Center)

By Edith Hughes /s/  
Title Chief Administrative Officer  
Date 12/17/2002

Department of Energy  
Chicago Operations Office  
9800 South Cass Avenue  
Argonne, Illinois 60439

February 10, 1987

Mr. Thomas Randazzo, Director  
Regulatory Affairs  
Detroit Edison  
6400 North Dixie Highway  
Newport, Michigan 48166

Dear Mr. Randazzo:

The U. S. Department of Energy (DOE) will respond to requests for radiological assistance from licensees, Federal, State, and local agencies, private organizations, or individuals involved in or cognizant of an incident believed to involve source, byproduct, or special nuclear material as defined by the Atomic Energy Act of 1954, as amended, or other ionizing radiation sources.

Unless DOE or a DOE contractor is responsible for the activity, ionizing radiation source, or radioactive material involved in an incident, DOE radiological assistance will be limited to advice and emergency action essential for the control of the immediate hazards to health and safety. Radiological emergency assistance will be terminated as soon as the emergency situation is under control. Therefore, responsibility for postincident recovery, including further action for the protection of individuals and public health and safety, should be assumed by the appropriate responsible Federal, State, or local government, or private authority as soon as the emergency conditions are stabilized.

If we can be of further assistance, please feel free to contact us.

Sincerely,

Hilary J. Rauch /s/  
Manager

cc: Director, Office of Nuclear Safety, HQ (EH-13/GTN)  
U.S. Nuclear Regulatory Commission, Office of  
Inspection and Enforcement, Region III

## Standard Operating Procedure

### APPROVALS

This Michigan Southeastern Local Area EAS plan was developed and approved by the Michigan Southeastern emergency Alert Committee, and the National Weather Service in cooperation with the Michigan State Police Emergency Management Division and County Emergency Management officials.

                    /s/                      
Mr. Ed Buterbaugh, Chairperson  
Southeaster Local Area Emergency Communications Committee

1/22/97  
Date

                    /s/                      
Mr. Gregory Urbiel, Vice chairperson  
Southeastern Local Area Emergency Communications Committee

1/22/97  
Date

                    /s/                      
Mr. Larry Estack, Co-Chairperson  
Michigan State Emergency Communications Committee

1/22/97  
Date

                    /s/                      
Co-Chairperson  
Michigan State Emergency Communications Committee

1/22/97  
Date

                    /s/                      
Mr. Gary Campbell  
National Weather Service Office, White Lake, MI

1/22/97  
Date

                    /s/                      
Lt. Ralph J. Hobrat, Coordinator  
Second District Michigan State Police  
Emergency management Division

1/22/97  
Date

SOUTHEASTERN MICHIGAN EAS PLAN

## TABLE OF CONTENTS

- I. Purpose
- II. Authority
- III. General Information
- IV. Michigan EAS Configuration
- V. Originating Stations
- VI. EAS Message Protocol
- VII. Monitoring Assignments
- VIII. Responsibilities of Primary Stations
- IX. Notification Procedures
- X. Broadcasters' Procedures
- XI. Legal Matters
- XII. Steps Stations Should Take to Participate in the South Eastern Local Emergency Alert System
- XIII. Test Procedures
- XIV. Michigan EAS Emergency Communications committee
- XV. Acronyms

## ATTACHMENTS

- A-I South Eastern Michigan Local Area Monitoring Chart
- A-II Radio/TV Stations/Cable Stations in the South Eastern Michigan Local Area
- A-III South Eastern Michigan EAS Local Area Notifier List and Verification Phone Numbers
- A-IV. Michigan NWR Locations Map
- A-V. Local ECC Members
- A-VI. Emergency Access Numbers for LP-1 and LP-2 Stations

## **Purpose**

This Document provides procedures agreed upon by the broadcast and cable industry which will permit designated federal, state and local government officials to issue emergency information, instructions and warning to the general public of the South Eastern Michigan Area by activating the South Eastern Michigan Area Emergency Alert System (EAS).

### **I. Authority**

Title 47 USC 151,154(i), (o), 303 (r), 524 (g) and 606. 47 CFR, Part 11, Federal Communications Commission (FCC) Rules and Regulations.

### **II. General Information**

A. The South Eastern Michigan EAS System will utilize digital message encoding/decoding equipment which complies with the standards of the FCC rules, Part 11, and is certified by the Commission.

B. This plan was prepared by members of the South Eastern Michigan Emergency Alert System (EAS) Emergency Communications Committee (ECC) in cooperation with the Michigan State Police Emergency Management Division (EMD), and the Nation Weather Service (NWS) and County Emergency Management Agencies. The plan provides background data and prescribes specific procedures for the broadcast and cable television media to disseminate emergency information and warnings to the general public throughout the State of Michigan, at the request of designated federal, state and local government officials, known as Notifiers. The South Eastern Michigan EAS Plan may be activated on a day-to-day basis in response to an occurrence or imminent threat of widespread or severe damage, injury, or loss of life or property resulting from a natural or man-made cause. It should be noted that operational area EAS activation for weather warnings, other than tornado warnings will occur only under extreme circumstances or during the failure of the NWR transmission system. Participating stations are encouraged to broadcast all local weather warnings promptly.

C. The plan provides for access to the EAS by designated officials (notifiers) working through two local primary (LP) stations. They are: WJR-AM (LP-1), WWJ-AM (LP-2). The South Eastern Michigan EAS Local Area, previously known as Operational Area, consists of the following five counties: Macomb, Monroe, Oakland, St. Clair, Wayne.

D. Acceptance of or participation in this plan shall not be deemed to prohibit a broadcast licensee or cable TV operator from exercising independent discretion and responsibility in any given situation. Stations originating EAS emergency communications shall be deemed to have conferred rebroadcast authority.

E. This plan shall be considered an appendix to, and part of, the Michigan State EAS Plan.

F. EAS Designations: The FCC has provided for EAS Stations Designations which reflect the EAS status of every broadcaster and cable operator. Below is a listing of these designations. Consult the State of Michigan EAS Plan, the "FCC mapbook" or Attachment II of this plan to determine our EAS designation.

NP (National Primary) = Sole source of national EAS alerts. These stations (Primary Entry Point or PEP stations) will feed national level alerts to the State Primary stations. At present there are no national stations located in Michigan. Signals from outstate NP stations will be picked up by the state primary station and distributed either directly or via state relay stations to each EAS Local Area.

SP (State Primary) = In Michigan, WKAR FM 90.5 MHz, East Lansing Michigan serves as the origination station for all state level EAS alerts, as well as, the distribution point for all national level EAS alerts.

SR (State Primary) = In Michigan, several key FM stations will serve in this capacity to relay emergency announcements from the SP station to other LP stations in the state.

LP (Local Primary) = Key stations in each of Michigan's twelve (12) local areas. There will be at least two in each area. The LP-1 is the primary stations. The LP-2 is the alternate Local Primary station. Local Primary 1 and 2 stations are to be monitored by participating stations in the area.

PN (Participating National) = Most broadcasters and cable operators are designated as PN. They monitor the area LP stations and deliver EAS alerts directly to the general public in case of a national level emergency.

NN (Non-participating National) = Broadcasters who hold an "NN Authorization" from the FCC to sign off their station after a national EAS activation. There are very few of these in Michigan.

### III. Michigan EAS Configuration

The Michigan goal for EAS is the development of a fully automated system that will allow notifiers through dedicated encoders to selectively provide Michigan citizens with family emergency information and warnings.

It is realized that at the initial implementation of the Michigan EAS much of the system will rely on broadcast station staff to air messages based on verbal requests from notifiers. Hopefully, within the year of system implementation, many notifiers will obtain EAS encoder equipment. Once this equipment is in place, notifiers with EAS equipment will be able to activate EAS directly through their LP-1 and LP-2 stations. Notifiers with out EAS equipment must handle requests for EAS activation verbally, but are encouraged to purchase necessary equipment as soon as possible, to speed the dissemination of information with greater accuracy.

LP stations serve as the primary contact point for EAS entry and therefor, carry an extra EAS responsibility. With this in mind, a key criteria for the selection of Michigan State Primary (SP) and Local Primary (LP) stations was their ability to provide 24-hour staffing, and provide adequate signal coverage of this area.

The process of selecting monitoring assignments in the Michigan EAS structure was based on station coverage areas with an emphasis on the ability to span state, local area and county boundaries. This focus provides Michigan with an approach for disseminating EAS messages over all stations with broadcast coverage serving an impacted area regardless of the physical location of the transmitter or cable head-end equipment. To achieve this capability, cross monitoring and multiple Local Primary (LP) monitoring assignments are required. While this monitoring scheme creates some additional burden on LP stations in hardware procurement and configuration, the benefits of specific and through coverage fare outweighs these burdens.

The ability to fully utilize the automated technology of the new EAS to assure 24 hour system reliability and selective signaling was key to the setting of our Michigan EAS goal. Throughout the long range development of the Michigan EAS, emphasis will be placed on configuring a fully automated but interruptible system. Emphasis will be placed on notifiers obtaining EAS encoders and on the reliable interface of the National Weather Service's Specific Area Message Encoder (SAME) into the Michigan EAS structure. Michigan EAS monitoring assignments specify the monitoring of the Local Area LP-1 and LP-2 (and, in some cases, an alternate LP-3 station) by all broadcasters and cable operators and recommend the monitoring of the NOAA weather radio station issuing weather warnings for counties within their coverage area. In the South Eastern Michigan operational area monitoring of NOAA Weather radio is required where reception is possible. In areas where NOAA Weather radio cannot be received, the 67khz subcarrier of WYST (97.1mhz) should be monitored. This subcarrier will retransmit NOAA weather radio on a full time basis.

#### **IV. Originating Stations**

A. The originating stations for the South Eastern Michigan Local Area are WJR (760 kHz), designated Local Primary (LP-1) and WWJ (950 kHz), LP-2.

The 24-hour EAS emergency number for the LP-1 and LP-2 stations for this area are included in Attachment A-VI.

B. An NOAA weather radio station (KEC63, 162.550 MHz) will provide National Weather Service warnings for this area and is required to be monitored by all participating stations.

#### **VI. EAS Message Protocol**

The EAS Systems uses a four part message structure for emergency activation. The four parts are: (1) The preamble and EAS header codes; (2) the audio attention signal; (3) The EAS message audio text; and (4) the preamble and the end-of-message code. The description of the protocol that follows is provided for informational purposes only, since

the actual generation of EAS messages using FCC type accepted Encoder/Decoder equipment will be much easier and user friendly than this text suggests. In actual practice, the equipment software will allow generating the header and end-of-message codes using plain English entries, through menu prompts. The equipment user interface works much like a bank ATM machine. The FCC protocol is as follows:

*(1) The Preamble and EAS Header*

The preamble and EAS header code contains specific information related to the origination, handling and routing of the EAS message. The code is transmitted by and EAS encoder three times with a one second pause between transmissions. The code format is as follows:

*(Preamble) ZCZC-ORG-EEE-PSSCCC+TTTT-JJJHHMM-LLLLLLL*

The preamble portion of this code contains a consecutive string of date bits used to clear the system equipment, set the equipment automatic gain control and set the decoder clocking cycles. This is a fixed code that is used at the beginning of all EAS headers and end of message codes.

*The ZCZC = (start of ASCII code) – Send automatically by the EAS Encoder.*

*The ORG = (the originator code) – Pre-set once by user, then sent automatically by the encoder. The following originator codes will be used as part of the Michigan EAS.*

<u>ORIGINATOR</u>	<u>CODE</u>
Broadcast Station or Cable system	EAS
Civil authorities	CIV
Emergency Action Notifications	EAN (National use only)
Nation Weather Service	WXR
Primary Entry Point system	PEP (National use only)

*EEE = (the event code) – Determined by the user each time an alert is sent. Indicates the nature of the EAS activation. See paragraph VI, C, for the list of event codes to be used in the Michigan EAS. Those event codes marked \*\* are required to be programmed as presets in all EAS decoders by FCC rules. Those events codes marked \* are specified to be programmed as pre-sets in all EAS decoders of stations and cable systems participating in the Michigan EAS system.*

*PSSCCC = (the location code) – determined by the user each time an alert is sent. This code indicates the geographic area affected by the EAS alert. Up to 31 location codes can be put into one EAS alert header. The location code uses Federal Information Processing System (FIPS) numbers to define areas. The PSSCCC code breakout is as follows:*



The "P" defines county subdivisions as indicated in the following table. A "0" in the "P" position indicates an entire county:

1 = NW	2 = NC	3 = NE
4 = WC	5 = C	6 = EC
7 = SW	8 = SC	9 = SE

(Michigan does not anticipate using county subdivisions at the present time. Therefore, an "0" should be used as the "P" code.

