

January 24, 2001

Dr. Robert C. Mecredy  
Vice President, Nuclear Operations  
Rochester Gas and Electric Corporation  
89 East Avenue  
Rochester, NY 14649

**SUBJECT: FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FINAL EXERCISE  
REPORT FOR THE NOVEMBER 17, 1999, ROBERT E. GINNA NUCLEAR  
POWER STATION PLUME EXPOSURE PATHWAY EXERCISE**

Dear Dr. Mecredy:

Enclosed is a letter from Mr. Joseph Picciano, Acting Director, FEMA Region II, dated December 5, 2000, transmitting the FEMA report for the subject exercise to Mr. Hubert J. Miller, Regional Administrator, NRC Region I.

There were no Deficiencies identified during the November 17, 1999, plume exposure pathway exercise. However, there were three Areas Requiring Corrective Action (ARCAs) identified. Please provide assistance to offsite officials as they address and resolve the identified items on a timely basis.

If you have any questions concerning this enclosure, please contact David Silk at (610) 337-5372.

Sincerely,

/RA/

Richard J. Conte, Chief  
Operational Safety Branch  
Division of Reactor Safety

Docket No. 05000244  
License No. DPR-18

Enclosure: FEMA Final Exercise Report for the Robert E. Ginna Nuclear Power Station

Dr. Robert C. Mecredy

-2-

cc w/encl:

P. Wilkens, Senior Vice President, Generation

P. Eddy, Electric Division, Department of Public Service, State of New York

C. Donaldson, Esquire, State of New York, Department of Law

N. Reynolds, Esquire

F. William Valentino, President, New York State Energy Research  
and Development Authority

J. Spath, Program Director, New York State Energy Research  
and Development Authority

T. Judson, Central NY Citizens Awareness Network

cc w/o encl:

FEMA, Region II

Distribution w/encl:

- H. Miller, RA
- J. Wiggins, DRA
- J. Shea, RI EDO Coordinator
- E. Adensam, NRR (ridsnrrdlpmlpdi)
- S. Nathan, NRR
- G. Vissing, NRR
- D. Thatcher, NRR
- J. Wilcox, NRR
- H. Nieh, SRI - Ginna
- M. Evans, DRP
- W. Cook, DRP
- R. Junod, DRP
- Region I Docket Room (with concurrences)
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Region II

Jacob K. Javits Federal Building  
26 Federal Plaza, Room 1337  
New York, New York 10278-0002

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REGION I

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December 5, 2000

Mr. Hubert J. Miller, Regional Administrator  
U.S. Nuclear Regulatory Commission  
NRC Region I  
475 Allendale Road  
King of Prussia, PA 19406-1415

Dear Mr. Miller:

Enclosed is a copy of the final exercise report for the November 17, 1999, full-participation Plume Exposure Pathway exercise of the offsite radiological emergency response plans specific to the Robert E. Ginna Nuclear Power Station. The State of New York participated in this exercise, as well as Monroe and Wayne Counties of New York. FEMA Region II staff will forward a copy of this report to the State of New York.

No Deficiencies were observed, and three Areas Requiring Corrective Action (ARCA) were identified during the November 17, 1999, exercise. FEMA Region II staff will monitor the status of corrective actions.

Based on the results of the November 17, 1999, exercise it has been determined that the offsite radiological emergency response plans for the State of New York, and the affected local jurisdictions, specific to the Robert E. Ginna Nuclear Power Station Site, can be implemented and are adequate to provide reasonable assurance that appropriate measures can be taken offsite to protect the health and safety of the public in the event of a radiological emergency at the site.

If there are any questions, please contact Robert F. Reynolds, FEMA Region II Regional Assistance Committee Chair, at (212) 225-7204.

Sincerely,



Joseph Picciano  
Acting Regional Director

Ccs: Vanessa E. Quinn, FEMA Headquarters  
Patricia C. Tenorio, FEMA Headquarters  
Kathy Halvey Gibson, NRC Headquarters  
Robert J. Bores, NRC Region I

Enclosure



# **Final Exercise Report**

## **ROBERT E. GINNA NUCLEAR POWER STATION**

**Licensee: Rochester Gas & Electric**

**Exercise Date: November 17, 1999**

**Report Date: October 2, 2000**

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**FEDERAL EMERGENCY MANAGEMENT AGENCY  
REGION II  
26 Federal Plaza  
New York, New York 10278**

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## I. EXECUTIVE SUMMARY

On, November 17, 1999 an exercise was conducted in the 10-mile Plume Exposure Pathway, emergency planning zone (EPZ) around the Robert E. Ginna Nuclear Power Station by the Federal Emergency Management Agency (FEMA) Region II. The purpose of the exercise was to assess the level of State and local preparedness in responding to a radiological emergency. This exercise was held in accordance with the Federal Emergency Management Agency's (FEMA's) policies and guidance concerning the exercise of State and local radiological emergency response plans (RERPs) and procedures.

The most recent full-scale exercise at this site was conducted on June 11, 1997. The qualifying emergency preparedness exercise was conducted on January 21, 1982.

FEMA wishes to acknowledge the efforts of the many individuals in New York State, Monroe County and Wayne County who participated in this exercise. Protecting the public health and safety is the full-time job of some of the exercise participants and an additional assigned responsibility for others. Still others have willingly sought this responsibility by volunteering to provide vital emergency services to their communities. Cooperation and teamwork of all the participants were evident during this exercise.

This report contains the final evaluation of the biennial exercise and the evaluation of the following out-of-sequence activities:

<b>Function</b>	<b>Date</b>	<b>Location</b>
Monroe County Reception Center	9/1/99	Rush Henrietta High School
Monroe County Congregate Care	9/1/99	Rush Henrietta High School
Monroe County School Interviews	11/4/99	Webster Central School Districts
Monroe County MS-1 Drill	9/1/99	Rush Henrietta High School (ambulance)
	7/28/99	Rochester General (facilities)
Wayne County Reception Center	11/17/99	Palmyra Macedon High School
Wayne County Congregate Care	11/17/99	Palmyra Macedon Middle School
Wayne County School Evacuation	11/17/99	Marion Central School District, Williamson Central School District, Wayne Central School District, Sodus Central School District
Wayne County School Interviews	10/29/99	Marion Central School District Williamson Central School District Wayne Central School District Sodus Central School District

The State and local organizations, except where noted in this report, demonstrated knowledge of their emergency response plans and procedures and adequately implemented them. There were No Deficiencies and three Areas Requiring Corrective Action (ARCA) identified as a result of this exercise.

## II. INTRODUCTION

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

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

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

- Taking the lead in offsite emergency planning and in the review and evaluation of the RERP and associated procedures developed by State and local governments;
- Determining whether such plans and procedures can be implemented on the basis of observation and evaluation of exercises of the plans and procedures conducted by State and local governments;
- Responding to requests by the U.S. Nuclear Regulatory Commission (NRC) pursuant to the Memorandum of Understanding between the NRC and FEMA dated June 17, 1993 (Federal Register, Vol. 58, No. 176, September 14, 1993); and
- Coordinating the activities of Federal agencies with responsibilities in the radiological emergency planning process:
  - U.S. Department of Commerce,
  - U.S. Nuclear Regulatory Commission,
  - U.S. Environmental Protection Agency,
  - U.S. Department of Energy,
  - U.S. Department of Health and Human Services,
  - U.S. Department of Transportation,
  - U.S. Department of Agriculture,
  - U.S. Department of the Interior, and
  - U.S. Food and Drug Administration.

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

Formal submission of the RERPs for the Robert E. Ginna Nuclear Power Station to FEMA Region II by the State of New York, Monroe County and Wayne County occurred on June 17, 1985. Formal approval of the RERPs was granted by FEMA on August 19, 1986, under 44 CFR 350.

A REP exercise was conducted on November 17, 1999, by FEMA Region II to assess the capabilities of State and local emergency preparedness organizations in implementing their RERPs and procedures to protect the public health and safety during a radiological emergency involving the Robert E. Ginna Nuclear Power Station. The purpose of this exercise report is to present the exercise results and findings on the performance of the offsite response organizations (ORO) during a simulated radiological emergency.

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

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

- NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980 (hereafter referred to as NUREG-0654);
- FEMA-REP-14, "Radiological Emergency Preparedness Exercise Manual," September 1991; and
- FEMA-REP-15, "Radiological Emergency Preparedness Exercise Evaluation Methodology," September 1991.

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

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

### III. EXERCISE OVERVIEW

Contained in this section are data and basic information relevant to the November 17, 1999 exercise to test the offsite emergency response capabilities in the area surrounding the Robert E. Ginna Nuclear Power Station. This section of the exercise report includes a description of the plume pathway EPZ, a listing of all participating jurisdictions and functional entities which were evaluated, and a tabular presentation of the time of actual occurrence of key exercise events and activities.

#### A. Plume EPZ Description

The Robert E. Ginna Nuclear Power Station site is located on the south shore of Lake Ontario, in the township of Ontario, in the northwest corner of Wayne County, New York. It is approximately 20 miles east-north-east of the center of the city of Rochester, New York, and 45 miles west-south-west of Oswego, New York at longitude 77 degrees 18.7' W and latitude 43 degrees 16.7' N; the site comprises 338 acres. The distance from the containment building to the nearest site boundary (excluding the lake front boundary) is 1550 feet.

The surface of the land on the southern shore of Lake Ontario at the site and East and West of it is either flat or gently rolling. It slopes upward to the south from an elevation of about 225 feet above mean sea level near the edge of the lake; to 440 feet at Ridge Road (New York State Highway 104) 32 miles South of the lake; and then to about 1,600 feet at the northern edge of the Appalachian Plateau, 30 to 40 miles to the South. Southward from Ridge Road, the terrain progressively roughens, with a series of small abrupt hills, commencing about 10 miles South of the site.

There are no public highways or railroads that traverse the site area.

#### Monroe County

Monroe County is bordered by Orleans and Genesee Counties to the West, by Livingston and Ontario Counties to the South, by Wayne County to the East and by Lake Ontario to the North. There are many manufacturing activities centered in and around the city of Rochester. Approximately 22% of the County's 67 square miles is in urban development, about 28% is vacant, wooded or water surface and 50% is farm land. Of Monroe County's workers, 45% are employed in manufacturing, 20% in service industries, 16% in retail, 1.4% in agriculture and the remainder in other activities.

The population of Monroe County is dispersed among the City of Rochester, nineteen towns and ten villages. In terms of population size and growth, Monroe is number one in the 8-county Genesee/Finger Lakes Region.

## Wayne County

Ginna Station is located in the Town of Ontario (the northwest corner of Wayne County). Wayne County is bordered by Monroe County to the west, by Ontario and Seneca Counties to the south, by Cayuga County to the east and Lake Ontario to the north.

Since its settlement in the 19th Century, Wayne County has been predominately rural in character. The northern portion of the county, especially the area between Ridge Road and Lake Ontario, is primarily orchards. Cherries, pears and apples are the chief crops produced.

In the southeastern portion of the County highly productive mucklands can be found that produce, for the most part, corn, potatoes and onions. In the southwest, grains such as corn, oats and wheat are grown. Dairy farms are also located throughout the County. Roughly 70% of the county's 600 square miles is utilized for approximately 2,500 farms. About 34% of the County's workers are employed in manufacturing operations; 18% in service industries; 16% in retail trade; 19% in agriculture and 13% in other occupations.

The population is dispersed among fifteen towns and eleven villages. Many residents of the western portion of Wayne County (including the four EPZ towns) commute to jobs in Monroe County.

## **B. Exercise Participants**

The following agencies, organizations, and units of government participated in the Robert E. Ginna Nuclear Power Station exercise on November 17, 1999.

### **STATE OF NEW YORK**

#### **New York State Agencies/Organizations -**

- New York State Emergency Management Office
- New York State Department of Health
- New York State Police
- New York State Department of Education
- New York State Department of Transportation
- New York State Department of Social Services
- New York State Department of Labor
- New York State Disaster Preparedness Commission
- New York State Department of Agriculture and Markets
- New York State Guard
- New York State Department of Environmental Conservation

#### **Federal Agencies/Organizations -**

- U.S. Nuclear Regulatory Commission

#### **Private/Volunteer Organizations -**

- RACES
- Greater Rochester American Red Cross
- Salvation Army
- New York Power Authority
- State University of New York

### **RISK JURISDICTIONS**

#### **MONROE COUNTY**

##### **County Agencies/Organizations**

- Monroe County Office of the County Executive
- Monroe County Office of Emergency Preparedness
- Monroe County Sheriff
- Monroe County Health Department
- Monroe County Fire Bureau
- Monroe County Social Services
- Monroe County Department of Transportation

Monroe County Water Authority  
Monroe County Shelter/Evacuation  
Monroe County Department of Corrections  
Rochester Police Department  
Rochester Fire Department  
Rochester Department of Emergency Services  
Webster School District  
Emergency Medical Services and Rural Metro

**New York State Agencies/Organizations -**

New York State Police  
New York Department of Transportation  
New York State Agriculture and Markets  
New York State Department of Health

**Private/Volunteer Organizations -**

Rochester Gas and Electric  
RACES  
Lift Line  
IMC - Industrial Representative  
Greater Rochester American Red Cross  
Regional Transit System

**WAYNE COUNTY**

**County Agencies/Organizations -**

Wayne County Board of Supervisors  
Wayne County Emergency Management Office  
Wayne County Weights and Measures Department  
Wayne County Department of Health  
Wayne County Sheriffs Department  
Wayne County Department of Emergency Medical Services  
Wayne County School District  
Wayne County Department of Highways  
Wayne County Department of Public Health  
Wayne County Social Services  
Wayne County Fire/Ambulance Services  
Ontario Fire Department  
Palmyra Fire District  
Palmyra School District  
Marion School District  
Wayne School District  
Sodus School District



Williamson School District  
Lyons School District

**New York State Agencies/Organization -**

New York State Police  
New York State Department of Agriculture and Markets  
New York State Department of Health

**Private/Volunteer Organizations -**

RACES  
Rochester Gas & Electric  
Greater Rochester American Red Cross  
Civil Air Patrol

**SUPPORT JURISDICTIONS**

None.

**PRIVATE/VOLUNTEER ORGANIZATIONS**

Radio Station WHAM  
RACES  
American Red Cross  
Civil Air Patrol  
St. John's Fisher College - journalism students (mock media at JNC)

### **C. Exercise Timeline**

Table 1, on the following page, presents the time at which key events and activities occurred during the Robert E. Ginna Nuclear Power Station exercise on November 17, 1999. Also included are times notifications were made to the participating jurisdictions/functional entities.

# Table 1. Exercise Timeline

November 17, 1999 — Robert E. Ginna Nuclear Power Plant

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received or Action Was Taken			
		SEOC	JNC	MCEOC	WCEOC
Unusual Event	0820	0826	NA	0827	0829
Alert	0838	0848	0855	0848	0853
Site Area Emergency	1015	1029	1040	1043	1038
General Emergency	1055	1105	1118	1114	1122
Simulated Rad. Release Started	1045	1045	1118	1054	1045
Simulated Rad. Release Terminated	NA	NA	NA	NA	NA
Facility Declared Operational		1049	0940	0939	0941
Declaration of State of Emergency		-	NA	1115	1105
Exercise Terminated		1457	1423	1350	1400
<b>1<sup>st</sup> A/N Sequence: Decision - Early Precautionary Actions: EBS Message alerting the public of potential problem at site.</b>		1023	1023	1023	1023
1st Siren Activation		1035	1035	1035	1035
1st EAS Message		1038	1038	1038	1038
<b>2<sup>nd</sup> A/N Sequence:</b> 1st Protective Action Decision Shelter: ERPAs W-4 thru W-7; M-1 thru M-9 Evacuate: ERPAs W-1, W-2 & W-3		1127	1127	1127	1127
2nd Siren Activation		1139	1139	1139	1139
2nd EAS Message		1142	1142	1142	1142
KI Administration Decision:		NA	NA	NA	NA

LEGEND: NA - Not Applicable

- Not Available

## IV. EXERCISE EVALUATION AND RESULTS

Contained in this section are the results and findings of the evaluation of all jurisdictions and functional entities which participated in the November 17, 1999 exercise to test the offsite emergency response capabilities of State and local governments in the 10-mile EPZ surrounding the Robert E. Ginna Nuclear Power Station.

Each jurisdiction and functional entity was evaluated on the basis of its demonstration of criteria delineated in exercise objectives contained in FEMA-REP-14, REP Exercise Manual, September 1991. Detailed information on the exercise objectives and the extent-of-play agreement used in this exercise are found in Appendix 3 of this report.

### A. Summary Results of Exercise Evaluation - Table 2

The matrix presented in Table 2, on the following page(s), presents the status of all exercise objectives from FEMA-REP-14 which were scheduled for demonstration during this exercise by all participating jurisdictions and functional entities. Exercise objectives are listed by number and the demonstration status of those objectives is indicated by the use of the following letters:

- M - Met (No Deficiency or ARCAs assessed and no unresolved ARCAs from prior exercises)
- D - Deficiency assessed
- A - ARCA(s) assessed or unresolved ARCA(s) from prior exercise(s)
- N - Not Demonstrated (Reason explained in Subsection B)

## Table 2. Summary Results of Exercise Evaluation

**November 17, 1999 – Robert E. Ginna Nuclear Power Plant**

JURISDICTION/FUNCTIONAL ENTITY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
<b>NEW YORK STATE</b>																																
State Emergency Operations Center	M	M	M	M							M	M																				
Accident Assessment							M		M						M																	
Emergency Operations Facility	M	M		M																												
Joint News Center	M	M	M	M							M	M	M	M																	M	
Emergency Alert System (EAS Station)				M							M																					
<b>MONROE COUNTY</b>																																
Emergency Operations Center	M	M	A	M							M	M				M	M	M													M	
Dose Assessment					M	M	M	M	M						M																	
Radiological Field Monitoring Teams	M			M	M	M		M							M																M	
School Evacuation				M	A												A															
Reception and Congregate Care Centers	M	M		M	M																							M	M			
Special Population Bus Run				M	M												M															
Traffic Control				M	M																											
Personnel Monitoring Center	M	M		M	M																										M	
School Interviews (EV-2 Questionnaire = MET)																																
Medical Drill					M																										M	M
<b>WAYNE COUNTY</b>																																
Emergency Operations Center	M	M	M	M							M	M	M				M	M	M												M	M
Dose Assessment									M								M															
Radiological Field Monitoring Teams	M			M	M	M		M								M																M
School Evacuation				M	M														M													
Reception Center	M	M		M	M																											M
Congregate Care Center			M		M																											M
Personnel Monitoring Center	M	M		M	M																											M
School Interviews (EV-2 Questionnaire = MET)																																
Traffic Control				M	M																											