The SS defines the state the EAS is being issued for. The SS codes for Michigan and adjacent states are as follows:

Illinois	17
Indiana	18
Michigan	26
Ohio	39
Wisconsin	55

The CCC refers to the county affected. A 000 in this code refers to an entire state. The three digit Michigan county FIPS codes: For South Eastern Michigan are as follows:

Wayne	163
Macomb	099
Monroe	115
Oakland	125
St. Clair	147

*+TTTT = (Duration of alert)* – Determined by user each time alert is sent. This code is in 15 minute segments up to one hour, and 30 minute segments beyond one hour. The code is as follows: 15 min. = +0015; 30 min. = +0030; 45 min. = +0045, one hour = +0100; one hour 30 min = +0130, etc. Except for weather related alerts, a one hour minimum is recommended to allow enough time for messages to reach all necessary distribution points.

*JJHHMM = (Date/Time stamp)* – Attached automatically by the encoder. JJJ is the three digit Julian day of the year. The HHMM is the time in hours and minutes using 24-hour universal coordinated time. In Michigan, universal coordinated time can be determined by adding five hours to Eastern Standard Time (EST) or four hours to Daylight Saves Time (DST). This code remains unchanged for all re-transmissions.

*LLLLLLLL = (Eight character ID, identifies the broadcaster, cable operator, NWS office, or Civil authority sending or relaying the message.)* All eight digit positions must be used. Dashes must not be used. After initial programming, the EAS encoder will

automatically affix this code to all outgoing EAS messages. The LLLLLLLL codes in Michigan will follow the convention shown the examples given below:

WGRYAMFM	-	Broadcast Station Combo
WILSWHZZ	-	Broadcast station combo (w/diff calls)
WJR (AM)_	-	Single broadcast station
WWJ (AM)_	-	Single broadcast station
WDIV (TV)	-	Television Station
WILX-TV_	-	Television Station
KDTX/NWS	-	NWS, NOAA weather radio
MARQCOEM	-	County Emergency Management (Example, Marquette County)
MARQCOSO	-	County Sheriff (example, Marquette County)
MSP/EOC	-	Michigan State Emergency Management Division

"L" codes for county notifier encoders can be found in Attachment IV to this plan. "L" codes for cable systems will be assigned by the SECC Cable Chairman by July 1, 1997.

*(2) Audio Attention Signal*

The audio attention signal is a two-tone signal transmitted after the EAS header code. This signal is eight (8) seconds in duration and serves to alert listeners to an upcoming emergency broadcast.

*(3) EAS Message Text.*

The EAS message text is the actual text of the emergency message to be transmitted. All South Eastern Michigan Local Area EAS messages will begin with the statement: "We interrupt this program to activate the South Eastern Michigan Local Area Emergency Alert System, for special emergency information" and end with the statement: "This concludes this message regarding the activation of the South Eastern Michigan Local Area Emergency Alert System. Stay tuned to this station for further information." This audio message including open, close and body must be limited to two (2) minutes in order to fit within the recording space provided in the EAS Decoders.

*(4) End-of-Message Code*

The end-of-message, generated by pushing a button, is the preamble followed by a string of four ASCII "N" characters. The end-of-message code is transmitted by the encoder three times with one second pauses between transmissions. Its purpose is to return automated broadcast programming equipment to normal programming after an EAS interruption.

B. The EAS Protocol described above is taken from the FCC Rules, Part 11, and shall be used exclusively by the Michigan EAS System. Each participating station, subject cable system and notifiers in the state shall program their EAS Decoder/Encoder to facilitate the proper functioning of the system as described in this Local Area Plan.

*C. Michigan Event Codes*

Whether used under the authority of the Michigan State EAS Plan, or any of the 12 Local Area EAS Plans, the following are the only Event Codes to be used in Michigan by anyone for any purpose. No codes can be used in Michigan by anyone for any purpose. No codes can be added without SECC/FCC approval. Local Areas wishing to use a code not on this list should submit that code request to the SECC for FCC approval and subsequent addition to the list. This list shall be maintained as a "Master List" for all event codes used in the State of Michigan. The SECC recommends pre-setting this entire list in your decoder.

**MANDATED FCC EVENT CODES**

Emergency Action Notifications	EAN***
Emergency Action Termination	EAT***
National Information Center	NIC
National Periodic Test	NPT
Required Monthly Test	RMT**
Required Weekly Test	RWT**
Tornado Watch	TOA
Tornado Warning	TOR*
Severe Thunderstorm Watch	SVA
Sever Thunderstorm Warning	FFA
Flash flood Watch	SVR
Flash Flood Warning	FFW*
Flash Flood Statement	FFS
Flood Watch	FLA
Flood Warning	FLW
Flood Statement	FLS
Winder Storm Watch	WSA
Winter Storm Warning	WSW
Blizzard Warning	BZW
High Wind Watch	HWA
High Wind Warning	HWW
Evacuate Immediate	EVI*
Civil Emergency Message	CEM*
Practice/Demo Warning	DMO

**MICHIGAN ADOPTED SPECIAL EVENT CODES**

Closed Circuit Test	CCT
Earthquake Warning	EQW*
Fire Warning	FRW
Fog Warning	FOW
Gas Leak Emergency	GLE*
Icy Road Warning	IRW
Industrial Plant Emergency	IPE*
Law Enforcement Emergency	LEE*

**MICHIGAN ADOPTED SPECIAL EVENT CODES (continued)**

Local Area Emergency	LAE*
Marine Warning	MRW
Military Emergency	MLE
Nuclear Power Plant Emergency	NPE*
Nuclear Power Plant Test	NPT
Radiological Emergency	RDE*
School Closing Emergency	SCE
Shelter in Place Advisory	SIP
State Emergency Test	SET*
State Emergency	STE*
Toxic Spill Emergency	TSE*
Telephone Outage Emergency	TOE*

\*\*\* Already pre-set in all decoders by FCC Rules

\*\* Required Tests

\* Specified to be pre-set in decoders, as a minimum, per the Michigan State EAS Plan.

*D. Michigan Location codes (PSSCCC):*

Michigan does not anticipate using the "P" code at the present time. A "0" should be entered for the "P" code. The remaining five (5) digits ("SSCCC") indicate the state, "26" for Michigan, and county as listed below:

Alcona	26001	Lake	26085
Alger	26003	Lapeer	26087
Allegan	26005	Leelanau	26089
Alpena	26007	Lenawee	26091
Antrim	26009	Livingston	26093
Arenac	26011	Luce	26095
Baraga	26013	Mackinac	26097
Barry	26015	Macomb	26099
Bay	26017	Manistee	26101
Benzie	26019	Marquette	26103
Berrien	26021	Mason	26105
Branch	26023	Mecosta	26107
Calhoun	26025	Menominee	26109
Cass	26027	Midland	26111
Charlevoix	26029	Missaukee	26113
Cheboygan	26031	Monroe	26115
Chippewa	26033	Montcalm	26117
Clare	26035	Montmorency	26119
Clinton	26037	Muskegon	26121
Crawford	26039	Newaygo	26123
Delta	26041	Oakland	26125
Dickinson	26043	Oceana	26127

Eaton	26045	Ogemaw	26129
Emmet	26047	Ontonagon	26131
Genessee	26049	Osceola	26133
Gladwin	26051	Oscoda	26135
Gogebic	26053	Ostego	26137
Grand Traverse	26055	Ottawa	26139
Gratiot	26057	Presque Isle	26141
Hillsdale	26059	Saginaw	26145
Houghton	26061	Roscommon	26143
Huron	26063	St. Clair	26147
Ingham	26065	St. Joseph	26149
Ionia	26067	Sanilac	26151
Iosco	26069	Schoolcraft	26153
Iron	26071	Shiawassee	26155
Isabella	26073	Tuscola	26157
Jackson	26075	Van Buren	26159
Kalamazoo	26077	Washtenaw	26165
Kalkaska	26079	Wayne	26163
Kent	26081	Wexford	26165
Keweenaw	26083		

## VII. Monitoring Assignments

As indicated in Paragraph V, WJR is the South Eastern Michigan Local Area Primary station (LP-1) and will be originator for South Eastern Michigan Local Area EAS messages. WWJ, the alternate Local Primary station (LP-2) will serve as the alternate originator for the South Eastern Michigan Local Area EAS and will monitor WJR. All South Eastern Michigan Local Area stations and cable systems shall monitor WJR and WWJ. (See Attachments I and III). In addition to the LP stations, all participating stations and cable systems are required to monitor the National Oceanic and Atmospheric Administration (NOAA) weather radio station KEC63.

B. If monitoring difficulties are experienced, the local area chairman should be consulted in resolving the problem. The local area chairman will co-ordinate any waiver necessary with the SECC chairman and the FCC.

## VIII. Responsibilities of Participating Stations

A. Stations serving the Michigan EAS system are the key to the effective dissemination of emergency information to the public. Stations shall re-transmit as a minimum any emergency message carrying event codes: CEM, EAN, EAT, EVI, RMT, or TOR which affect any county in their secondary coverage area. This will ensure message dissemination through all broadcast and cable media which may have listeners, views or subscribers in the area affected by the emergency. This will require effort and attention to detail in EAS decoder programming, station operational planning and staff training. Station engineers or other responsible personnel should be sure that their station procedures and encoder/decoder programming adhere to this plan. Your local area

chairperson, adjoining area chairperson the state chairperson will assist you if questions arise regarding the implementation of this plan.

B Participating stations must program their EAS decoders to accept emergency messages carrying location codes for all counties which are covered, in whole or in part, by their secondary coverage contour.

#### IX. Notification Procedures

A. *Notifiers:* The Emergency Management coordinator for each of the five (5) counties in the South Eastern Michigan Local Area are the designated officials authorized to request activation of the EAS and are known as notifiers. All other local officials must request EAS activation through the authorized notifiers.

B. At the initial implementation of the Michigan EAS, notification will rely on verbal contact with the Local Primary (LP) station for notification requests. Until such time as the notifier has the proper encoding equipment the Local Primary Station will authenticate the request by telephone call-back using the telephone verification list included in Attachment III. As EAS encoders are installed at the county or city Emergency Operations Centers (EOC), automated notification will become the primary EAS activation method.

C. *Requests for Activation:* Requests for activation of the South Eastern Michigan Local Area EAS for civil emergencies will be made by contacting WJR (LP-1) for this operational area. Refer to Attachment A-VI for telephone number. If the LP-1 station cannot be reached, the LP-2 station should be contacted. Emergency communications from designated notifiers will be handled immediately. Notifiers should have all information to be broadcast prepared and ready to read prior to requesting an EAS activation. Prepared information should contain the type of emergency, area affected and action that should be taken.

D. *Authentication:* Authentication of all requests for activation of the South Eastern Michigan Local Area EAS made by telephone will be verified by call back. See Attachment A-VI for verification numbers.

E. *Severe Weather Warnings:* The national Weather Service (NWS) will serve as the primary notifier for severe weather warnings and subsequent weather information. Detailed activation procedures have been agreed upon by the NWS and the LP stations. The primary means of NWS activation for the Michigan EAS will be over the NOAA Weather Radio Specific Area Message Encoder (SAME) through station monitoring of the NOAA weather radio system. In the event of failure of the NOAA weather radio system the NWS will contact the LP-1 and LP-2 stations directly by phone for EAS activation in severe weather situations. The LP-1, LP-2 stations will relay warnings for all counties in the area.

**X. Broadcasters' Procedure**

*A. Pre-formatted Alert:* Upon receipt of a pre-formatted EAS alert from an appropriate notifier and verification has been made of this authenticity, the appropriate LP station shall retransmit that alert immediately.

*B. Verbal Activation Request:* Upon receipt of a request to activate the south Eastern Michigan EAS from an appropriate notifier via a telephone call, and verification has been made of its authenticity, the appropriate LP station shall proceed as follows:

- (1) Determine and prepare the text of the message to be broadcast.
- (2) Prepare the EAS message header to include the EAS protocol with the proper originator, event, location codes, effective time and attention signal.
- (3) Transmit the EAS message header and attention tones.
- (4) Broadcast the emergency announcement audio, not to exceed two minutes in length. All South Eastern Michigan Local Area EAS messages are to be formatted and preceded with the following beginning and ending statements: "WE INTERRUPT THIS PROGRAM TO ACTIVATE THE SOUTH EASTERN MICHIGAN LOCAL AREA EMERGENCY ALERT SYSTEM BECAUSE OF AN EMERGENCY AFFECTING THE AREA."

(Text of the emergency announcement)

"THIS CONCLUDES THIS MESSAGE REGARDING ACTIVATION OF THE SOUTH EASTERN MICHIGAN LOCAL AREA EMERGENCY ALERT SYSTEM. STAY TUNED TO THIS STATION FOR FURTHER INFORMATION."

- (5) Transmit the EAS end-of-message code.

*C.* All broadcast stations and cable systems in the South Eastern Local Area monitoring and key LP stations will be alerted by the EAS decoders based on the event and location codes contained in the EAS digital header. Upon receipt of a valid EAS message each station or cable system should retransmit the message within 15 minutes of receipt.