LEGEND: M = Met (No Deficiency or ARCAs assessed; A = ARCA(s) assessed and/or unresolved prior ARCAs; N = Not Demonstrated; Blank = Not scheduled for demo and no unresolved prior ARCAs)

## B. Status of Jurisdictions Evaluated

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

- **Met** - Listing of the demonstrated exercise objectives under which no Deficiencies or ARCAs were assessed during this exercise and under which no ARCAs assessed during prior exercises remain unresolved.
- **Deficiency** - Listing of the demonstrated exercise objectives under which one or more Deficiencies was assessed during this exercise. Included is a description of each Deficiency and recommended corrective actions.
- **Area Requiring Corrective Actions** - Listing of the demonstrated exercise objectives under which one or more ARCAs were assessed during the current exercise or ARCAs assessed during prior exercises remain unresolved. Included is a description of the ARCAs assessed during this exercise and the recommended corrective action to be demonstrated before or during the next biennial exercise.
- **Not Demonstrated** - Listing of the exercise objectives which were not demonstrated as scheduled during this exercise and the reason they were not demonstrated.
- **Prior ARCAs - Resolved** - Descriptions of ARCAs assessed during previous exercises which were resolved in this exercise and the corrective actions demonstrated.
- **Prior ARCAs - Unresolved** - Descriptions of ARCAs assessed during prior exercises which were not resolved in this exercise. Included is the reason the ARCA remains unresolved and recommended corrective actions to be demonstrated before or during the next biennial exercise.

The following are definitions of the two types of exercise issues which are discussed in this report.

- A **Deficiency** is defined in FEMA-REP-14 as "...an observed or identified inadequacy of organizational performance in an exercise that could cause a finding that offsite emergency preparedness is not adequate to provide reasonable assurance that appropriate protective measures can be taken in the

event of a radiological emergency to protect the health and safety of the public living in the vicinity of a nuclear power plant."

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

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

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

- **Plant Site Identifier** - A two-digit number corresponding to the Utility Billable Plant Site Codes.
- **Exercise Year** - The last two digits of the year the exercise was conducted.
- **Objective Number** - A two-digit number corresponding to the objective numbers in FEMA-REP-14.
- **Issue Classification Identifier** - (D = Deficiency, A = ARCA). Only Deficiencies and ARCAs are included in exercise reports.
- **Exercise Issue Identification Number** - A separate two (or three) digit indexing number assigned to each issue identified in the exercise.

# 1 NEW YORK STATE

## 1.1 State Emergency Operations Center (SEOC)

- a. MET: Objectives 1, 2, 3, 4, 10 & 11
- b. DEFICIENCY: NONE
- c. AREAS REQUIRING CORRECTIVE ACTION: NONE
- d. NOT DEMONSTRATED: NONE
- e. PRIOR ARCAs - RESOLVED: NONE
- f. PRIOR ARCAs - UNRESOLVED: NONE

## 1.2 Dose Assessment

- a. MET: Objectives 7, 9 & 14
- b. DEFICIENCY: NONE
- c. AREAS REQUIRING CORRECTIVE ACTION: NONE
- d. NOT DEMONSTRATED: NONE
- e. PRIOR ARCAs - RESOLVED:

**Issue:** 27-97-07-A-01

**Description:** It was possible for the SEOC dose assessment group to get an approximate idea of the plume location from their plume projections and the field monitoring results that were communicated to them. However, the dose assessment group members projected a radioactive plume extending to the south of the plant; and, on the basis of the information available to them, were not able to clearly identify the fact that the plume direction did move downwind so as to extend in a somewhat more westerly direction. Thus, the SEOC dose assessment group was not able to warn Monroe County emergency personnel that the plume was moving into the southeastern part of Monroe County.

**Recommendation:** It is recommended that the dose assessment group be more proactive in requesting further measurements from field monitoring teams as needed as well as any further information needed from the utility, so as to be able to provide



assurance that the plume has been accurately located and its radiation levels determined. It is recommended that the dose assessment group clearly display on a map together the projected plume location with both calculated radiation levels and field monitoring team measurement data. It is also suggested that predetermined monitoring points be identified so as to provide for quicker and simpler communications of the locations from which monitoring measurements are reported.

**Corrective Action Demonstrated:** The exercise scenario did not present an entirely similar situation to that of the preceding exercise during which the ARCA originated, so the remedial action was verified in part by discussion, and in part by the demonstration of activities that would act to resolve any similar problems. Projections were conducted using 3 computers and 2 codes, and they had the ability to enter current weather conditions and forecast weather conditions. They were able to back calculate from field team data, and a lot of data was received from utility and county field teams. They had a better map than previously, and as soon as they started getting data from the field teams, they plotted the data and time on the map. Back calculations were performed on the field team data and examined for discrepancies between field team data and dose projections based on utility data and meteorology. Thus, the significant efforts to model the plume and to compare the results of modeling with simulated measurements would have brought out any major shifts in the plume and enabled the dose assessment group to provide a warning to the Counties and their field personnel of any major unexpected plume movements.

f. **PRIOR ARCAs - UNRESOLVED: NONE**

### 1.3 **Emergency Operations Facility (EOF)**

a. **MET: Objectives 1, 2 & 4**

b. **DEFICIENCY: NONE**

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

d. **NOT DEMONSTRATED: NONE**

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

f. **PRIOR ARCAs - UNRESOLVED: NONE**

#### 1.4 Joint News Center (JNC)

- a. **MET:** Objectives 1, 2, 3, 4, 10, 11, 12, 13 & 30
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:**

**Issue:** 27-97-03-A-02

**Description:** Monroe County PIOs were using an outdated version of the plan dated 9/95 instead of the current 2/97 version. However, this did not impair their ability to respond.

**Recommendation:** There should be copies of the current plan in use, not previous versions.

**Corrective Action Demonstrated:** Copies of the most current version of the plans were available in the JNC.

**Issue:** 27-97-11-A-03

**Description:** The prescribed two-minute length of the EAS messages does not allow for geographic boundaries or familiar landscapes to be described. This information was referred to in the press briefings by reference to this information outlined in the brochures and calendar distributed to all residents in the 10-mile EPZ. At present this is the only way this information is available.

**Recommendation:** As a minimum geographic boundaries and familiar landmarks for each specific ERPA should be described in a news release and distributed to the media.

**Corrective Action Demonstrated:** Protective action areas were described in the EAS messages and in the press releases in terms of familiar landmarks and boundaries for the affected areas.

- f. **PRIOR ARCAs - UNRESOLVED:** NONE

**1.5 Emergency Alert System Radio Station - WHAM**

- a. **MET: Objectives 4 & 10**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

## **2 RISK JURISDICTIONS**

### **2.1 MONROE COUNTY**

#### **2.1.1 Monroe County Emergency Operations Center (MCEOC)**

- a. MET: Objectives 1, 2, 4, 10, 11, 15, 16, 17 & 30**
- b. DEFICIENCY: NONE**
- c. AREAS REQUIRING CORRECTIVE ACTION:**

**Issue:** 27-99-03-A-01

**Description:** The Monroe County EOC did not notify the Personnel Monitoring Center PMC of changes in plant status or when a radiological release from the plant had occurred (NUREG-0654, A.1.a, A.2).

**Recommendation:** County EOC staff should provide important emergency information (e.g., changes in ECLs and release data) to the Personnel Monitoring Center as described in the Monroe County Plan (Procedure K, Attachment 5; XI.C).

- d. NOT DEMONSTRATED: NONE**
- e. PRIOR ARCAs - RESOLVED: NONE**
- f. PRIOR ARCAs - UNRESOLVED: NONE**

#### **2.1.2 Dose Assessment**

- a. MET: Objectives 5, 6, 7, 8, 9 & 14**
- b. DEFICIENCY: NONE**
- c. AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. NOT DEMONSTRATED: NONE**

e. **PRIOR ARCAs - RESOLVED:**

**Issue:** 27-97-07-A-04

**Description:** Monroe County Dose Assessment did not quickly identify that the plume was not going in the direction indicated by meteorology. There were some indications in the form of three utility field measurements, showing normal background radiation levels, to Monroe County Dose Assessment that the plume was no longer going due south. Monroe County field teams first detected the plume at about 1215 providing the County Dose Assessment the first indication of plume presence at about 1250.