*D.* To avoid unnecessary escalation of public confusion, all broadcast stations must be cautious in providing information and news pertaining to the emergency. All messages must be based on definite and confirmed facts. This can best be assured by using the notifiers or originating station's own audio as transmitted through the EAS decoder/encoder equipment.

*E.* Upon completion of the EAS transmission, appropriate notations must be entered into the station log. It is suggested that the FCC's EAS office be notified of EAS activation by filing FCC form 201.

## **XI Legal Matters**

As a reminder to broadcasters, the following legal points are made regarding emergency alert operations. (for complete information, consult FCC Rules and Regulations, Part 11.)

A. While the broadcast of EAS messages is encouraged, use of Michigan EAS material is solely up to the discretion of individual station or cable system management. Although the activation of the EAS is discretionary at the state and local levels, if it is activated, all communications facilities within the affected area that are participating in the EAS at the state or local level are expected to take part in the activation and to follow the requirements of the FCC's rules, the EAS Operating Handbook, the State EAS Plan and this Local Area Plan. (See FCC Rules, Part 11, Secs. 11.21, 11.41 and 11.55).

B. All participating stations have permission to rebroadcast Michigan EAS messages. Such rebroadcast permission begins with issuance of the EAS signaling and alert tones, and ends with the EAS end-of-message code. Stations are encouraged to configure their EAS encoders for automatic relay of EAS messages. Unattended stations must operate EAS encoders for automatic relay of EAS messages.

C. In the event of an EAS activation, stations with certain power, pattern and operating hours limitations may forego those limitations subject to FCC Rules and Regulations.

## **XII. Steps Stations should Take To Participate In the Southeastern Michigan Local Area Emergency Alert Systems**

A. The success of the South Eastern Michigan Local Area EAS will hinge entirely upon the operating staff and equipment configuration of each broadcast station at the time of a weather warning or other emergency which justifies activation of the Michigan EAS.

B. All Michigan EAS stations must have an EAS Encoder/Decoder fed by audio from their LP-1, LP-2 and NWS monitoring assignments. A list of additional NOAA radio stations covering is provided in Attachment IV. Encoder/Decoders must be programmed (pre-set) to accept EAS messages carrying all the FCC required event codes (normally done by the equipment manufacturer). The SECC encourages stations and cable operators to pre-set all event codes shown in Paragraph VI.

C. As a minimum, those required by the FCC and those shown with a single asterisk must be pre-set in order to participate in the Michigan EAS system. Decoders should be programmed to accept any county location code within the station's secondary coverage contour. Unless a facility is attended 24 hours, encoder/decoders should be configured to automatically rebroadcast properly addressed EAS messages. EAS equipment should be configured to notify station personnel of any EAS activation. LP stations must program their decoders for additional location codes as prescribed in the State EAS plan. Cable systems should program their decoders to cover any county location code covered by their system.



D. Placement of the EAS equipment is critical. It must be placed where regular station personnel can hear it and observe the message printer on the decoder, should it be activated at any time.

E. Each station is unique in the role that it plays in the EAS system. Questions related to this plan or on the specific details and requirements for fulfilling the needs of the specific area should be addressed to the South Eastern Michigan Local Area EAS chairperson or vice chairperson.

F. Stations should, based on this plan, devise their own standard operating procedures, and those procedures should be posted at the EAS equipment for quick reference by station personnel to use as a guide at the time of activation, nor can station personnel be expected to remember what to do after studying this plan. This plan must be applied to each station. Therefore a clear, concise step-by-step operating procedure, readily available, for operating personnel to use at the time of an emergency, is absolutely necessary if the EAS is to be successful.

G. The EAS has both audio and video capabilities. Television stations and cable TV systems participating in the Michigan EAS must have systems configured at all times to air the EAS message crawl as well as audio during EAS messages. All participating stations and cable systems are encouraged to purchase EAS equipment with multiple monitoring capability. This must include as a minimum the ability to monitor two assigned over-the-air LP broadcast stations plus a NOAA weather radio station. For LP-1 and LP-2 stations equipment should also allow for the telephone interface of notifiers' encoders or the interface of existing remote pickup unit equipment, if appropriate. Local Primary stations should pay particular attention to their multiple monitoring responsibilities when selecting EAS equipment.

H. All participating stations should assign a permanent input on their master control console to receive program audio from the LP station sources as shown on the station monitoring chart in Attachment I.

### **XIII. Test Procedures**

A. EAS weekly tests of the EAS header and end-of-message codes must be conducted by all stations in accordance with FCC Rules. This is known as the Required Weekly Test (RWT).

B. South Eastern Michigan Local Area monthly tests will be originated by the South Eastern Michigan Local Primary (LP) stations or from county Emergency Operations Centers on the following schedule. Tests will be conducted in accordance with FCC Rules and Regulations. Tests must be re-transmitted within 15 minutes of receipt by all participating EAS stations. Tests originating from County Emergency Operations Centers will be initiated by the county Emergency Management Agency on a rotational basis.

<u>MONTH</u>	<u>TIME FRAME</u>	<u>STATION</u>	<u>ORIG. SOURCE</u>
January	Day/8:30 AM to Local Sunset	LP-1	County EOC
February	Night/Local Sunset to 8:30 AM	LP-2	Station Staff
March	Day/Statewide Tornado Test	SP	State EOC
April	Night/Local sunset to 8:30 AM	LP-1	Station Staff
May	Day/8:30 AM to Local Sunset	LP-2	County EOC
June	Night/Local Sunset to 8:30 AM	LP-2	Station Staff
July	Day/8:30 AM to Local Sunset	LP-1	County EOC
August	Night/Local Sunset to 8:30 AM	LP-1	Station Staff
September	Day/8:30 AM to Local Sunset	LP-2	County EOC
October	Night/Local Sunset to 8:30 AM	SP	State EOC
November	Day/8:30 AM to Local Sunset	LP-1	Michigan State Police (Northville)
December	Night/Local Sunset to 8:30 AM	LP-2	Station Staff

C. Statewide EAS tests will be conducted twice each year and will count as the required monthly test for the month in which it runs. One of these tests will take place as part of the Michigan "Severe Weather Awareness Week" activities, held in March of each year. This test will be conducted on a Wednesday in March at 09:50 AM, or such other time as can be determined. A second statewide EAS test will be conducted in October between the hours of Local sunset and 8:30 AM. The SECC will send a mailing to all stations announcing these tests. Statewide EAS tests will be originated by the Michigan State Police from the State Emergency Operations Center (EOC), in East Lansing. Every attempt will be made to adjust the test times so that all broadcast stations can accommodate the inclusion of the RMT with minimal interruption of their programming within the 15 minute retransmission requirements.

D. The following script will be used for statewide tests or Local Area monthly tests:

"THIS IS A COORDINATED MONTHLY (STATEWIDE/LOCAL TEST OF THE EMERGENCY ALERT SYSTEM, ORIGINATING FROM THE (\_\_\_\_\_) COUNTY EMERGENCY OPERATIONS CENTER)

OR (EAS LOCAL PRIMARY STATION FOR THIS AREA.)

OR (MICHIGAN STATE POLICE EMERGENCY OPERATIONS CENTER IN LANSING)

EQUIPMENT THAT CAN QUICKLY WARN YOU DURING EMERGENCIES IS BEING TESTED.

IF THIS HAD BEEN AN ACTUAL EMERGENCY, SUCH AS A TORNADO, A TOXIC MATERIAL RELEASE, NUCLEAR PLANT INCIDENT, OR OTHER STATE OR LOCAL EMERGENCY THAT AFFECTS YOUR SAFETY, OFFICAL MESSAGES WOULD HAVE FOLLOWED THE ALERT TONE.

THIS STATION SERVES THE (EAS AREA NAME) AREA.

THIS CONCLUDES THIS TEST OF THE EMERGENCY ALERT SYSTEM."

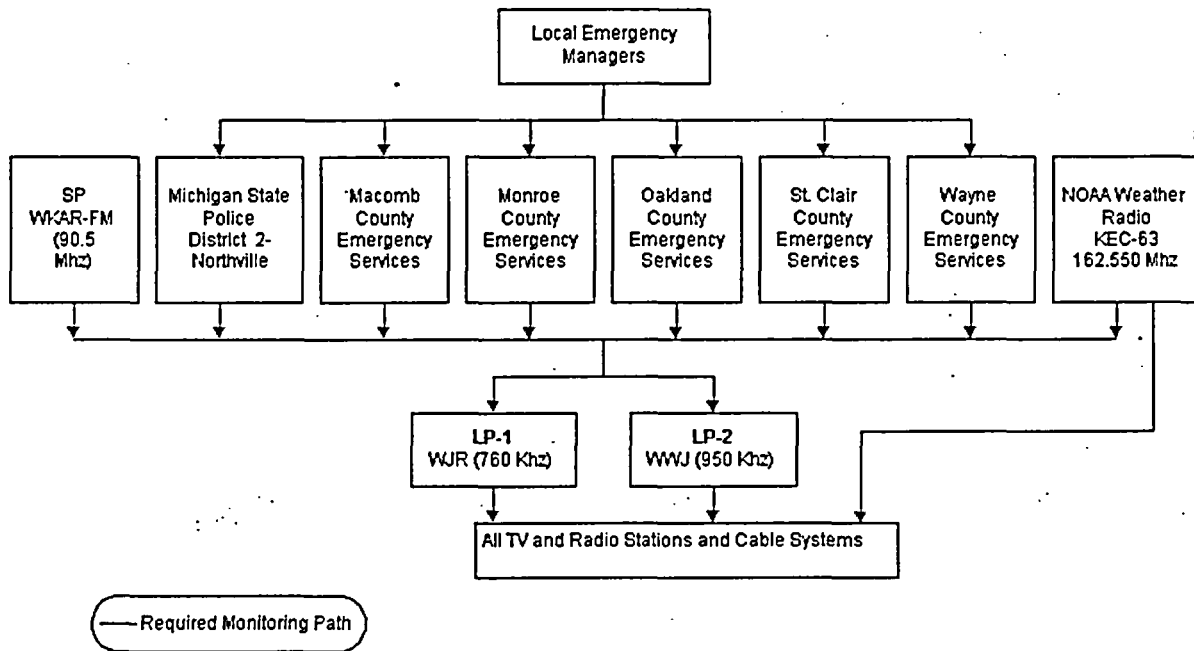
- XIV. Michigan EAS emergency Communications Committee (ECC)**  
Emergency Communications Committee (ECC) Chairperson and Vice Chairperson are appointed by the Federal Communications Commission (FCC).

State Emergency Communications Committee (SECC) members include a State Co-Chairperson, a Cable Co-Chairperson, a State Vice Chairperson, the Chairperson and Vice Chairperson of the Southeastern Michigan Local Areas, a representative of the Governor's Office, a representative of the Michigan State Police, a representative of the National Weather Service and other voluntary members appointed by the SECC. The Southeastern Michigan and the State ECC Co-Chairpersons and Vice Chairperson are listed in Attachment V.

**XV. Acronyms**

EAS	Emergency Alert System
FEMA	Federal Emergency Management Agency
EOC	Emergency Operations Center
FCC	Federal Communications Commission
LP-1	Local Primary Station
LP-2	Local Primary Station, alternate
LP-3	Local Primary Station, alternate
LECC	Local Emergency Communications Committee
NOAA	National Oceanic and Atmospheric Administration
NWS	National Weather Service
RPU	Remote Pickup Unit
SAME	Specific Area Message Encoder
SECC	State Emergency Communications Committee

## Southeastern Michigan EAS Monitoring Chart



## Attachment II

### WBRB - AM , MI

Phone:                      Fax:                      Status: PN  
Frequency or CH.: 1430 KHZ                      Facility: .5/5 KW / DA-2 U  
City of License: MT. CLEMENS, MACOMB County                      Fips: 26099

### WCAR - AM

32500 Parklane St,      Garden City, MI 48135-1527  
Phone: 313-252-1111      Fax: 313-525-3608                      Status: PN  
Frequency or CH.: 1090 KHZ Facility: .5/25 KW / DA-2 U  
City of License: LIVONIA, WAYNE County                      Fips: 26163

### WCHB - AM

32790 Henry Ruff Road, MI      Romulus, MI 48174  
Phone: 313-278-1440      Fax:                      Status: PN  
Frequency or CH.: 1200 KHZ                      Facility: .7/25 KW / DA-2 U  
City of License: TAYLOR, WAYNE County                      Fips 26163

### WDFN - AM

2930 E. Jefferson Ave.,      Detroit MI 48207-5029  
Phone: 313-259-4323      Fax: 313-259-9079                      Status: PN  
Frequency or CH.: 1130 KHZ                      Facility: 10/50. KW / DA-2 U  
City of License: DETROIT, WAYNE County                      Fips: 26163

### WDOZ - AM

P.O. Box 1310      Dearborn, MI 48121-1310  
Phone: 313-846-8500      Fax: 313-846-1068                      Status: PN  
Frequency or CH.: 1310 KHZ                      Facility: .5/5 KW / DA-2 U  
City of License: DEARBORN, WAYNE County                      Fips: 26163