**Recommendation:** Procedures and plans for Monroe County Dose Assessment should be reviewed to ensure that plume location would be verified based on field team measurements. It should be expected that the plume might not be where indicated based on meteorological data and that field teams will need to locate the plume. In cases of a reported release and in the absence of field team verification of the plume location and intensity, plans and procedures should require early conservative protective actions over wide areas to cover the uncertainties. Additional training for County Dose Assessment as well as field teams should also be considered.

**Corrective Action Demonstrated:** Monroe County Dose Assessment quickly identified the plume location by use of field monitoring team data. Field data was posted on a status board that also contained isopleths based upon meteorology. The field data corresponded with the isopleths. Field data with background levels began coming in at 1045. Field data above background started coming in at 1106 from field monitoring teams supplied by the utility. The plume location and direction of travel was easily identified by data received from field monitoring teams supplied by the utility, Wayne County and Monroe County.

f. **PRIOR ARCAs - UNRESOLVED: NONE**

**2.1.3 Monroe County Radiological Field Monitoring Teams**

- a. **MET:** Objectives 1, 4, 5, 6, 8, 14 & 30
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE

- e. **PRIOR ARCAs - RESOLVED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

**2.1.4 Monroe County Warning Point**

- a. **MET: Objectives 1 & 4**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

**2.1.5 School Evacuation (Webster School District)**

- a. **MET: Objective 4**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION:**

**Issue:** 27-99-05-A-02

**Description:** The Transportation Coordinator for the Webster Central School District had no knowledge of exposure control. He did not give the bus driver a briefing; the bus driver issued himself a dosimetry kit. A Monroe County Group Exposure Record was not available in the office on which to record information regarding issuing of kits. The Monroe County Plan states that all emergency information is to be placed on a Monroe County Group Exposure Record (Attachment 7, Procedure K, Figure #2, Monroe County Group Exposure Record; Attachment 2B to Procedure K, Section VII, Paragraph B). When the Bus driver was filling out the Individual Emergency Worker Reference Card provided in his kit, he did not know where to obtain the serial number of the TLD (it was printed on the TLD).

Although the dosimetry kit contained an instruction card, the bus driver did not refer to this card, and he explained that he would check his self-reading dosimeter one time at every stop rather than at 30-minute intervals as described on the instruction card.

The bus driver also did not know the exposure levels at which he is required to notify his supervisor (.5R, 1R, 3R, and 5R) or the turn-back value (5R), and he did not know that any exposure above 25R was on only a voluntary basis for those fully aware of the risks (Monroe County Plan, Page III-K-2-1).

The bus driver also did not know he should report to the Personnel Monitoring Center after completion of his assignment. (NUREG-0654, H.10; K.3.a, b; J.10.e; K.3.a, b; K.4; N.1.2)

**Recommendation:** The Transportation Coordinators and bus drivers for the Webster Central School District should receive additional training in Emergency Worker Exposure Control. A briefing sheet should be developed for the transportation coordinators to use when briefing the bus drivers prior to deployment. The Regional Transit Service (RTS) sheet could serve as an excellent model.

**Issue:** 27-99-16-A-03

**Description:** When the evaluator arrived at 1105, he was informed by the Transportation Coordinator that the current ECL was an Alert; although the Transportation Center had received notice of the SAE ECL, it had failed to inform the Transportation Coordinator. When the secretary heard the Transportation Coordinator make this mistake, she passed him the log that indicated that an SAE ECL had been declared and that buses were to be at the schools awaiting instructions (simulated). At 1107, the transportation office received notification from the Webster Central School District liaison at the EOC to evacuate students to Monroe Community College. However, there was no indication that the Transportation Coordinator was informed of this crucial piece of information. Although the bus evacuating students from the school was dispatched in sequence, from the perspective of the Transportation Coordinator and the evaluator, this activity was actually performed out of sequence because they were not informed of the instructions to evacuate. There was no relaying of information to the Transportation Coordinator upon receipt of information from the EOC.

The Transportation Coordinator at the bus garage was not knowledgeable of the school evacuation procedures as required in the plan (Monroe County Plan, Part I, Appendix C). The bus driver was handed a folder with alternative routes to the Monroe Community College (route 1 and route 2) but was not instructed which route to take. However, the EOC duty log of

the Webster Central School District liaison at the EOC directed that route 1 be used when the Transportation Center was notified of the evacuation instruction. Students were to be loaded on buses (simulated) after the Monroe County EOC received notice of a GE ECL and of a radiological release. This information was not relayed from the EOC to the school's transportation office for dissemination to the bus drivers. (NUREG-0654, J.10.d. g., N.1.a)

**Recommendation:** The staff of the transportation center should be trained as to the importance of conveying ECL and protective action information to the Transportation Coordinators. Transportation Coordinators should be trained to respond to the information conveyed and implement protective actions. Alternates for the Transportation Coordinators position should be trained in the event the primary Coordinator is unavailable to respond to the schools transportation center.

- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

**2.1.6 Reception Center (Rush Henrietta High School; September 1, 1999)**

- a. **MET: Objectives 1, 2, 4, 5 & 18**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

**2.1.7 Congregate Care Center (Rush Henrietta High School; September 1, 1999)**

- a. **MET: Objectives 4 & 19**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**



- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

**2.1.8 Special Population Bus Run (Regional Transit Service)**

- a. **MET: Objectives 4, 5 & 15**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

**2.1.9 Traffic Control Points (2)**

- a. **MET: Objectives 4, 5 & 17**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

**2.1.10 Personnel Monitoring Center (Culver Road Armory)**

- a. **MET: Objectives 1, 2, 4, 5 & 22**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**

- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

**2.1.11 School Interviews (Webster Central School District - November 4, 1999)**

- a. **MET: Objective 16: EV-2 Questionnaire**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

**2.1.12 Medical Drill (Rush Henrietta High School - Transportation on September 1, 1999; Rochester General Hospital - Facilities on July 28, 1999)**

- a. **MET: Objectives 5, 20 & 21**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

## **2.2 WAYNE COUNTY**

### **2.2.1 Wayne County Emergency Operations Center (WCEOC)**

- a. **MET: Objectives 1, 2, 3, 4, 9, 10, 11, 15, 16, 17, 30 & 31**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

### **2.2.2 Wayne County Dose Assessment**

- a. **MET: Objectives 7 & 14**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

### **2.2.3 Wayne County Radiological Field Monitoring Teams**

- a. **MET: Objectives 1, 4, 5, 6, 8, 14 & 30**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

**2.2.4 Wayne County Warning Point**

- a. **MET: Objectives 1 & 4**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

**2.2.5 School Evacuation (4 Locations; - Varies [Marion Central School District, Williamson Central School District, Wayne Central School District] & BOCES [Sodus Central School District])**

- a. **MET: 4, 5 & 16**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

**2.2.6 Reception Center (Palmyra Macedon High School)**

- a. **MET: Objectives 1, 2, 4, 5 & 18**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**

f. **PRIOR ARCAs - UNRESOLVED: NONE**

**2.2.7 Congregate Care Centers (Palmyra Macedon Middle School)**

a. **MET: Objectives 2, 4 & 19**

b. **DEFICIENCY: NONE**

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

d. **NOT DEMONSTRATED: NONE**

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

f. **PRIOR ARCAs - UNRESOLVED: NONE**

**2.1.8 Special Population Bus Run**

a. **MET: Objectives 4, 5 & 15**

b. **DEFICIENCY: NONE**

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

d. **NOT DEMONSTRATED: NONE**

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

f. **PRIOR ARCAs - UNRESOLVED: NONE**

**2.2.9 Personnel Monitoring Center (County Complex)**

a. **MET: Objectives 1, 2, 4, 5 & 22**

b. **DEFICIENCY: NONE**

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

d. **NOT DEMONSTRATED: NONE**

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

f. **PRIOR ARCAs - UNRESOLVED: NONE**

**2.2.10 School Interviews (4 Locations; October 29, 1999 - Varies [Marion Central School District, Williamson Central School District, Wayne Central School District] & BOCES [Sodus Central School District])**

- a. **MET: Objective 16: EV-2 Questionnaire**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

**2.2.11 Traffic Control Points (2)**

- a. **MET: Objectives 4, 5 & 17**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

## APPENDIX 1

### ACRONYMS AND ABBREVIATIONS

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

ANL	Argonne National Laboratory
ARCA	Area Requiring Corrective Action
BOCES	Board of Cooperative Educational Services
CFR	Code of Federal Regulations
DOT	U.S. Department of Transportation
EAL	Emergency Action Level
EAS	Emergency Alert System
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EPA	U.S. Environmental Protection Agency
EPIP	Emergency Plan Implementing Procedure
EPZ	Emergency Planning Zone
ERPA	Emergency Response Planning Area
FEMA	Federal Emergency Management Agency
FR	Federal Register
JENC	Joint Emergency News Center
KI	Potassium Iodide
KLT	K.L. Travis & Associates
MCC	Monroe Community College
MCEOC	Monroe County Emergency Operations Center
MCFA	Monroe County Field Activities
mR	milliroentgen
mR/h	milliroentgen per hour
NRC	U.S. Nuclear Regulatory Commission
NUREG-0654	NUREG-0654/FEMA-REP-1, Rev. 1, <i>"Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants,"</i> November 1980

ORO	Offsite Response Organization
PIO	Public Information Officer
PMC	Personnel Monitoring Center
R	Roentgen
RAC	Regional Assistance Committee
RACES	Radio Amateur Civil Emergency Service
RECS	Radiological Emergency Communications System
REM	Roentgen Equivalent Man
REP	Radiological Emergency Preparedness
RERP	Radiological Emergency Response Plan
RG&E	Rochester Gas and Electric
R/h	Roentgen(s) per hour
RTS	Regional Transport Service
SEOC	State Emergency Operations Center
SEMO	State Emergency Management Office
TBD	To Be Determined
TCP	Traffic Control Point
TL	Team Leader
UE	Unusual Event
USDA	U.S. Department of Agriculture
WCEOC	Wayne County Emergency Operations Center
WCFA	Wayne County Field Activities
WHAM	Emergency Alert System Radio Station for Ginna area.