### WEXL - AM

317 E. 11 Mile Rd.      Royal Oak, MI 48067-2736  
Phone: 248-544-2200      Fax:                      Status: PN  
Frequency or CH.: 1340 KHZ                      Facility: 1/1. KW / DA-2 U  
City of License: ROYAL OAK, OAKLAND County                      Fips: 26125

### WHLS - AM

808 Huron Avenue      Port Huron, MI 48060-3705  
Phone: 810-987-1450      Fax: 810-987-9380                      Status: PN  
Frequency or CH.: 1450 KHZ                      Facility: 1. KW / ND-1 U  
City of License: PORT HURON, ST. CLAIR County                      Fips: 26147

### WIFN - AM

P.O. Box 310      Marine City, MI 48039-0310  
Phone: 810-764-8893      Fax: 810-765-8894                      Status: PN  
Frequency or CH.: 1590 KHZ                      Facility: .102/1. KW / DA-2 U  
City of License: MARINE CITY, ST. CLAIR County                      Fips: 26147

### WJR - AM

2100 Fisher Building      Detroit, MI 48202  
Phone: 313-876-4440      Fax: 313-875-9022                      Status: LP-1/BSPP  
Frequency or CH.: 760 KHZ Facility: 50 KW / ND-1 U  
City of License: DETROIT, WAYNE County                      Fips: 26163

**WLLZ - AM** 22150 Greefield Road, Suite 200 Oak Park, MI 48237  
Phone: 248-968-4100 Fax: 248-962-4100 Status: PN  
Frequency or CH.: 560 KHZ Facility: .027/.500 KW / DA-2 U  
City of License: MONROE, MONROE County Fips: 26115

**WLQV - AM** 29200 Vassar St., Ste 650 Livonia, MI 48152-2116  
Phone: 248-477-4600 Fax: 248-477-6911 Status: PN  
Frequency or CH.: 1500 KHZ Facility: 5/50. / DA-2 U  
City of License: DETROIT, WAYNE County Fips: 26163

**WNZK - AM** 21700 Northwestern Hwy., Ste. 1190 Southfield, MI 48075  
Phone: 248-557-3500 Fax: 248-557-3241 Status: PN  
Frequency or CH.: 690 KHZ Facility: 1. KW / DA-D D  
City of License: Westland, Wayne, County Fips: 26163

**WPHM - AM** 2379 Military St. Port Huron, MI 48060-6662  
Phone: 810-987-4100 Fax: 810-987-4045 Status: PN  
Frequency or CH.: 1380 KHZ Facility: 5-.5. KW / DA-2 U  
City of License: PORT HURON, ST. CLAIR County Fips: 26147

**WPON - AM** 2222 Franklin Rd. Bloomfield Hills, MI 48302-0330  
Phone: 248-332-8883 Fax: 248-332-5470 Status: PN  
Frequency or CH.: 1460 KHZ Facility: 0.76/1. KW / DA-2 U  
City of License: WALLED LAKE, OAKLAND County Fips: 26125

**WQBH - AM** Penobscot Ste. 2050 Detroit, MI 40226-4009  
Phone: 313-965-4500 Fax: 313-965-4608 Status: PN  
Frequency or CH.: 1400 KHZ Facility: 1. KW / ND-1 U  
City of License: DETROIT, WAYNE County Fips: 26163

**WUFL - AM** P.O. Box 1030 Sterling Heights, MI 48311-1030  
Phone: 810-263-1030 Fax: 810-228-1030 Status: PN  
Frequency or CH.: 1030 KHZ Facility: 5. KW / ND-1 U  
City of License: STERLING HEIGHTS, MACOMB County Fips: 26099

**WWJ - AM** 16550 W. 9 Mile Road Southfield, MI 48075-4705  
Phone: 248-423-3300 Fax: 248-423-3326 Status: LP-2/BSPP  
Frequency or CH.: 950 KHZ Facility: 5/5. KW / DA-N U  
City of License: DETROIT, WAYNE County Fips: 26163

**WXYT - AM** P.O. Box 905 Southfield, MI 48037-0905  
Phone: 248-569-8000 Fax: 248-569-9866 Status: PN  
Frequency or CH.: 1270 KHZ Facility: 5/5. KW / DA-N U  
City of License: DETROIT, WAYNE County Fips: 26163

**WAHS - FM** 2950 Waukegan St. Auburn Hills, MI 48326-3264  
Phone: 248-852-3961 Fax: 248- Status: PN  
Frequency or CH.: 89.5 MHZ Facility: .100 KW / 43 METERS  
City of License: AUBURN HILLS, OAKLAND County Fips: 26125

**WVFM-FM** 4200 Andover Road Bloomfield Hills, MI 48302-2000  
Phone: 248-645-4740 Fax: 248-454-4744 Status: PN  
Frequency or CH.: 88.1 MHZ Facility: .36 KW / 55 METERS  
City of License: BLOOMFIELD HILLS, OAKLAND County Fips: 26125

**WBLD - FM** 4925 Orchard Lake Rd. West Bloomfield, MI 48323-2964  
Phone: 248-851-8930 Fax: Status: PN  
Frequency or CH.: 89.1 MHZ Facility: .015 KW / 49 METERS  
City of License: WEST BLOOMFIELD, OAKLAND County Fips: 26125

**WCHB - FM** 2994 E. Grand Blvd. Detroit, MI 48202-3134  
Phone: 313-871-0590 Fax: 313-871-8770 Status: PN  
Frequency or CH.: 105.9 MHZ Facility: 20.0 KW / 221 METERS  
City of License: DETROIT, WAYNE County Fips: 26163

**WCSX - FM** 1 Radio Plaza St. Detroit, MI 48220-2140  
Phone: 248-398-7600 Fax: 248-398-2012 Status: PN  
Frequency or CH.: 94.7 MHZ Facility: 13.5 KW / 290 METERS  
City of License: BIRMINGHAM, OAKLAND County Fips: 26125

**WDET - FM** 4600 Cass Ave. Detroit, MI 48201-1222  
Phone: 313-577-4146 Fax: 313-577-1300 Status: PN  
Frequency or CH.: 101.9 MHZ Facility: 79. KW / 137 METERS  
City of License: DETROIT, WAYNE County Fips: 26163

**WDRQ - FM** 28411 Northwestern Hwy., Ste. 1000 Southfield, MI 48034-5540  
Phone: 248-354-9300 Fax: 248-354-1474 Status: PN  
Frequency or CH.: 93.1 MHZ Facility: 26.5 KW / 204 METERS  
City of License: DETROIT, WAYNE County Fips: 26163

**WDTR - FM** 9345 Lawton St. Detroit, MI 48206-1905  
Phone: 313-596-3507 Fax: 313-596-3517 Status: PN  
Frequency or CH.: 90.9 Facility: 42. KW / 165 METERS  
City of License: DETROIT, WAYNE County Fips: 26163

**WEJY-FM** 1275 n. Macomb St. Monroe, MI 48162-3128  
Phone: Fax: Status: PN  
Frequency or CH.: 97.5 MHZ Facility: .008 KW / 41 METERS  
City of License: MONROE, MONROE County Fips: 26115

**WGPR - FM** 3146 E. Jefferson Detroit, MI 48207  
Phone: 313-259-8862 Fax: 313-259-6662 Status: PN  
Frequency or CH.: 107.5 MHZ Facility: 50 KW  
City of License: DETROIT, WAYNE County Fips: 26163

**WGTR - FM** 624 Grand river Avenue Port Huron, MI 48060-3817  
Phone: 810-987-3200 Fax: 810-987-3325 Status: PN  
Frequency or CH.: 102.3 MHZ Facility: 3. KW / 97 METERS  
City of License: PORT HURON, ST. CLAIR County Fips: 26147

**WHFR - FM** 5101 Evergreen Road Dearborn, MI 48128-2407  
Phone: 313-846-9634 Fax: Status: PN  
Frequency or CH.: 89.3 MHZ Facility: .270 KW / 30 METERS  
City of License: DEARBORN, WAYNE County Fips: 26163

**WHPR - FM** , MI  
Phone: 810-956-0109 Fax: Status: PN  
Frequency or CH.: 88.1 MHZ Facility: .011 KW / 32 METERS  
City of License: HIGHLAND PARK, WAYNE County Fips: 26163

**WHYT - FM** 2100 Fisher Building Detroit, MI 48202  
Phone: 313-871-3030 Fax: 313-871-1744 Status: PN  
Frequency or CH.: 96.3 MHZ Facility: 20.0 KW / 240 METERS  
City of License: DETROIT, WAYNE County Fips: 26163

**WJLB - FM** 645 Griswold Detroit, MI 48226-4044  
Phone: 313-965-2000 Fax: 313-965-2000 Status: PN  
Frequency or CH.: 97.9 MHZ Facility: 50 KW / 149 METERS  
City of License: DETROIT, WAYNE County Fips: 26163

**WKQI - FM** 15401 10 Mile Rd. Oak Park, MI 48237-1467  
Phone: 248-967-3750 Fax: 248-967-0840 Status: PN  
Frequency or CH.: 95.5 KHZ Facility: 100. KW / 131 METERS  
City of License: DETROIT, WAYNE County Fips: 26163

**WMUZ - FM** 12300 Radio Plaza Detroit, MI 48228-1029  
Phone: 313-272-3434 Fax: 313-272-5045 Status: NN  
Frequency or CH.: 103.5 MHZ Facility: 50. KW / 142 METERS  
City of License: DETROIT, WAYNE County Fips: 26163

**WMXD - FM** 645 Griswold Detroit, MI 48226-4004  
Phone: 313-965-2000 Fax: 313-965-2000 Status: PN  
Frequency or CH.: 92.3 Facility: 50. KW / 140  
City of License: DETROIT, WAYNE County Fips: 26163

**WNFA - FM** 2865 Maywood Drive Port Huron, MI 48060-7719  
Phone: 810-985-3260 Fax: 810-985-7712 Status: PN  
Frequency or CH.: 88.3 MHZ Facility: 1.30 KW / 61 METERS  
City of License: PORT HURON, ST. CLAIR County Fips: 26147

**WNIC - FM** P.O. BOX 1310 Dearborn, MI  
Phone: 313-846-8500 Fax: 313-846-1068 Status: PN  
Frequency or CH.: 100.3 MHZ Facility: 32. KW / 183 METERS  
City of License: DEARBORN, WAYNE County Fips: 26163



**WOMC - FM** 2201 Woodward Hts Detroit, MI 48220-1521  
Phone: 248-546-9600 Fax: 248-546-5446 Status: PN  
Frequency or CH.: 104.3 MHZ Facility: 190 KW / 110 METERS  
City of License: DETROIT, WAYNE County Fips: 26163

**WOPR - FM** 13701 Oak park Blvd. Oak Park, MI 48237-2080  
Phone: 248-548-9677 Fax: Status: NN  
Frequency or CH.: 90.3 MHZ Facility: .016 KW / 29 METERS  
City of License: OAK PARK, OAKLAND County Fips: 26125

**WORB - FM** 27055 Orchard Lake Rd. Farmington Hills, MI 48334-4556  
Phone: 248-471-7789 Fax: Status: PN  
Frequency or CH.: 90.3 MHZ Facility: .012 KW / 42 METERS  
City of License: FARMINGTON HILLS, OAKLAND County Fips: 26125

**WORW - FM** 1799 Krafft Rd Port Huron, MI 48060-8606  
Phone: 810-984-2675 Fax: Status: PN  
Frequency or CH.: 91.9 MHZ Facility: .180 KW / 6 METERS  
City of License: PORT HURON, ST. CLAIR County Fips: 26147

**WOVI - FM** , MI  
Phone: 248-344-8300 Fax: Status: PN  
Frequency or CH.: 89.5 MHZ Facility: .1 KW / 32 METERS  
City of License: NOVI, OAKLAND County Fips: 26125

**WPHS - FM** 30333 Hoover Rd. Warren, MI 48093-6532  
Phone: 810-751-3689 Fax: Status: PN  
Frequency or CH.: 89.1 MHZ Facility: .100 KW / 30 METERS  
City of License: WARREN, MACOMB County Fips: 26099

**WQRS - FM** 28588 Northwestern Hwy. Southfield, MI 48034-8334  
Phone: 248-355-1051 Fax: Status: NN  
Frequency or CH.: 105.1 MHZ Facility: 20.0 KW / 239 METERS  
City of License: DETROIT, WAYNE County Fips: 26163

**WRIF - FM** 1 Radio Plaza St. Detroit, MI 48220-2140  
Phone: 248-547-0101 Fax: 810-398-2012 Status: PN  
Frequency or CH.: 101.1 MHZ Facility: 27.0 KW / 268 METERS  
City of License: DETROIT, WAYNE County Fips: 26163