## APPENDIX 2.

### EXERCISE EVALUATORS AND TEAM LEADERS

The following is a list of the personnel who evaluated the Robert E. Ginna Nuclear Power Station exercise on November 17, 1999 and the out of sequence drills. Evaluator Team Leaders are indicated by the letters "(TL)" after their names. The organization which each evaluator represents is indicated by the following abbreviations:

FEMA	Federal Emergency Management Agency
ANL	Argonne National Laboratory
NRC	Nuclear Regulatory Commission
KLT	K.L. Travis & Associates

<u>EVALUATION SITE</u>	<u>EVALUATOR</u>	<u>ORGANIZATION</u>
<b>EXERCISE OVERSIGHT</b>	R. Reynolds	FEMA
<b>NEW YORK STATE</b>		
SEOC - Direction & Control	R. Acerno(TL)	FEMA
SEOC - Communication & Operations	S. Thomas	FEMA
SEOC - Warning Point	S. Thomas	FEMA
SEOC - Dose Assessment	C. Herzenberg	ANL
EOF	R. Bores	NRC
JNC	C. McCoy	ANL
JNC	M. Meshenberg	ANL
EAS Activation	M. Meshenberg	ANL
<b>MONROE COUNTY</b>		
MCEOC - Direction & Control	B. Gasper(TL)	ANL
MCEOC - Communication & Operations	P. Kier	ANL
MCEOC - Dose Assessment	R. Grundstrum	KLT
Warning Point	P. Kier	ANL
Special Population Evacuation	R. Ohlsen	FEMA
TCP	S. Waters	FEMA

<u>EVALUATION SITE</u>	<u>EVALUATOR</u>	<u>ORGANIZATION</u>
<b>MONROE COUNTY (Cont.)</b>		
School Evacuation	R. Ohlsen	FEMA
Reception Center*	S. Nelson	ANL
Congregate Care Center*	S. Nelson	ANL
PMC	R. Bernacki	FDA
Radiological Field Monitoring Team	J. Jacobson	ANL
School Interview*	S. Nelson	ANL
Medical Drill*	T. Carroll	ANL
	S. Nelson	ANL
<b>WAYNE COUNTY</b>		
WCEOC - Direction & Control	R. Thomson (TL)	ANL
WCEOC - Communications & Operations	B. Hasemann	FEMA
WCEOC - Dose Assessment	F. Wilson	ANL
Warning Point	B. Hasemann	FEMA
Special Population Evacuation	T. Carroll	ANL
TCP	A. Teotia	ANL
School Evacuations*	S. Nelson	ANL
School Evacuations	J. Staroba	ANL
Reception Center*	S. Nelson	ANL
Congregate Care Center*	J. Staroba	ANL
PMC	A. Teotia	ANL
Radiological Field Monitoring Team	H. Harrison	ANL
School Interviews*	S. Nelson	ANL

\* Indicates an out of sequence drill or demonstration.

## APPENDIX 3

### EXERCISE OBJECTIVES AND EXTENT-OF-PLAY AGREEMENT

This appendix lists the exercise objectives and the extent-of-play agreement which were scheduled for demonstration in the Robert E. Ginna Nuclear Power Station exercise on November 17, 1999.

The exercise objectives, contained in FEMA-REP-14, "Radiological Emergency Preparedness Exercise Manual," September 1991, represent a functional translation of the planning standards and evaluation criteria of NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for the Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980.

Because the exercise objectives are intended for use at all nuclear power plant sites, and because of variations among offsite plans and procedures, an extent-of-play agreement is prepared by the State and approved by FEMA to provide evaluators with guidance on expected actual demonstration of the objectives. The following objectives were approved by FEMA Region II on September 3, 1998.

#### A. Exercise Objectives

Listed below are the specific radiological emergency preparedness objectives scheduled for demonstration during this exercise.

##### **OBJECTIVE 1: MOBILIZATION OF EMERGENCY PERSONNEL**

Demonstrate the capability to alert and fully mobilize personnel for both emergency facilities and field operations. Demonstrate the capability to activate and staff emergency facilities for emergency operations.

Locations: SEOC, EOF, JENC, MCEOC, WCEOC, MCFA, WCFA

##### **OBJECTIVE 2: FACILITIES - EQUIPMENT, DISPLAYS, AND WORK ENVIRONMENT**

Demonstrate the adequacy of facilities, equipment, displays and other materials to support emergency operations.

Locations: SEOC, EOF, JENC, MCEOC, WCEOC, MCFA, WCFA

**OBJECTIVE 3: DIRECTION AND CONTROL**

Demonstrate the capability to direct and control emergency operations.

Locations: SEOC, EOF, JENC, MCEOC, MCFA, WCEOC, WCFA

**OBJECTIVE 4: COMMUNICATIONS**

Demonstrate the capability to communicate with all appropriate emergency personnel at facilities and in the field.

Locations: SEOC, EOF, JENC, MCEOC, MCFA, WCEOC, WCFA

**OBJECTIVE 5: EMERGENCY WORKER EXPOSURE CONTROL**

Demonstrate the capability to continuously monitor and control radiation exposure to emergency workers.

Locations: SEOC, MCEOC, MCFA, WCEOC, WCFA

**OBJECTIVE 6: FIELD RADIOLOGICAL MONITORING - AMBIENT RADIATION MONITORING**

Demonstrate the appropriate use of equipment and procedures for determining field radiation measurements.

Locations: MCEOC, MCFA, WCEOC, WCFA

**OBJECTIVE 7: PLUME DOSE PROJECTION**

Demonstrate the capability to develop dose projections and protective action recommendations regarding evacuation and sheltering.

Locations: SEOC (Only if the governor declares a State of Emergency.), MCEOC, WCEOC

ARCA-27-97-07-01, 27-97-07-A-04

**OBJECTIVE 8: FIELD RADIOLOGICAL MONITORING - AIRBORNE RADIOIODINE AND PARTICULATE ACTIVITY MONITORING**

Demonstrate the appropriate use of equipment and procedures for the measurement of airborne radioiodine concentrations as low as  $10^{-7}$  (0.0000001) microcuries per cubic centimeter in the presence of noble gases and obtain samples of particulate activity in the airborne plume.

Locations: MCEOC, MCFA, WCEOC, WCFA

**OBJECTIVE 9: PLUME PROTECTIVE ACTION DECISION MAKING**

Demonstrate the capability to make timely and appropriate protective action decisions.

Locations: SEOC (Only if the governor declares a State of Emergency.), MCEOC

**OBJECTIVE 10: ALERT AND NOTIFICATION**

Demonstrate the capability to promptly alert and notify the public within the 10-mile plume pathway emergency planning zone and disseminate instructional messages to the public on the basis of decisions by appropriate State or local officials.

Locations: SEOC (Only if the governor declares a State of Emergency.), JENC, MCEOC, WCEOC, WHAM

**OBJECTIVE 11: PUBLIC INSTRUCTIONS AND EMERGENCY INFORMATION**

Demonstrate the capability to coordinate the formulation and dissemination of accurate information and instructions to the public.

Locations: SEOC (Only if the governor declares a State of Emergency.), JENC, MCEOC, WCEOC

ARCA-27-97-03-A-02

**OBJECTIVE 12: EMERGENCY INFORMATION - MEDIA**

Demonstrate the capability to coordinate the development and dissemination of clear, accurate, and timely information to the news media.

Locations: JENC

**OBJECTIVE 13: EMERGENCY INFORMATION - RUMOR CONTROL**

Demonstrate the capability to establish and operate rumor control in a coordinated and timely manner.

Locations: JENC

**OBJECTIVE 14: IMPLEMENTATION OF PROTECTIVE ACTIONS - USE OF POTASSIUM IODIDE FOR EMERGENCY WORKERS, INSTITUTIONALIZED INDIVIDUALS, AND THE GENERAL PUBLIC**

Demonstrate the capability and resources to implement potassium iodide protective actions for emergency workers, institutionalized individuals, and, if the State plan specifies, the general public.