**WSAQ - FM** 808 Hurone Ave. Port Huron, MI 48060-3705  
Phone: 810-987-1450 Fax: 810-987-9380 Status: PN  
Frequency or CH.: 107.1 MHZ Facility: 6.0 KW / 91 METERS  
City of License: PORT HURON, ST. CLAIR County Fips: 26147

**WSDP - FM** 46181 Joy Road Canton, MI 48187-1316  
Phone: 313-451-6266 Fax: Status: NN  
Frequency or CH.: 88.1 MHZ Facility: .200 KW / 22 METERS  
City of License: PLYMOUTH, WAYNE County Fips: ##

**WSGR - FM** 323 Erie St. Port Huron, MI 48060-3812  
Phone: 810-984-5064 Fax: Status: NN  
Frequency or CH.: 91.3 MHZ Facility: .120 KW / 13 METERS  
City of License: PORT HURON, WAYNE County Fips: 26147

**WSHJ - FM** 24675 Lahser Rd. Southfield, MI 48034-3238  
Phone: 248-746-8630 Fax: 810-746-8631 Status: PN  
Frequency or CH.: 88.3 MHZ Facility: .125 KW / 91 METERS  
City of License: SOUTHFIELD, OAKLAND County Fips: 26125

**WTWR - FM** 7 S. Monroe St. Monroe, MI 48161-2230  
Phone: 313-424-6600 Fax: Status: PN  
Frequency or CH.: 98.3 MHZ Facility: 1.40 KW / 142 METERS  
City of License: MONROE, MONROE County Fips: 26115

**WWMV - FM** 31555 W. 14 Mile Rd. Farmington Hills, MI 48334-1286  
Phone: 248-855-5100 Fax: 248-855-1302 Status: PN  
Frequency or CH.: 98.7 MHZ Facility: 50. KW / 141 METERS  
City of License: DETROIT, WAYNE County Fips: 26163

**WWBR - FM** 850 Stephenson Hwy Troy, MI 48083-1163  
Phone: 248-589-7900 Fax: 248-583-8295 Status: PN  
Frequency or CH.: 102.7 MHZ Facility: 50. KW / 152 METERS  
City of License: MOUNT CLEMENS, MACOMB County Fips: 26099

**WWWW - FM** 2930 E. Jefferson Ave. Detroit, MI 48207-5029  
Phone: 313-259-4323 Fax: 313-259-9079 Status: PN  
Frequency or CH.: 106.7 MHZ Facility: 61. KW / 155 METERS  
City of License: DETROIT, WAYNE County Fips: 26163

**WYCD - FM** 26555 Evergreen Rd Southfield, MI 48076-4230  
Phone: 248-799-0600 Fax: 248-358-9216 Status: PN  
Frequency or CH.: 99.5 MHZ Facility: 21.0 KW / 230 METERS  
City of License: DETROIT, WAYNE County Fips: #26163#

**WKRK - FM** 16555 W.. 9 Mile Rd. Southfield, MI 48075-4705  
Phone: 248-423-3300 Fax: 248-423-3326 Status: PN  
Frequency or CH.: 97.1 MHZ Facility: 12.0 KW / METERS  
City of License: DETROIT, WAYNE County Fips: 26163

**WADL - TV** 15 Mile Road Clinton Township, MI 4848035202  
Phone: 810-790-3838 Fax: 810-790-3841 Status: PN  
Frequency or CH.: CH 38 Facility: 5000 KW / 192 METERS  
City of License: MT. CLEMENS, MACOMB County Fips: 26099

**WDIV - TV** 550 W. Lafayette Blvd. Detroit, MI 48226-3123  
Phone: 313-222-0444 Fax: 313-222-5092 Status: PN  
Frequency or CH.: CH 04 Facility: 100 KW / 306 METERS  
City of License: DETROIT, WAYNE County Fips: ##26163

**WJBK - TV** P.O. Box 2000 Southfield, MI 48037-2000  
Phone: 248-557-2000 Fax: 248-552-0280 Status: PN  
Frequency or CH.: CH 02 Facility: 100 KW / 305 METERS  
City of License: DETROIT, WAYNE County Fips: 26163

**WKBD - TV** 26905 W. 11 Mile Rd. Southfield, MI 48034-2292  
Phone: 248-350-5050 Fax: 248-355-2692 Status: PN  
Frequency or CH.: CH 50 Facility: 2340 KW / 293 METERS  
City of License: SOUTHFIELD, WAYNE County Fips: 26163

**WROK - TV** , MI  
Phone: 248-544-6663 Fax: Status:  
Frequency or CH.: Facility: /.  
City of License: ROYAL OAK, OKALND County Fips: 26125

**WTVS - TV** 7441 2<sup>nd</sup> Ave. Detroit, MI 48240202-270102  
Phone: 313-873-7200 Fax: 313-876-8179 Status: PN  
Frequency or CH.: CH 56 Facility: 2090 KW / 293 METERS  
City of License: DETROIT, WAYNE County Fips: 26163

**WWJ - TV** Stroh River Place #6200 Detroit, MI 48207  
Phone: 313-259-6288 Fax: 313-259-9674 Status: PN  
Frequency or CH.: CH 62 Facility: 1000 KW / 296 METERS  
City of License: DETROIT, WAYNE County Fips: 26163

**WXON - TV** 27777 Franklin Rd., Ste. 1220 Southfield, MI 48034-8262  
Phone: 248-355-2020 Fax: 248-355-0368 Status: PN  
Frequency or CH.: CH 20 Facility: 1200 KW / 293 METERS  
City of License: SOUTHFIELD, WAYNE County Fips: 26163

**WXYX - TV** P.O. Box 987 Southfield, MI 48037-0987  
Phone: 248-827-7777 Fax: 248-827-4454 Status: PN  
Frequency or CH.: CH 07 Facility: 316 KW / 305 METERS  
City of License: DETROIT, WAYNE County Fips: 26163

## Attachment II

### Cable Stations

Booth American Company  
333 West Fort Street  
Detroit, MI 48226  
T - (313) 202-3360  
F - (313) 202-3390

Comcast Cablevision  
12775 Lyndon  
Detroit, MI 48227  
T (313) 934-2519  
F - (313) 934 9490

Comcast Cable  
24744 Eureka  
Taylor, MI 48180  
T - (313) 946-6010  
F - (313) 946-4421

Comcast Cable Grosse Pointe  
15001 Charlevoix Ave.  
Grosse Pointe Park, MI 48230  
T - (313) 822-9200

Comcast Cable of Inkster  
2680 Michigan Ave.  
Inkster, MI 48141  
T - (313) 561-5252

Comcast Cable  
29414 Pardo Road  
Garden City, MI 48135  
T - (313) 427-4940

Time Warner of Livonia  
14525 Farmington Road  
Livonia, MI 48151  
T - (313) 422-2810

Time Warner of Redford  
P.O. Box 39178  
Redford, MI 48239  
(313) 538-1313

Time Warner Cable  
15200 Mercantile  
Dearborn, MI 48120  
T - (313) 336-4300

Continental Cablevision  
2800 S. Guley Road  
Dearborn Heights, MI 48125  
T - (313) 277-1050  
F - (313) 277-1796

Continental Cablevision  
8465 Ronda Drive  
Canton, MI 48187  
T - (313) 459-7300

TCI Cablevision Downriver  
21170 Allen Road  
Woodhaven, MI 48183  
T - (313) 675-8304  
F - (313-675-1987

Omnicom Cablevision  
12750 Huron River Drive  
Romulus, MI 48174  
T - (313) 459-7300

## Attachment II

### Cable Stations

Wyandotte Municipal Services  
CATV Department  
3005 Biddle Ave.  
Wyandotte, MI 48192  
T – (313) 282-7100

Continental Cablevision  
27800 Franklin Road  
Southfield, MI 48034  
T – (248) 353-3905  
F – (248) 353-0141

Cablevision Industries of Dearborn/Wayne  
15200 Mercantile Drive  
Dearborn, MI 48120  
T – (313) 336-4300  
F – (313) 271-2600

Harron Communications  
5580 New Haven Road  
Chesterfield, MI 48051  
T – (800) 427-7622  
F – (800) 749-1101

Horizon Cablevision  
Lansing Road  
Charlotte, MI 48813  
T (517) 543-1245

Booth Communications  
645 South Eaton  
Birmingham, MI 48009  
T – (248) 540-6739  
F – (248) 540-6739

Comcast Cable of SE Michigan  
6095 Wall Street  
Sterling Heights, MI 48077  
T – (810) 978-8780  
F – (810) 978-1511

Comcast Cablevision  
3008 Airpark Drive  
Flint, MI 48507  
T – (810) 235-6112

Comcast Cable  
20936 Kelly Road  
East Pointe, MI 48021  
T – (313) 772-1023

Continental Cablevision  
32030 John R  
Madison Heights, MI 48071  
T – (248) 583-1350

Comcast of Pontiac  
1300 Crescent Lake Road  
Waterford, MI 48327  
T – (248) 674-0500  
F – (248) 673-7572

TCI Cablevision of Oakland County  
4500 Delemere Blvd.  
Royal Oak, MI 48073  
T – (248) 549-8288  
F – (248) 549-6389

Continental Cablevision  
27432 Grosebeck Highway  
Roseville, MI 48066  
T – (810) 779-3421  
F O (810) 779-0635

TCI Cablevision  
3166 Martin Road  
Walled Lake, MI 48390  
T – (248) 669-2288

## Attachment II

### Cable Stations

Time Warner Cable of Oakland 2598  
37635 Enterprise Court  
Farmington Hills, MI 48018  
T - (248) 553-7300  
F - (248) 553-4829

DF Cablevision  
14300 Fenton Road  
Fenton, MI 48430  
T - (810) 750-9965  
F - (810) 750-1988

Monroe Cablevision  
428 S. Monroe  
Monroe, MI 48161  
T - (313) 241-2225

C-Tech Cable System  
1145 Telegraph Road  
Monroe, MI 48161  
T - (313)

Continental Cablevision  
2505 S. Industrial Hwy.  
Ann Arbor, MI  
T - (313) 429-4923

### Attachment III

#### Southeastern Michigan EAS Local Area Notifier List and Verification Phone Numbers

St. Clair County Emergency Management  
204 Bard Street  
Port Huron, Michigan 48060  
Coordinator: Mr. Jeffrey Friedland  
24 Hour Emergency Verification Number: 810-985-8115  
Non-Emergency Number: 810-987-1710

Macomb County Emergency Management  
43565 Elizabeth Road  
Mt. Clemens, Michigan 48043  
Director: Charles Seehase  
24 Hour Emergency Verification Number: 810-469-5502  
Non-Emergency Number: 810-469-5270

Wayne County Emergency Management  
10250 Middlebelt Road  
Detroit, Michigan 48242  
Director: Mark Sparks  
24 Hour Emergency Verification Number: 313-942-3600  
Non-Emergency Number: 313-942-5289

National Weather Service, NOAA  
9200 White Lake Road  
White Lake, Michigan 48386  
WCM: Darin Figurskey  
24 Hour Emergency Verification Number: 248-625-4139  
Non-Emergency Number: 248-625-3309

### Attachment III

#### Southeastern Michigan EAS Local Area Notifier List and Verification Phone Numbers

Michigan State Police, Northville  
42145 West Seven Mile Road  
Northville, Michigan 48167  
Contact: Lt. Ralph J. Holbrat  
24 Hour Emergency Verification Number: 313-256-9887