Locations: SEOC, MCEOC, MCFA, WCEOC, WCFA

**OBJECTIVE 15: IMPLEMENTATION OF PROTECTIVE ACTIONS - SPECIAL POPULATIONS**

Demonstrate the capability and resources necessary to implement appropriate protective actions for special populations.

Locations: MCEOC, WCEOC

**OBJECTIVE 16: IMPLEMENTATION OF PROTECTIVE ACTIONS - SCHOOLS**

Demonstrate the capability and resources necessary to implement protective actions for school children within the plume pathway emergency planning zone.

Locations: MCEOC, MCFA, WCEOC, WCFA

**OBJECTIVE 17: TRAFFIC AND ACCESS CONTROL**

Demonstrate the organizational capability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas.

Locations: MCEOC, MCFA, WCEOC, WCFA

**OBJECTIVE 18: RECEPTION CENTER -  
MONITORING, DECONTAMINATION AND REGISTRATION**

Demonstrate the adequacy of procedures, facilities, equipment, and personnel for the radiological monitoring, decontamination and registration of evacuees.

Locations: Monroe County: Rush Henrietta High School  
Wayne County: Palmyra Macedon High School

**OBJECTIVE 19: CONGREGATE CARE**

Demonstrate the adequacy of facilities, equipment, supplies, personnel, and procedures for congregate care of evacuees.

Locations: Monroe County: Rush Henrietta High School  
Wayne County: Palmyra Macedon Middle School

**OBJECTIVE 20: MEDICAL SERVICES - TRANSPORTATION**

Demonstrate the adequacy of vehicles, equipment, procedures, and personnel for transporting contaminated, injured, or exposed individuals.

Locations: Monroe County: Rush Henrietta

**OBJECTIVE 21: MEDICAL SERVICES - FACILITIES**

Demonstrate the adequacy of equipment, procedures, supplies, and personnel of medical facilities responsible for treatment of contaminated, injured, or exposed individuals.

Locations: Monroe County: Rochester General Hospital

**OBJECTIVE 22: EMERGENCY WORKERS, EQUIPMENT, AND VEHICLES  
- MONITORING AND DECONTAMINATION**

Demonstrate the adequacy of procedures for the monitoring and decontamination of emergency workers, equipment, and vehicles.

Locations: Monroe County: Culver Road Armory  
Wayne County: County Complex

**OBJECTIVE 30: CONTINUOUS, 24-HOUR STAFFING**

Demonstrate the capability to maintain staffing on a continuous, 24 hour basis through an actual shift change.

Locations: MCEOC, WCEOC

**OBJECTIVE 31: OFFSITE SUPPORT FOR THE EVACUATION OF ONSITE PERSONNEL**

Demonstrate the capability to provide offsite support for the evacuation of onsite personnel.

Locations: WCEOC



## B. Extent-of-Play Agreement

The extent-of-play agreement on the following pages was submitted by the New York State, and was finalized and accepted by FEMA Region II on November 16, 1999, in preparation for the Robert E. Ginna Nuclear Power Station exercise on November 17, 1999. Please note that not all of the activities listed in the extent-of-play agreement occurred as described, and some demonstrations occurred that were not described in the agreement. The extent-of-play agreement includes any significant modification or change in the level of demonstration of each exercise objective listed in Subsection A of this appendix.

<u>Facility/Activity</u>	<u>NY State</u>	<u>Monroe</u>	<u>Wayne</u>
Warning Point	Actual	Actual	Actual
EOC	Actual	Actual <sup>1,7</sup>	Actual <sup>1,7</sup>
EOF	Actual <sup>1</sup>	Actual	Actual
JENC	Actual <sup>1</sup>	Actual <sup>1,7</sup>	Actual <sup>1,7</sup>
Reception Center	N/A	Actual <sup>1,6</sup>	Actual <sup>1,6</sup>
Congregate Care Center	N/A	Actual <sup>1,6</sup>	Actual <sup>1,6</sup>
Emergency Worker PMC	None	Actual <sup>1</sup>	Actual <sup>1</sup>
Siren Activation	N/A	Simulated	Simulated
EAS Formulation	Actual	Actual	Actual
EAS Broadcast	Simulated (1 test only)	Simulated (1 test only)	Simulated (1 test only)
Route Alerting -Primary -Backup	N/A N/A	N/A 1-EOC Discussion	N/A 1-EOC Discussion
Field Monitoring Teams	N/A	1-Actual <sup>7</sup> Team 1-RGE Team	1-Actual <sup>7</sup> Team 1-RGE Team

	<u>NY State</u>	<u>Monroe</u>	<u>Wayne</u>
Special Population Bus Run	N/A	1-Actual 1-Interview	1-Actual 1-Interview
School Evacuation Bus Run	N/A	1-Actual 1-Interview	1-Actual 3-Interviews
School Interviews	N/A	1-Interview	4-Interviews
Notification of Hearing Impaired	N/A	Simulated Via EOC Discussion	Simulated Via EOC Discussion
Evac. Of Mobility Impaired-Non-Institutionalized	N/A	Simulated Via EOC Discussion	Simulated Via EOC Discussion
Traffic Control Pts.	N/A	2-Actual	2-Actual
Impediments to Evac.	N/A	Simulated Via EOC Discussion	Simulated Via EOC Discussion
K1 Administration	Discussion	Discussion	Discussion
School Interview	N/A	1 <sup>5</sup> -Actual <sup>6</sup>	4 <sup>5</sup> -Actual <sup>6</sup>
Medical Drill Hospital	N/A	Actual <sup>6</sup>	

1. Staffing is described in extent play agreement
2. To be demonstrated at State EOC should the governor declare a State of Emergency
3. Not used.
4. EAS message will be sent to WI-IAM but test message will be broadcast
5. Number of School districts in EPZ.
6. Out of sequence with exercise.
7. Shift change

**ROBERT E. GINNA NUCLEAR POWER PLANT  
1999 FULL SCALE EXERCISE  
RESPONSE BY FACILITY/TEAM**

### **3.1 WARNING POINTS**

**Applicable Objectives: 1, 2, 4**

Summary Response:

The New York State, Monroe County and Wayne County Warning Points will be evaluated for this exercise. They will receive the official notification of an event from the utility via the Radiological Emergency Communications System (RECS) dedicated line. This will initiate a notification of designated agencies and personnel who, in turn, have additional notification responsibilities.

Limitations:

It should be understood that the call lists may change on a weekly basis. The latest quarterly revision call list will be provided to the federal/state evaluators at the briefing session the day before the exercise.

There will be no free play messages introduced at the warning points.

### **3.2 STATE EOC**

**Applicable Objectives: 1, 2, 3, 4, 5, 7, 9, 10, 11, 14**

Summary Response:

Partial activation of the State EOC occurs for the Alert classification level with full activation occurring for State Area Emergency and General Emergency classification levels. The State EOC is staffed by various state agencies which provide support and guidance to the affected county. The local county retains primary responsibility for responding to a radiological emergency. A State Declaration of Disaster Emergency allows the State to mobilize additional resources but does not change the duties or responsibilities of the various agencies. The dose assessment group coordinates activities with their counterparts at the county EOC regarding protective action decisions including the need to authorize KI. An adequate supply of KI is available at the EOC and is distributed to emergency field workers along with dosimetry equipment prior to dispatch.

Limitations:  
None

### **3.3 MONROE AND WAYNE COUNTY EOC**

**Applicable Objectives: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14, 15, 16, 17, 30, 31 (Wayne)**

**Summary Response:**

The County EOC will be activated in accordance with the County Plan. Once operational the County EOC has primary responsibility for accident assessment, dose projections, field team direction, protective action decision-making, public notification and evacuation management. The County EOC coordinates activities with the State EOC which provided a support function.

**Limitations**

1. The County Radiological Officer can be questioned regarding procedures and resources to transport samples to a central point for transfer to the State laboratory (Albany). There will be no transport of samples to either the transfer point or the State laboratory (Albany).
2. All siren system activations will be simulated.
3. Back-up route alerting of one route (selected by the FEMA evaluator) will be discussed at the county EOC. This will be a discussion only activity.
4. Emergency workers in the EPZ at risk of exposure to radioactive iodine will be issued KI before dispatch to the field. (Note: KI is not provided to the general public.)
5. Call lists will be available at the County EOC for the non-institutionalized hearing impaired and mobility impaired individuals. All calls will be simulated.
6. Two Traffic Control Points (TCPs) in each county will be demonstrated, controller inject messages will identify the TCPs. A police officer will be dispatched to each TCP but there will be no trucks or heavy equipment dispatched. In addition, there will be no actual placing of barricades and signs which could interfere with the normal traffic flow. The police officers will be released when FEMA has completed the evaluation following contact with the County EOC.
7. The County will demonstrate the ability to deal with no more than 3 impediments to evacuation through EOC discussion only. Play will be initiated with controller inject messages. No resource providers will be contacted or equipment deployed to the field.
8. Offsite support for the evacuation of onsite personnel will be demonstrated by

discussion only at the Wayne County EOC and discussion with the utility Site Emergency Director.

9. The State and utility (technical) liaisons will arrive no sooner than 30 minutes after the Alert declaration is received over the RECS line.