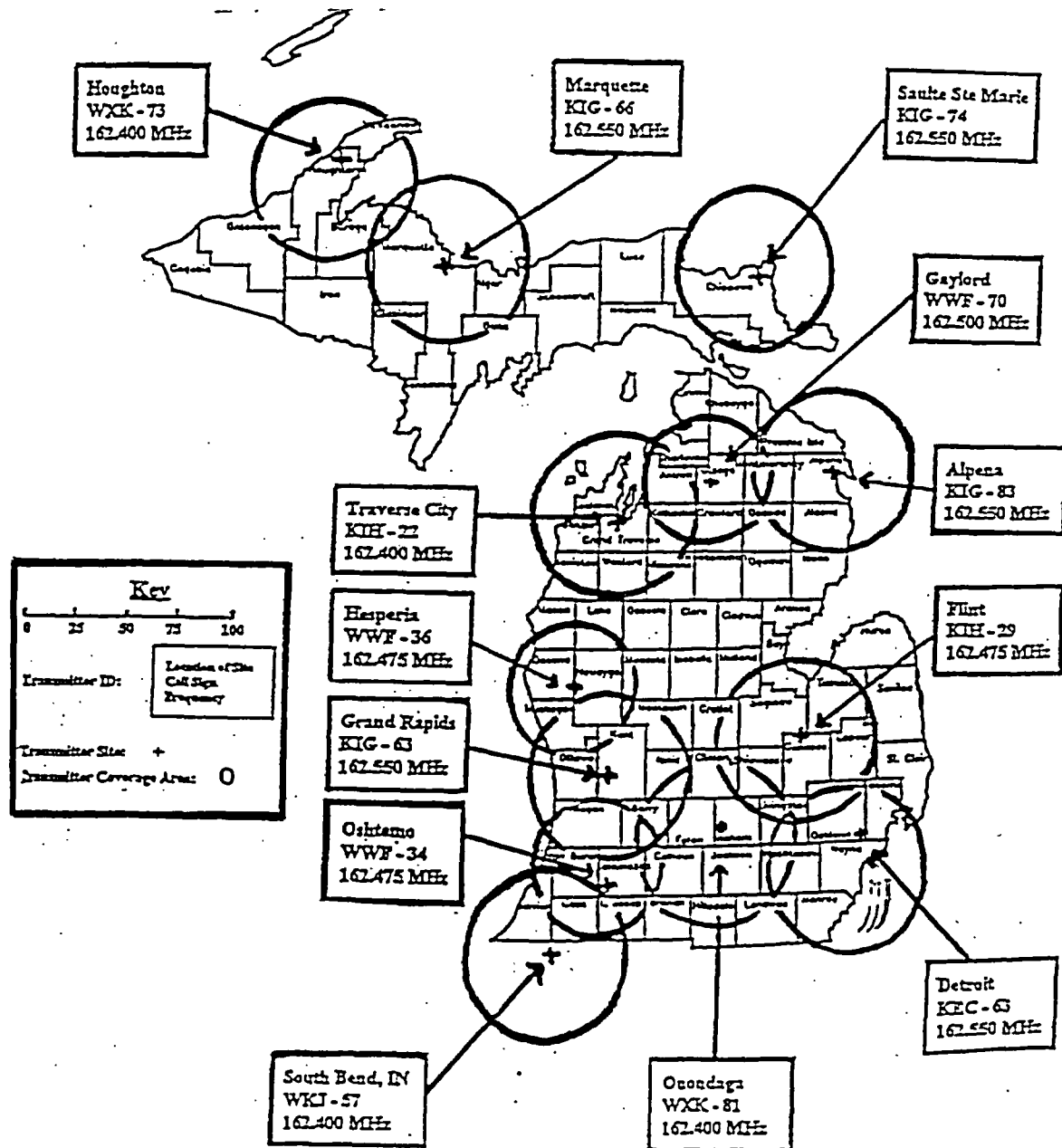
Michigan State Police, East Lansing Operations  
714 S. Harrison Road  
East Lansing, Michigan 48833  
Operations Lieutenant  
24 Hour Emergency Verification Number: 517-336-6100

Oakland County Emergency Management  
1200 N. Telegraph road  
Pontiac, Michigan 48341  
24 Hour Emergency Verification Number: 248-858-5300  
(If Auto Attendant Is On Push "0")

Monroe County Emergency Management  
965 S. Raisinville Road  
Monroe, Michigan 48161-9700  
Director: Mitch Yudas Jr.  
24 Hour Emergency Verification Number: 313-243-7070



## Attachment IV NOAA Weather Radio Coverage in Michigan



## **Attachment V**

### **Local ECC Members**

Ed Buterbaugh – Committee Chairman  
WJR Radio  
2100 Fisher building  
Detroit, MI 48202  
313-873-9703

Gregory Urbiel – Committee Vice Chairman  
WWJ Radio  
16550 W. Nine Mile Road  
Southfield, MI 48086  
248-423-3366

Lt. Ralph Hobrat  
Michigan State Police Northville  
Emergency Management Division  
42145 W. Seven Mile road  
Northville, MI 48167  
248-380-1055

Darin Figurskey  
National Weather Service, NOAA  
9200 White Lake Road  
White Lake, MI 48386  
248-625-3309

Charles Seehase  
Macomb County Emergency Management  
43565 Elizabeth Road  
Mt. Clemens, MI 48043  
810-469-5270

Mitch Yudas Jr.  
Monroe county Emergency Management  
965 S. Raisinville Road  
Monroe, MI 48161-9700  
313-241-6400

## Attachment V

### Local ECC members

Colleen Prosygniuk  
Oakland County Emergency Management  
1200 N. Telegraph Road  
Pontiac, MI 48341  
248-858-5324

Jeffrey Friedland  
St. Clair County Emergency Management  
204 Bard Street  
Port Huron, MI 48060  
810-987-1710

Sanford M. Altschul  
Wayne County Emergency Management  
10250 Middlebelt Road  
Detroit, MI 48142  
313-942-5289

Ross Lusk – Engineering Manager  
WVMV - FM  
31555 W. fourteen Mile Road  
Suite 102  
Farmington Hills, MI 48034  
248-354-9300

Mark Phelps – Engineering Manager  
WDRQ – FM  
28411 Northwestern Highway #1000  
Southfield, MI 48034  
248-855-5100

Dick Howard chief Engineer  
WHLS Radio  
808 Huron Ave  
Port Huron, MI 48060  
810-987-1450

## Attachment V

### Local ECC members

Gene Wilczak – Manager of Technical Operations  
WJBK – TV  
16550 W. Nine Mile Rd  
Southfield, MI 48075  
248-552-5284

Tom Christie – chief Engineer  
WJLB/WMXD  
633 Penobscott Building  
Detroit, MI 48226  
313-965-9898 ( Ext. 303)

Larry Estlack – EAS State Coordinator  
WLAJ-TV 53, Chief Engineer  
5813 Pennsylvania  
PO box 27307  
Lansing, MI 48909-7307  
517-394-5300

Karole L. White – President  
Michigan Association of Broadcasters  
810 N. Washington Avenue  
Lansing, MI 48906  
800-968-7622 / 517-484-7444

## **Attachment VI**

### **Emergency Access Numbers for LP-1, LP-2 Stations**

Listed below are the 24 hour Emergency Access numbers for the LP-1 (WJR) and LP-2 (WWJ) stations. When calling these numbers to request EAS activation, please ask for the Operator or Newsperson in charge.

#### **WJR (LP-1)**

**313-875-5554**

**313-873-2370**

#### **WWJ (LP-2)**

**248-423-3369**

**248-423-3333**

RERP Plan  
Revision 29  
Appendix 2 - 36

FIPS code	county	Call letters	Frequency	EAS Code	Street Address	City	Zip Code	Phone Number	Fax Number
26099	Macomb	WADL-TV	38		15 Mile Road	Clinton Township	48035	8107903838	8107903841
26099	Macomb	WPHS-FM*	89.1		30333 Hoover Raod	Warren	45093-6532	8107513689	
26099	Macomb	WUFL-AM	1030		42669 Garfield Road - suite 328	Clinton Township	48038	8102631030	8102281030
26099	Macomb	WWBR-FM (was wdzr)	102.7		850 Stephenson Hwy Ste 405	Troy	48083-1163	2485897900	2485898295
26115	Monroe	WEJY-FM*	97.5		1275 N Macomb St	Monroe	48162-3128	3132411663	
26115	Monroe	WLLZ-AM (was whnd)	560		12300 Radio Place	Detroit	48228	3132723434	3132725045
26115	Monroe	WTWR-FM	98.3		7 S Monroe St	Monroe	48161-2230	3132426600	3132426599
26125	Oakland	WAHS-FM*	89.5		2950 Waukegan St	Auburn Hills	48326-3264	2488523961	2488520595
26125	Oakland	WBFH-FM*	88.1		4200 Andover Rd	Bloomfield Hills	48302-2000	2486454740	2486454744
26125	Oakland	WBLD-fm	89.3		4925 Orchard Lake Rd	West Bloomfield	48323-2964	2488518930	
26125	Oakland	WCSX-FM	94.7		1 Radio Plaza St	Detroit	48220-2140	2483987600	2485427700
26125	Oakland	WDRQ-FM (was wlti)	93.1		28411 Northwestern Hwy Ste 1000	Southfield	48034-5540	2483549300	2483541474
26163	Oakland	WDWB-TV (was wxon)	20		27777 Franklin Rd, Ste 1220	Southfield	48034-8262	2483552020	2483550368
26125	Oakland	WEXL-AM	1340		12300 Radio Place	Detroit	48228	3132723434	3132725045
26163	Oakland	WJBK-TV	2		PO Box 2000	Southfield	48037-2000	2485572000	2485520280
26163	Oakland	WOMC-FM	104.3		2201 Woodward Hts	Detroit	48220-1521	2485469600	2485465446
26125	Oakland	WORB-FM*	90.3		27055 Orchard Lake Rd	Farmington Hills	48334-4556	2484717789	
26125	Oakland	WOVI-FM*	89.5		24062 Taft Rd	Novi	48375-3022	2484491508	2484491519
26125	Oakland	WPON-AM	1460		2222 Franklin Rd	Bloomfield Hills	48302-0330	2483328883	2483325470
26125	Oakland	WROK-TV			211 S Williams St	Royal Oak	48067-2619	2485446663	2485461546
26125	Oakland	WSHU-FM*	88.3		24675 Lahser Rd	Southfield	48034-3238	2487468630	2487468631
26147	St. Clair	WGRT-FM	102.3		624 Grand River Ave	Port Huron	48060-3817	8109873200	8109873325
26147	St. Clair	WHLS-AM	1450		808 Huron Ave	Port Huron	48060-3705	8109871450	8109879380
26147	St. Clair	WHYT-AM (was wifn)	1590		2379 Military St	Port Huron	48060-6662	8109874100	8109874045
26147	St. Clair	WNFA-FM*	90.7		2865 Maywood Dr	Port Huron	48060-7719	8109853260	8109857712
26147	St. Clair	WORW-FM*	91.9		1799 Krafft Rd	Port Huron	48060-8606	8109842675	8109842747
26147	St. Clair	WPHM-AM	1380		2379 Military St	Port Huron	48060-6662	8109874100	
26147	St. Clair	WSAQ-FM	107.1		808 Huron Ave	Port Huron	48060-3705	8109871450	8109879380
26147	St. Clair	WSGR-FM*	91.3		323 Erie St	Port Huron	48060-3812	8109845064	
26163	Wayne	WCAR-AM	1090		32500 Parklane St	Garden City	48135-1527	7345251111	7435253608
26163	Wayne	WDET-FM	101.9		4600 Cass Ave	Detroit	48201-1222	3135774146	3135771300
26163	Wayne	WDFN-AM	1130		2930 E. Jefferson Ave	Detroit	48207-4210	3132594323	3135299817
26163	Wayne	WDIV-TV	4		550 W. Lafayette Blvd	Detroit	48226-3123	3132220444	3132220471
26163	Wayne	WDTJ-AM (was wchb)	1200		2994 E Grand Blvd.	Detroit	48202	3138710590	3138718770
26125	Wayne	WETJ-FM (was wchb)	105.9		2994 E Grand Blvd.	Detroit	48202-3134	3138710590	3138718770
26163	Wayne	WDTR-FM*	90.9		9345 Lawton St	Detroit	48206-1905	3135963507	3135963517
26163	Wayne	WGPR-FM	107.5		3146 Jefferson East	Detroit	48207	3132898862	
26163	Wayne	WHFR-FM*	89.3		5101 Evergreen Rd	Dearborn	48128-2407	3138459634	3138456321
26163	Wayne	WHPR-FM*	88.1		15851 Woodward	Highland Park	48203	8109560109	
26163	Wayne	WJLB-FM	97.9		645 Griswold #633	Detroit	48226-4004	3139652000	3139659970
26163	Wayne	WJR-AM	760	LP-1	2100 Fisher Building	Detroit	48202	3138754440	3138759022
26163	Wayne	WKBD-TV	50		26905 W 11 Mile Rd. #50	Southfield	48034-2292	2483505050	2483552692