### **3.4 EMERGENCY OPERATIONS FACILITY**

**Applicable Objectives: 1, 2, 4**

**Summary Response:**

Activation occurs at the Site Area Emergency classification level and includes representatives of the State of New York, Monroe and Wayne Counties. Their primary responsibility is to relay information to the State and County EOCs.

**Limitations:**

1. The State liaisons will arrive no sooner than 30 minutes after the Alert declaration is received over the RECS line.
2. County liaisons will arrive no sooner than 15 minutes after the Alert declaration is received over the RECS line.

### **3.5 JOINT EMERGENCY NEWS CENTER**

**Applicable Objectives: 1, 2, 3, 4, 10, 11, 12, 13**

**Summary Response:**

The Joint News Center, when activated, includes representatives of Rochester Gas & Electric Corporation, the State of New York, Monroe and Wayne Counties. These representatives serve as the official sources of State and County information released to the news media. The County EOC develops EAS messages and sends them to the JENC for coordination with the State and utility. The JENC arranges for their airing on WHAM. A rumor control function is also provided.

**Limitations:**

1. The State liaisons will arrive no sooner than 30 minutes after the Alert declaration is received over the RECS line.
2. The County liaisons will arrive no sooner than 15 minutes after the Alert declaration is received over the RECS line.

3. EAS messages will be developed and sent to WHAM. There will be no broadcast of EAS messages. There will be only one (1) simulation of airing of the EAS message. This will be the first EAS message. The last time to be recorded (clock stopped) is the time at which the EAS message begins to be broadcast (first 3 words read of the talk-up after "this is a drill").
4. During the exercise there will be no actual siren sounding and no broadcasting of EAS messages.
5. Content and time of all EAS messages will be noted by FEMA. However, whether or not the accompanying EAS message contains a protective action recommendation.
6. Rumor control staff will be limited to 6 people.

### **3.6 RECEPTION CENTERS**

**Applicable Objectives: 1, 2, 4, 5, 18**

Summary Response:

The Reception Centers will be demonstrated out of sequence with the exercise scenario. They are located at the Rush Henrietta School Complex in Monroe County and the Palmyra Macedon High School in Wayne County. A controller will provide simulated contamination levels to drive demonstration of various activities. The center is staffed with enough personnel to monitor 20% of the EPZ population in 12 hours (as defined by the plan).

Limitations:

NOTE: SEMO, Wayne County, Monroe County and FEMA have agreed that the reception centers will be demonstrated under the following schedule:

Wayne County - 11/17/99 between 1830 - completion

Monroe County - 9/01/99 between 0900 and 1300 (completed)

FEMA evaluators should advise the participants when their evaluation is complete so that participants can resume their normal duties. Vehicle monitoring and decontamination will be observed first by FEMA evaluators.

The demonstration will be limited to the following:

1. One station for vehicle monitoring with at least 1 monitor monitoring at least two vehicles.

2. One portal monitoring station monitoring 6 individuals.
3. One registration station (social services) with 2 personnel registering at least 2 individuals each.
4. One decon station with 2 monitors to simulate at least 1 personnel decon each.
5. One vehicles decon station with at least 1 monitor to simulate at least 2 vehicle decons.
6. Other staff will be demonstrated through the use of rosters. Evacuees, some of whom will be contaminated using controller inject messages, will be simulated by members of the facility staff.
7. The facility will be set up as it would be in an actual emergency with all route markings and contamination control measures in place with the exception that Receptions Center floors will not be covered with paper/plastic.
8. Monitors will not suite up in anti-contamination clothing although one monitor may suit up at FEMA's request.

### **3.7 CONGREGATE CARE CENTER**

**Applicable Objectives: 4, 19**

Summary Response:

Facility will be demonstrated at the same time as the reception center evacuation.

Limitations:

NOTE: SEMO, Wayne County, Monroe County, and FEMA have agreed that the congregate care will be demonstrated under the following schedule:

Wayne County - 11/17/99 between 1830 - completion

Monroe County - 9/01/99 between 0900-1300 (completed)

FEMA evaluators should advise the participants when their evaluation is complete so that participants can resume their normal duties.

1. The facility will be staffed by the Shelter Manager, Registrar and one support staff.
2. The facility will not be set up nor will equipment and supplies be brought to the center. Center personnel will make estimates of supplies required for the potential evacuees.
3. Should the facility become unavailable the day of the exercise, an alternate congregate care center identified in the County Plan will be substituted.

### **3.8 EMERGENCY WORKER PMC**

**Applicable Objectives: 1, 2, 4, 5, 22**

Summary Response:

The Emergency Worker Personnel Monitoring Center (PMC) at the Culver Road Armory in Monroe County and the EWPMC at the County Complex in Wayne County will be demonstrated in sequence with the scenario. A controller will provide simulated contamination levels to drive demonstration of the various activities.

Limitations:

NOTE: SEMO, Wayne County, Monroe County and FEMA have agreed that the EW PMC will be demonstrated under the following schedule:

Wayne County - in sequence  
Monroe County - in sequence

The demonstration will be limited to the following:

1. One lane for vehicle monitoring with at least 1 monitor monitoring at least 2 vehicles.
2. One personnel monitoring station to monitor at least 2 individuals.
3. One personnel decon station with at least 1 monitor each to simulate at least 2 personnel decons.
4. One vehicle decon station with at least 1 monitor to simulate at least 1 vehicle decon.
5. Other staff will be demonstrated through the use of rosters. Contaminated individuals will be simulated by members of the facility staff.
6. The facility will be set up as it would be in an actual emergency with all route markings and contamination control measures in place with the exception that PMC floors may not be covered with paper/plastic.
7. Monitors will not suite up in anti-contamination clothing although one monitor may suit up at FEMA's request.
8. Please note that federal evaluators may not use a hidden source (such as a lantern mantle) to test the skills of the monitors.
9. Monroe County EW PMC is activated at the Alert classification level.
10. Wayne County EW PMC is placed on standby at the Site Area Emergency classification level and is activated after the release.
11. Monroe County may use radio-controlled survey instruments.



### **3.9 FIELD MONITORING TEAMS**

**Applicable Objectives: 1, 2, 3, 4, 5, 6, 8**

Summary Response:

One Field Monitoring Team is dispatched by each County EOC. Additional teams will be dispatched by RGE to support each county in accordance with the plan and established protocols. KI will be issued along with their dosimetry prior to departure.

**They are aware of the procedures regarding the use of KI. A controller will supply simulated field data when the team has taken measurements.**

Limitations:

1. Two Field Monitoring Teams will be dispatched. One from each EOC.
2. The teams will take radiation measurements, some of which may be the same locations, but at different times in the scenario.
3. The teams will not suit up in anti-contamination clothing, however, one member will suit up at FEMA's request following return to the EOC.
4. Silver zeolite cartridges will be used for air sampling.
5. The teams can be questioned regarding procedures and resources to transport samples to a central point for transfer to the State laboratory (Albany). There will be no transport of samples to either the transfer point or the State laboratory (Albany).
6. If a county is not affected by the plume, field monitoring teams may not be able to demonstrate all capabilities listed in the points of review, exercise evaluation methodology - objectives 6 and 8. It is understood that the circumstances described above will not adversely affect FEMA's evaluation of the field monitoring team's performance (e.g., objective not met or partially met). An interview of team members may be substitute for the lack of field data.
7. Monroe County will use radio-controlled instruments for indication of field survey readings.

### **3.10 SPECIAL POPULATION BUS RUN**

**Applicable Objectives: 4, 5, 15**

Summary Response:

Monroe County will activate one (1) bus route; Wayne County will activate two (2) bus routes.

The driver reports to the bus operators garage and is assigned routes, briefed and deployed. One bus, or similarly equipped vehicle, will complete the assigned routes up to the last pickup point and then discuss the route to the Reception Center at which time the bus and driver will be returned to service following contact with the County EOC.

Limitations:

**NOTE:** SEMO, Wayne County, Monroe County and FEMA have agreed that the Special population bus runs will be demonstrated under the following schedule:

Wayne County - Palmyra/Macedon, Newark - 11/17/99 - 0930 - 1130

Monroe County - 11/17/99 - 0900

1. One route will be demonstrated.
2. In Wayne County, the bus driver will not make any stops. The federal evaluator will question the bus driver about the location of pick-up points.
3. In Monroe County, the bus driver will make stops at the pick-up points identified on the prescribed bus route.
4. A large bus may be substituted with a similarly equipped vehicle.

### **3.11(a) SCHOOL EVACUATION BUS RUNS**

**Applicable Objectives:** 4, 5, 15

Summary Response:

One bus route will be demonstrated in each County. The bus driver will assemble at the normal dispatch location for briefing, assignment, and dispatch. The bus, or similarly equipped vehicle, will complete the assigned routes but will not make any stops. The routes will be completed after arrival at the school and a discussion of the route to be taken to the Reception Center at which time the bus and driver will be released following contact with the County EOC.