RERP Plan  
Revision 29  
Appendix 2 - 37

FIPS code	county	Call letters	Frequency	EAS Code	Street Address	City	Zip Code	Phone Number	Fax Number
26163	Wayne	WKQI-FM	95.5		15401 W 10 Mile Rd	Oak Park	48237-1467	2489673750	2488670840
26163	Wayne	WKRK-FM (was wyst)	97.1		16550 W 9 Mile Rd	Southfield	48075-4705	2484233300	2484233326
26163	Wayne	WLQV-AM	1500		29200 Vassar St Ste 650	Livonia	48152-2116	2484774600	2484776911
26163	Wayne	WMUZ-FM	103.5		12300 Radio Place	Detroit	48228	3132723434	3132725045
26163	Wayne	WMXD-FM	92.3		645 Griswold #633	Detroit	48226-4004	3139652000	3139659970
26163	Wayne	WNIC-FM	100.3		PO Box 1310	Dearborn	48121-1310	3138468500	3138461068
26163	Wayne	WNZK-AM	680		21700 Northwestern Hwy Ste 1190	Southfield	48075-4916	2485573500	2485573241
26163	Wayne	WPLT-FM	96.3		2100 Fisher Building	Detroit	48202	3138713030	3138759636
26163	Wayne	WQBH-AM	1400		Penobscot Ste 2050	Detroit	48226-4009	3139654500	3139654608
26163	Wayne	WRIF-FM	101.1		1 Radio Plaza St	Detroit	48220-2140	2485470101	2483982012
26163	Wayne	WSDP-FM*	88.1		46181 Joy Road	Canton	48187-1316	7344167732	7344167791
26163	Wayne	WTVS-TV	56		7441 2nd Avenue	Detroit	48202-2701	3138737200	3138768179
26163	Wayne	WVMV-FM (was, willz)	98.7		31555 W 14 Mile Rd	Farmington Hills	48334-1239	2488555100	2488551302
26163	Wayne	WWJ-AM	950	LP-2	16550 W 9 Mile Rd	Southfield	48075-4705	2484233300	2484233326
26163	Wayne	WWJ-TV	62		300 Stroh River Place, #6200	Detroit	48207	3132596386	3132599674
26163	Wayne	WWWW-FM	106.7		2930 E Jefferson Ave	Detroit	48207-5029	3132594323	3132599079
26163	Wayne	WXDG-FM (was wqrs)	105.1		28588 Northwestern Hwy Ste 200	Southfield	48034-8334	2483551051	2483553485
26163	Wayne	WXYT-AM	1270		PO Box 905	Southfield	48037-0905	2485698000	2485699866
26163	Wayne	WXYZ-TV	7		PO Box 789	Southfield	48037-0789	2488277777	2488274454
26163	Wayne	WYDC-FM	99.5		26555 Evergreen Rd Ste 675	Southfield	48076-4230	2487990600	2483589216
26163	Wayne	WYUR-AM (was wdoz)	1310		860 W Long Lake Road	Bloomfield Hills	48302	2484339987	2482585572

**APPENDIX 3:**

**LIST OF RERP IMPLEMENTING PROCEDURES**



FERMI 2  
RERP IMPLEMENTING PROCEDURES  
INDEX

EP NO.	TITLE	RERP PLAN SECTION IMPLEMENTED
101	Classification of Emergencies	D
102	Unusual Event	D
103	Alert	D
104	Site Area Emergency	D
105	General Emergency	D
110	Organization and Responsibilities	B
201-03	Variances from Routine Radiological Practice and Procedures During an Emergency	K
204-01	Damage Control and Rescue Team	B,K,L
205-01	Security Force	B,J
220	Personnel Monitoring and Radiological Emergency Teams	B,H,I,J,K,L
225	Radiological Medical Emergencies	L
226	Potassium Iodide	J,K
290	Emergency Notifications	E,J
292	Emergency Call Out - Backup Method	E

# RERP IMPLEMENTING PROCEDURES

## INDEX (Continued)

EP NO.	TITLE	RERP PLAN SECTION IMPLEMENTED
301-01	Technical Support Center	B,F,H,I,J,K,M
302-01	Operational Support Center	B,F,H
303-01	Emergency Operations Facility	B,F,H,I,J,K,M
304-01	Alternate Emergency Operations Facility	H
402	Responsibilities of the Recovery Organization	M
530	Assembly and Accountability and Onsite Protective Actions	J
540	Drills and Exercises	N,O
542	Computer-Based Offsite Dose Assessment - Airborne Releases	I
545	Protective Action Recommendations	I,J
546	Calculation of Estimated Containment High Range Radiation Monitor or SGTS/AXM Monitor Readings if Instruments are Inoperable or Offscale	I
547	Rapid Estimate of Core/Fuel Damage Based on Containment High Range Radiation Monitor	I
550	RERP Training Program	O
601	Public Education and Information	G
607	Media Pool Operation	G
608	Joint Public Information Center Operation	G
Appendix A	Forms	E,J,N,O

**APPENDIX 4**

**LIST OF SUPPORTING PROCEDURES AND  
DOCUMENTS IDENTIFIED IN THE PLAN**

SUPPORTING PROCEDURES AND  
DOCUMENTS IDENTIFIED IN PLAN

INDEX

1. 10 CFR 20 (Sections B,H,I,K)
2. 10 CFR 50.47 (Preface)
3. 10 CFR 50.54(q) (Preface)
4. 10 CFR 50.54(t) (Section P)
5. 10 CFR 50, Appendix A (Section H)
6. 10 CFR 50, Appendix E (Preface)
7. 10 CFR 50, Appendix E, Section F (Section N)
8. 10 CFR 50, Appendix I (Section I)
9. 44 CFR 350 (Section N)
10. NUREG-0654/FEMA-REP-1, Revision 1, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants (Preface, Sections B,J,P)
11. NUREG-0845, Revision 1, Agency Procedures for the NRC Incident Response Plan (Sections A,C)
12. NUREG-0737, Clarification of TMI Action Plan Requirements (Sections B,I)
13. NUREG-0981/FEMA-51, NRC/FEMA Operational Response Procedures for Response to a Commercial Nuclear Reactor Accident (Section A)
14. U.S. NRC Regulatory Guide 1.23, Onsite Meteorological Programs (Safety Guide 23) (Section H)
15. American Industrial Hygiene Association Respiratory Protection Devices Manual (Section E)
16. Act 390 of the Public Acts of 1976 (Section A)
17. Fermi 2 Updated Final Safety Analysis Report (Sections B,H,I)
18. Fermi 2 Technical Specifications (Preface, Sections B,D,I, P)
19. EPA 400-R-92-001, Manual of Protective Action Guides and Protective Actions for Nuclear Incidents (Sections I,J,K)
20. Federal Radiological Emergency Response Plan (Sections A,C)

SUPPORTING PROCEDURES AND  
DOCUMENTS IDENTIFIED IN PLAN

INDEX (continued)

21. INPO Emergency Resources Manual (section C)
22. Michigan Emergency Management Plan (Preface, Sections A,C, J)
23. Monroe County Emergency Management Plan (Preface, Sections A, C, G, J)
24. Wayne County Emergency Operations Plan (Preface, Sections A, C, J)
25. Sandia Report, SAND 77-1725, Public Protection Strategies for Potential Nuclear Reactor Accidents: Sheltering Concepts with Existing Public and Private Structures (Section J)
26. JB/A, Inc., Evacuation Time Estimate Analyses for the Enrico Fermi Atomic Power Plant Unit 2 Plume Exposure Pathway Emergency Planning Zone (Section J)
27. MRP09, Respiratory Protection, (Section K)
28. Radiation Protection Procedure 67.000.400, Personnel Decontamination and Assessment, (Section J)
29. Radiation Protection Procedure 67.000.405, Maintenance and Inventory of Radiation Protection Emergency Kits, (Sections H, J)
30. Fermi 2 Offsite Dose Calculation Manual (Sections D, H, I, J)
31. Selection, Training, and Qualification Program Description QP-ER-665 (Section O)
32. 29.100.01, Sheet 5, Secondary Containment and Rad Release (Section D)
33. 29.100.01, Sheet 6, Curves, Cautions and Tables (Section D)
34. 20.000.018, Control of the Plant From the Dedicated Shutdown Panel (Section D)
35. 20.000.019, Shutdown From Outside the Control Room (Section D)
36. EPPOS No. 3, Emergency Preparedness Position (EPPOS) on Requirement for Onshift Dose Assessment Capability (Section B)

END

**APPENDIX 5:**

**RERP PLAN CROSS-REFERENCE WITH NUREG-0654**

# RERP PLAN CROSS-REFERENCE WITH NUREG-0654

NUREG-0654 Requirement	Description of Requirement	RERP Plan Section
A.1.a	Identify State, local and Federal emergency organizations intended to be part of overall response organization.	A
A.1.b	Specify concept of operation for each emergency organization.	A
A.1.c	Illustrate interrelationships in a block diagram.	A(fA-6)
A.1.d	Identify a specific individual by title in charge at all times of the emergency response.	A.1, A.2, A.3
A.1.e	Provide for 24-hour per day emergency response and communications.	A.6
A.3	Establish written agreements with support organizations and/or governments.	Appendix 1
A.4	Ensure capability for 24 hour coverage for protracted time and identify individual, by title, who is responsible for ensuring continuity of resources.	A.6, B.2
B.1	Specify plant staff and responsibilities for all shifts and its relation to the responsibilities and duties of normal staff complement.	B (tB-1)
B.2	Designate an Emergency Coordinator on shift.	B.2.1
B.3	Designate line of succession for Emergency Coordinator and identify specific conditions for higher level utility officials assuming this function.	B.2.1
B.4	Establish Emergency Coordinator's functional responsibilities and clearly specify which responsibilities may not be delegated.	B.2.1
B.5	Identify shift augmentation/minimum staffing as identified in NUREG-0654, Table B-1.	B (tB-1)
B.6	Include block diagram of interfaces established between onsite organizations, State, and local organizations.	B (fB-2, fB-3, fB-4, fB-5) A(fA-6)
B.7	Specify corporate, administrative, and technical support personnel who will augment Table B-1 staff.	B (tB-2)

Note: "t" indicates a Table; "f" indicates a Figure (tB-1 = Table B-1)

RERP PLAN CROSS-REFERENCE WITH NUREG-0654

NUREG-0654 Requirement	Description of Requirement	RERP Plan Section
B.7.a	Identify the individual responsible for logistical support.	B (tB-2)
B.7.b	Identify the individual responsible for technical support for planning and reentry/recovery operations.	B (tB-2)
B.7.c	Identify management interface with government authorities.	B (tB-2)
B.7.d	Identify the individual responsible for information release to the media.	B (tB-2)
B.8	Specify contractor or private organizations who may be required to provide technical support.	Appendix 1
B.9	Identify services to be provided by local agencies.	Appendix 1
C.1.a	Specify those persons, by title, who are authorized to request Federal assistance.	C.1
C.1.b	Specify what Federal resources are expected, including estimated times of arrival.	C.1
C.1.c	Specify what utility, local, and State resources are available to support Federal response.	C.1
C.2.b	Identify an individual to be dispatched to governmental Emergency Operations Centers.	C.1
C.3	Identify radiological laboratories and their general capabilities and expected availability for emergency use.	H.1.4 H.3.2.2
C.4	Identify nuclear and other facilities, individuals, or organizations providing assistance.	C.2 Appendix 1
D.1	Identify emergency classification/action levels.	D
D.2	Include all initiating conditions from NUREG-0654 <sup>(a)</sup> Appendix 1 and all postulated accidents found in the Fermi 2 Final Safety Analysis Report.	D <sup>(a)</sup>
E.1	Establish procedures which prescribe methods of notification/verification.	E.2
E.2	Establish procedures for alerting, notifying, and mobilizing Emergency Response Organization.	E.1.1

NOTE (a) – all initiating conditions (regarding emergency classifications/action levels) are from NUMARC/NESP-007 endorsed by the NRC in Regulatory Guide 1.101.



RERP PLAN CROSS-REFERENCE WITH NUREG-0654

NUREG-0654 Requirement	Description of Requirement	RERP Plan Section
E.3	Establish contents of initial emergency messages.	E.2.1
E.4	Provide for follow-up messages from Fermi 2 to Offsite Authorities.	E.2.1
E.4.a	Follow-up messages shall contain location, name, and telephone number of caller.	E.2.1
E.4.b	Follow-up messages shall contain date and time of incident.	E.2.1
E.4.c	Follow-up messages shall contain the class of emergency.	E.2.1
E.4.d	Follow-up messages shall contain type of actual or projected release and duration.	E.2.1
E.4.e	Follow-up messages shall contain quantity and height of release.	E.2.1
E.4.f	Follow-up messages shall contain chemical and physical form and estimates of relative quantities and concentrations (noble gases, iodines, particulates) released.	E.2.1
E.4.g	Follow-up messages shall contain meteorological conditions (wind speed, directions, stability class, etc.)	E.2.1
E.4.h	Follow-up messages shall contain actual or projected dose and dose rate at site boundary.	E.2.1
E.4.i	Follow-up messages shall contain projected dose and dose rate at 2, 5, and 10 miles, including affected sectors.	E.2.1
E.4.j	Follow-up messages shall contain estimate of surface contamination.	E.2.1
E.4.k	Follow-up messages shall contain Fermi 2 emergency response actions underway.	E.2.1
E.4.l	Follow-up messages shall contain protective action recommendations.	E.2.1

RERP PLAN CROSS-REFERENCE WITH NUREG-0654

NUREG-0654 Requirement	Description of Requirement	RERP Plan Section
E.4.m	Follow-up messages shall contain request for offsite support needed onsite.	E.2.1
E.4.n	Follow-up messages shall contain prognosis for the event.	E.2.1
E.6	Establish administrative and physical means for notifying the public and define time needed to provide notifications and instructions to public within the 10-mile EPZ.	E.3
E.7	Provide supporting information for public protective actions.	E.3
F.1.a	Provide for 24-hour per day notifications to State and local governments.	A.6
F.1.b	Provide for communications with State and local governments.	H.1.1 H.1.2 H.1.4
F.1.c	Provide for communications with Federal emergency response organizations.	F.1
F.1.d	Provide for communications between the nearsite Emergency Operations Facility and State/local Emergency Operations Centers, and offsite Radiological Emergency Teams.	H.1.4
F.1.e	Provide for alerting personnel in each response organization.	E.1.1
F.1.f	Provide for communications between Fermi 2 and NRC Headquarters and NRC Region 3, the nearsite Emergency Operations Facility, and offsite Radiological Emergency Teams.	H.1.4
F.2	Ensure that a coordinated communications link exists between Fermi 2 and mobile medical support facilities.	L.1.1 L.3
F.3	Conduct periodic testing of emergency communication systems.	N.2.1