Limitations:

**NOTE:** SEMO, Wayne County, Monroe County and FEMA have agreed that the school transportation interviews be conducted under the following schedule:

Wayne County - 11/17/99 between 0930-1100:

1. Marion School District

2. Williamson School District
3. Sodus Central School District
4. Wayne Central School District

Monroe County - 11/4/99

1. Webster School District - 1000

1. One (1) bus route per county will be demonstrated.
2. The bus will not make any stops.
3. The route to the Reception Center will only be discussed.

### **3.11(b) SCHOOL INTERVIEWS**

**Applicable Objectives:** 16 (EV-2 Questionnaire)

Summary Response:

School interviews were performed prior to the exercise in coordination with Monroe and Wayne Counties.

Wayne County - 9/29/99 (4 Interviews)

1. Marion School District
2. Williamson School District
3. Sodus Central School District
4. Wayne Central School District

Monroe County - 11/4/99 (1 Interview)

1. Webster School District

### **3.12 TRAFFIC CONTROL POINTS**

**Applicable Objectives** 4, 5, 17

Summary Response:

Two Traffic Control Points (TCPs) in each county will be demonstrated in sequence with the scenario. A controller inject message will be provided at the County EOC indicating which TCPs to activate. One police officer will be dispatched to each TCP. KI will be issued along with dosimetry prior to departure. The police officers are aware of the procedures regarding the use of KI. Play will be terminated when FEMA has completed the evaluation following contact with the County EOC.

Limitations:

1. Two TCPs will be activated in each county, interviews will be conducted at locations agreed to by FEMA.
2. No trucks or heavy equipment will be dispatched.
3. There will be no actual placing of barricades and signs which could interfere with the normal traffic flow.
4. The police officer will be released when FEMA has completed the evaluation following contact with the County EOC.

### **3.13 MEDICAL SERVICES – TRANSPORTATION**

**Applicable Objectives:** 5, 20

Summary Response:

An ambulance crew and one (1) monitor will be stationed at the Reception Center on 9/1/99. An individual with a simulated injury and contamination will be presented. The individual may be surveyed, depending on the injury, administered appropriate care and placed in the vehicle. The drill will end when the vehicle is ready to depart with the victim.

Limitations:

1. There will be no dispatch nor transport.
2. Communications will be simulated and include information relative to ETA, patient status, etc.
3. Radiological monitoring will be done using the radio controlled survey instruments

### **3.14 MEDICAL SERVICES - HOSPITAL**

**Applicable Objectives:** 5, 21

Summary Response:

This drill will be demonstrated out of sequence from the exercise on 7/28/99 at Rochester General Hospital

Limitations:

As per Medical Drill scenario.

### **3.15 INVENTORY OF EQUIPMENT AND SUPPLIES**

Prior to the exercise, Federal evaluators may visit selected facilities to verify the inventory of equipment and supplies.

**NOTE:** SEMO, Wayne County, Monroe County and FEMA have agreed that the Inventory be conducted under the following schedule:

Wayne County — 9/29/99 (Completed)

Monroe County — 11/4/99, 0900-completion

It will be the responsibility of FEMA to have evaluators available at the times agreed upon.

Equipment to be inspected:

1. EWPMC
2. Reception Center to be demonstrated.
3. Two (2) field teams

### **3.16 CALL LISTS/TRAINING RECORDS**

New York State will provide call lists and training records to FEMA two weeks prior to the exercise to allow for the most up-to-date records to be provided at the evaluators' meeting the day prior to the exercise, if required.

### **3.17 SHIFT CHANGE**

Position lists will be provided by FEMA

## APPENDIX 4.

### EXERCISE SCENARIO

This appendix contains a summary of the simulated sequence of events -- Exercise Scenario -- which was used as the basis for invoking emergency response actions by OROs in the Robert E. Ginna Nuclear Power Station exercise on November 17, 1999.

This exercise scenario was submitted by the New York State and approved by FEMA Region II on October 13, 1999.

#### GINNA STATION 1999 EMERGENCY PREPAREDNESS EXERCISE ONSITE SEQUENCE OF EVENTS

<u>APPROPRIATE TIME</u>	<u>SCENARIO TIME</u>	<u>EVENT DESCRIPTION</u>
06:45	-00:15	Initial conditions established.
07:00	00:00	Announcement to commence annual exercise
07:25	+00:25	Truck arrives at the guardhouse to deliver bulk chemicals.  <u>Anticipated results</u> The truck should be searched by Security and escorted to the east side of the plant to deliver chemicals. An auxiliary operator should be dispatched to connect the truck to plant systems.
08:00	+01:00	Operators receive fire alarm Z-32 (turbine bldg 253-6 basement floor north) and annunciators L-21 (main feedwater pump oil sump hi-lo level), H-12 (feed pump DC oil pump auto start) and H-4 (main feed pump oil system).  <u>Anticipated results</u> Operators should refer to AR-L21 and announce the fire alarm over the plant page and should the fire alarm. The fire brigade should respond. The fire

brigade will find a fire on the one of the main feedwater pumps due to an oil leak. Operators should consult EPIP 1-0 for event classification. Operators should reduce the plant power to approximately 50% and secure the main feedwater pump.

08:15            +01:15  
UNUSUAL  
EVENT

The fire has lasted greater than 15 minutes

Anticipated results

The operators should declare an UNUSUAL EVENT. EAL#8.2.1 "Confirmed fire in any plant area (Turbine Building) not extinguished in  $\leq$  15 minutes of Control Room notification" Operators should implement EPIP 1-1 "Unusual Event"

The fire brigade should continue to battle the fire.

<u>APPROPRIATE TIME</u>	<u>SCENARIO TIME</u>	<u>EVENT DESCRIPTION</u>
<u>08:35</u>	+01:35	<p>The auxiliary operators are detained from starting the chemical delivery because they were busy with supporting the fire brigade. The truck driver delivering chemicals hears the fire alarm and sees the smoke from the main feed pump fire and is panic stricken for his safety. He attacks the Security Officer and is successful in wrestling the gun from the officer. The truck driver retreats to the steam generator building. He will not let anyone enter and is afraid of the fire in the nuclear plant.</p> <p><u>Anticipated results</u> Security should announce a security event is in progress and secure the area and start negotiations with the truck driver. Operators should declare an ALERT. EAL# 8.1.2 "Intrusion into plant protected area by an adversary OR any security event which represents an actual substantial degradation of the level of safety of the plant." Operators should implement EPIP 1-2 "Alert"</p>
08:40	+01:40	<p>The fire in the main feedwater pump is extinguished.</p> <p><u>Anticipated results</u> Operators should make a plant announcement to secure from the fire. Maintenance should start to assess the damage to the main feedwater pump.</p>
09:00	+02:00	<p>Negotiations continue with the truck driver.</p> <p><u>Anticipated results</u> Security should discuss options for securing the building. Discussions should also include if there are employees in the steam generator building and evacuations of employees in adjacent buildings.</p>



APPROPRIATE <u>TIME</u>	SCENARIO <u>TIME</u>	<u>EVENT DESCRIPTION</u>
09:40	+02:40	<p>The truck driver surrenders to the Security force.</p> <p><u>Anticipated results</u>  Security officers should escort the truck driver offsite and turn him over to local law enforcement. (local law enforcement will be simulated). Security should restrict access to the steam generator building and sweep the building to determine if any explosives were planted or the truck driver performed sabotage. All RG&amp;E emergency facilities should be nearing operational readiness.</p>
10:10	+03:45	<p>A rupture occurs on the pressurizer reference leg. Containment pressure increases. Containment radiation monitors increase to 200-300 R/hr.</p> <p><u>Anticipated results</u>  A SITE AREA EMERGENCY should be declared in accordance with EPIP 1-0 "Ginna Station Event Evaluation and Classification." EAL# 2.3.2 "Containment radiation monitor R-29/30 reading. 100 R/hr""</p> <p>Operators should implement procedure EPIP 1-2 "Site Area Emergency". Operators should make attempts to isolate the leak.</p>

<u>APPROPRIATE TIME</u>	<u>SCENARIO TIME</u>	<u>EVENT DESCRIPTION</u>
10:45	+04:15	<p>Operators receive annunciator K-4 (containment access) then the alarm clears. The reading on effluent radiation monitor R-14A has increased. A leak has developed through the personnel access hatch of containment. (NOTE: The release will not be terminated)</p> <p><u>Anticipated results</u>  A GENERAL EMERGENCY should be declared in accordance with EPIP 1-0 "Ginna Station Event Evaluation and Classification". EAL# 4.1.5 "Rapid uncontrolled decrease in containment radiation monitor R-29/30 reading &gt;100 R/hr" OR EAL# 5.1.4 "Dose projections or field surveys resulting from actual or imminent release which indicate <math>\leq</math> 1000 mR TEDE dose at the site boundary or beyond".</p> <p>Operators should implement procedure EPIP 1-4 "General Emergency". Plume tracking and dose projections begin.</p>
11:30	+04:30	<p>The TSC should be working on isolating the leak to terminate the release.</p> <p>The EOF should be discussing Protective Actions with offsite officials.</p>
12:00	+05:30	<p>The organization will be informed to perform a shift change. The organization will have 90 minutes to perform a shift change.</p>
14:00	+06:00	<p>Terminate the exercise when all objectives are met</p>