RERP PLAN CROSS-REFERENCE WITH NUREG-0654

NUREG-0654 Requirement	Description of Requirement	RERP Plan Section
G.1	Provide, at least annually, dissemination of information to the public regarding notification procedures, protective measures, and general information on radiation.	G.1
G.2	Provide information for the permanent and transient population, and update such information at least annually.	G.2
G.3.a	Designate points of contact and physical locations for news media use in an emergency.	G.3
G.3.b	Provide space for the media at the nearsite Emergency Operations Facility.	G.3
G.4.a	Designate a spokesperson having access to all necessary information.	G.4
G.4.b	Establish arrangements for timely exchange of information among designated spokespersons.	G.4
G.4.c	Establish coordinated arrangements for dealing with rumors.	G.4
G.5	Conduct coordinated programs at least annually to acquaint news media with emergency plans, information concerning radiation, and points of contact for the release of information in an emergency.	G.5
H.1	Establish a Technical Support Center in accordance with NUREG-0696, Revision 1.	H.1.2
H.2	Establish an Emergency Operations Facility in accordance with NUREG-0696, Revision 1.	H.1.4
H.4	Provide for the timely activation and staffing of facilities.	H.1 E.1.1
H.5	Identify and establish onsite monitoring systems that are to be used to initiate emergency measures as well as those to be used for conducting assessment.	H.2

RERP PLAN CROSS-REFERENCE WITH NUREG-0654

NUREG-0654 Requirement	Description of Requirement	RERP Plan Section
H.5.a	Onsite equipment includes geophysical phenomena monitors.	H.2.1
H.5.b	Onsite equipment includes radiological monitors.	H.2.2
H.5.c	Onsite equipment includes process monitors.	H.2.3
H.5.d	Onsite equipment includes fire and combustion products detectors.	H.2.4
H.6.a	Acquire data for offsite geophysical phenomena monitors.	H.3.1
H.6.b	Provide for offsite radiological monitoring and sampling.	H.3.2.1
H.6.c	Provide for fixed or mobile laboratory facilities for analyzing offsite samples.	H.3.2.2
H.7	Provide for offsite radiological monitors near the plant.	H.3.2.1
H.8	Provide meteorological instrumentation and procedures and ensure ability to obtain representative current meteorological information from other sources.	H.3.1.1
H.9	Provide for an onsite Operational Support Center.	H.1.3
H.10	Inspect, inventory, and check all emergency equipment at least quarterly, and after each use.	H.5
H.11	Identify emergency kits by general category.	H.5
H.12	Establish a central point for receipt and analysis of field data and coordination of sample media.	H.3.2.2
I.1	Identify plant system and effluent parameter values for off-normal conditions and the corresponding emergency classification.	D
I.2	Include onsite capability and resources to provide initial values and continuing assessment, including post-accident sampling, radiation and effluent monitors, in-plant iodine instrumentation, and containment radiation monitoring in accordance with NUREG-0578.	H (IH-2, IH-3, IH-4, IH-5, IH-6)

RERP PLAN CROSS-REFERENCE WITH NUREG-0654

NUREG-0654 Requirement	Description of Requirement	RERP Plan Section
I.3.a	Establish methods and techniques to determine the source term of releases within plant systems.	I
I.3.b	Establish methods and techniques to determine the magnitude of release based on effluent monitors and plant system parameters.	I
I.4	Establish the relationship between effluent monitor readings and onsite and offsite exposures for various meteorological conditions.	I
I.5	Acquire and evaluate meteorological information.	H.3.1.1
I.6	Establish the methodology for determining release rate and projected doses with dose assessment instrumentation inoperable.	I
I.7	Describe the capability and resources for field monitoring within the plume exposure EPZ.	I.4
I.8	Provide method for making rapid field estimates of liquid and gaseous releases.	I.4
I.9	Ensure capability to detect airborne radioiodine as low as $10E-7 \mu Ci/cc$ in the field.	I.4
I.10	Establish means to conduct nuclide analysis/ integrated dose and make provisions for comparing such estimates with protective action guides.	I.3
J.1.a	Establish means to warn non-Emergency Response Organization employees onsite.	J.1
J.1.b	Establish means to warn Visitors onsite.	J.1
J.1.c	Establish means to warn contract/construction personnel onsite.	J.1
J.1.d	Establish means to warn other personnel in the Owner-Controlled Area.	J.1
J.2	Provide for evacuation routes and transport to offsite assembly areas.	J.2
J.3	Provide for radiological monitoring of evacuees.	J.2.1

# RERP PLAN CROSS-REFERENCE WITH NUREG-0654

NUREG-0654 Requirement	Description of Requirement	RERP Plan Section
J.4	Provide for evacuation of non-essential personnel at Site Area Emergency or General Emergency and provide decontamination.	J.2.1
J.5	Provide for capability to account for all onsite personnel and report names of missing within 30 minutes.	J.2.2
J.6.a	Provide for respiratory protection during an emergency.	J.3
J.6.b	Provide for use of protective clothing during an emergency.	J.3
J.6.c	Provide for the use of radioprotective drugs.	J.3
J.7	Provide for protective action recommendations to State and local authorities. Recommendations shall include Emergency Action Levels corresponding to projected dose to the population-at-risk.	J.4
J.8	Provide for evacuation time estimates within the plume exposure EPZ.	J.4.2
J.10.a	Develop maps for evacuation routes and sampling sites, relocation centers, and shelter areas.	J (IJ-2)
J.10.b	Include maps showing population around Fermi 2.	J (IJ-3)
J.10.c	Provide for means of notifying transients and residents.	J.4
J.10.m	Describe the basis for choice of recommended protective actions from plume exposure pathway during an emergency.	J.4.1
K.1.a	Establish onsite exposure guidelines for removal of injured personnel.	K (tK-1)
K.1.b	Establish onsite exposure guidelines for taking corrective actions.	K (tK-1)
K.1.c	Establish onsite exposure guidelines for performing assessment actions.	K (tK-1)
K.1.d	Establish onsite exposure guidelines for providing first aid.	K (tK-1)

# RERP PLAN CROSS-REFERENCE WITH NUREG-0654

NUREG-0654 Requirement	Description of Requirement	RERP Plan Section
K.1.e	Establish onsite exposure guidelines for performing personnel decontamination.	K (tK-1)
K.1.f	Establish onsite exposure guidelines for providing ambulance service.	K (tK-1)
K.1.g	Establish onsite exposure guidelines for providing medical treatment services.	K (tK-1)
K.2	Provide an onsite radiation protection program to be implemented during an emergency. Identify individual, by title or position, who can authorize emergency workers to exceed 10 CFR 20 limits.	K.1 B.2.1
K.3.a	Provide for self-reading/permanent record dosimetry and for capability to determine doses received by emergency workers on a 24-hour-per-day basis.	K.2
K.3.b	Maintain dose records of emergency workers and read dosimetry at appropriate (time) frequencies.	K.2
K.5.a	Specify action level for determining the need for decontamination.	K.3
K.5.b	Establish means for decontamination of wounds, supplies, instruments and equipment, and waste disposal.	K.4
K.6.a	Provide for area access contamination control.	K.4
K.6.b	Provide for drinking water and food supply contamination control.	K.4
K.6.c	Provide criteria for return of areas and items to normal use.	K.4
K.7	Provide for the decontamination of relocated onsite personnel with special attention given to radioiodine contamination of the skin.	J.2.1
L.1	Provide for local and backup hospital and medical services to evaluate radiation exposure and uptake.	L.1.1
L.2	Provide for onsite first aid capability.	L.2
L.4	Arrange for transport of victims of radiation accidents to medical facilities.	L.3

RERP PLAN CROSS-REFERENCE WITH NUREG-0654

NUREG-0654 Requirement	Description of Requirement	RERP Plan Section
M.1	Develop general plans and procedures for Reentry/ Recovery operations.	M.1
M.2	Identify by position and title key members of the Recovery Organization, including their authority and responsibilities.	M.2
M.3	Specify means for informing organizations that Recovery operations are to be initiated, and what organizational changes might occur.	M.3
M.4	Establish a method to periodically estimate total population exposure.	M.4
N.1.a	Define and conduct exercises per NRC/FEMA rules.	N.1
N.1.b	Conduct announced and unannounced exercises under various weather conditions and times, and with various scenarios.	N.2
N.2.a	Communications with the State, local authorities, and the NRC shall be tested monthly. Communications between Fermi 2, State and local emergency operations centers, and field teams, shall be conducted annually.	N.2.1
N.2.b	Fire drills shall be conducted in accordance with Technical Specifications.	N.2.2
N.2.c	A medical emergency drill which contains provisions for participation by local support services agencies shall be conducted annually.	N.2.3
N.2.d	Plant environs and radiological monitoring drills shall be conducted annually, and shall include collection and analysis of all sample media.	N.2.4
N.2.e.1	Conduct Health Physics drills semi-annually that involve response to, and analysis of, simulated elevated airborne and liquid samples, and direct radiation measurements in the environment.	N.2.5



# RERP PLAN CROSS-REFERENCE WITH NUREG-0654

NUREG-0654 Requirement	Description of Requirement	RERP Plan Section
N.3.a	Scenarios shall contain basic objectives and evaluation criteria.	N.3
N.3.b	Scenarios shall contain dates, time periods, places, and participating organizations.	N.3
N.3.c	Scenarios shall contain a list of simulated events.	N.3
N.3.d	Scenarios shall contain a time schedule of real and simulated events.	N.3
N.3.e	Scenarios shall contain a narrative summary of events.	N.3
N.3.f	Scenarios shall describe arrangements for, and advance materials provided to, official observers.	N.3 N.4
N.4	Conduct a critique as soon as possible following completion of the drill/exercise, and produce a formal evaluation as a result of the critique.	N.4
N.5	Establish management controls for assigning and implementing corrective actions.	N.4
O.1	Conduct training for appropriate individuals.	O.1
O.1.a	Provide site specific training to offsite emergency response organizations.	O.2
O.2	Emergency Response Organization training shall, besides classroom training, include participation in drills/exercises.	O O.1
O.3	First Aid training shall be equivalent to Red Cross Multi-Media.	O.1

RERP PLAN CROSS-REFERENCE WITH NUREG-0654

NUREG-0654 Requirement	Description of Requirement	RERP Plan Section
O.4.a	Provide training for Emergency Response Organization Director/Coordinators.	O.1
O.4.b	Provide training for accident assessment personnel.	O.1
O.4.c	Provide training for radiological monitoring teams and radiological analysis personnel.	O.1
O.4.d	Provide training for police, security, and fire fighting personnel.	O.1 O.2
O.4.e	Provide training for Damage Control and Rescue Teams.	O.1
O.4.f	Provide training for First Aid and rescue personnel.	O.1
O.4.g	Provide training for local support services personnel, including Civil Defense/Emergency Services.	O.2
O.4.h	Provide training for medical support personnel.	O.2
O.4.i	Provide training for headquarters support personnel.	O.1
O.4.j	Provide training for Communicators.	O.1
O.5	Provide for initial and annual retraining of personnel with emergency response responsibilities.	O.1
P.1	Provide for the training of those responsible for planning.	P.1
P.2	Identify the individual, by title, who has overall authority and responsibility for planning.	P.1
P.3	Designate an Emergency Planning Coordinator with responsibility for development and update of emergency plans.	P.1
P.4	Annually, or as needed, review and update the RERP Plan and agreements, taking into account changes identified by drills/exercises.	P.3
P.5	The RERP Plan and approved changes shall be dated and marked to show revisions, and shall be sent to all organizations and individuals with implementation responsibilities.	P.3

RERP PLAN CROSS-REFERENCE WITH NUREG-0654

NUREG-0654 Requirement	Description of Requirement	RERP Plan Section
P.6	The RERP Plan shall contain a detailed list of supporting plans and their sources.	P. 2 Appendix 4
P.7	The RERP Plan shall contain an appendix listing of implementing procedures. This list shall include the sections of the Plan to be implemented by each procedure.	P. 2 Appendix 3
P.8	The RERP Plan shall contain a specific Table of Contents. Plans submitted for review should be cross-referenced to these criteria.	P. 2 Table of Contents
P.9	Conduct independent reviews of the Emergency Preparedness program every 12 months. Review shall include the RERP Plan, implementing procedures, training, readiness testing, equipment, and interfaces with State and local governments. Review results shall be formally documented, reported to appropriate organizations; and retained for 5 years.	P.4.1
P.10	Update emergency telephone numbers in procedures at least quarterly.	N.2.1

END