



FEDERAL EMERGENCY MANAGEMENT AGENCY RECEIVED

Region II REGION II

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

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November 28, 2001

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 June 6, 2001, 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 Wayne and Monroe Counties of New York. The final exercise report was prepared by the Federal Emergency Management Agency (FEMA) Region II staff. FEMA Region II staff will forward a copy of this report to the State of New York.

No Deficiencies were observed during the June 6, 2001 exercise.

Based on the results of the June 6, 2001 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, 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 regarding this matter, please contact Brian Hasemann, FEMA Region II Acting Regional Assistance Committee Chair at (212) 680-3689.

Sincerely,



Joseph Ricciano
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



Exercise Report

ROBERT E. GINNA NUCLEAR POWER STATION

Licensee: Rochester Gas & Electric

Exercise Date: June 6, 2001

Report Date: September 6, 2001

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

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I. EXECUTIVE SUMMARY

On June 6, 2001, 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 November 17, 1999. 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:

| Function | Date | Location |
|--|-------------|--|
| Monroe County Reception Center | 7/18/01 | Pittsford-Mendon High School |
| Monroe County Congregate Care | 7/18/01 | Pittsford-Mendon High School |
| Monroe County School Interview | 5/24/01 | Webster Central School District |
| Monroe County MS-1 Exercise | 7/18/01 | Pittsford-Mendon High School |
| | 7/18/01 | Rochester General Hospital |
| Monroe County Emergency Worker PMC | 6/06/01 | Culver Road Armory |
| Monroe County Traffic Control Points | 5/25/01 | Interview at Monroe County EOC |
| Monroe County Special Population Bus Company Interviews, RTS | 5/24/01 | Interview at Monroe County Regional Transportation Offices |
| Monroe County School Bus Company Interviews | 5/24/01 | Webster Central School District |
| Wayne County Reception Center | 6/06/01 | Palmyra Macedon High School |
| Wayne County Congregate Care | 6/06/01 | Palmyra Macedon Middle School |
| Wayne County Emergency Worker EMC | 6/05/01 | Wayne County Fire Training Facility |

| Function | Date | Location |
|--|-------------|---|
| Wayne County Traffic Control Points | 6/06/01 | Interview at Wayne County EOC |
| Wayne County Special Population Bus Company Interviews | 5/23/01 | Wayne County Highway Department Building |
| Wayne County School Interviews | 5/15/01 | Marion Central School District Williamson Central School District Wayne Central School District Sodus Central School District for BOCES |
| Wayne County School Bus Company Interviews | 5/16/01 | Wayne Central School District |
| | 5/16/01 | (Penfield) |
| | 5/17/01 | Williamson Central School District |
| | 5/17/01 | Sodus Central School District Marion 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 four (4) Areas Requiring Corrective Action (ARCAs) identified as a result of this exercise.

Three (3) ARCAs were corrected during the exercise or in Out-Of-Sequence demonstrations in accordance with new policy from the REP Program Strategic Review:

Initiative 1.3: Negotiate Use of Out-Of-Sequence Demonstration, adopted October 1, 1999

Initiative 1.4: Give Direct Feedback, adopted October 1, 1999

Initiative 1.5: Correct Issues Immediately, adopted March 31, 2000.

In addition, three prior ARCAs were successfully addressed and resolved.

I. 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 stations. 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 June 6, 2001, 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 June 6, 2001, 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 that were evaluated, and a tabular presentation of the time of actual occurrence of key exercise events and activities.

A. Plume Emergency Planning Zone 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-northeast of the center of the city of Rochester, New York, and 45 miles west-southwest 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.

No public highways or railroads 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. Many manufacturing activities are centered in and around the city of Rochester. Approximately 22% of the County's 67 square miles are in urban development, about 28% are vacant, wooded or water surface and 50% are 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. Monroe is the largest and fastest-growing County in the eight-county Genesee/Finger Lakes Region.

Wayne County

Ginna Nuclear Power Station is located in the Town of Ontario in 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 by 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 are 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.

Plume Emergency Planning Zone Population

The 1992 estimated population of the EPZ was 52,155. Of this total, 29,059 were in Monroe County and 23,096 were in Wayne County. Approximately half of the EPZ is covered by Lake Erie. Of the land area, about 30% is in Monroe County and 70% in Wayne County.

B. Exercise Participants

The following agencies, organizations, and units of government participated in the Robert E. Ginna Nuclear Power Station exercise on June 6, 2001.

STATE OF NEW YORK

New York State Agencies/Organizations

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

Federal Agencies/Organizations

- U.S. Nuclear Regulatory Commission

RISK JURISDICTIONS

MONROE COUNTY

County Agencies/Organizations

- Emergency Medical Services
- Monroe County Department of Transportation
- Monroe County Fire Bureau
- Monroe County Health Department
- Monroe County Office of the County Executive
- Monroe County Office of Emergency Preparedness
- Monroe County Public Safety Communications
- Monroe County Sheriff
- Monroe County Social Services
- Monroe County Water Authority
- Rochester Fire Department
- Rochester Police Department
- Rochester Emergency Communications Dept. (ECD)-911
- Webster Central School District
- Webster Police Department

WAYNE COUNTY

County Agencies/Organizations

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

PRIVATE/VOLUNTEER ORGANIZATIONS

Greater Rochester American Red Cross
Humane Society of Rochester & Monroe County
Lift Line
Monroe Ambulance
RACES
Radio Station WHAM
Regional Transit System
Rural Metro Medical Services
Rochester Gas & Electric

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 June 6, 2001. Also included are the times at which notifications were made to the participating jurisdictions/functional entities.

Table 1. Exercise Timeline
June 6, 2001 - Robert E. Ginna Nuclear Power Station

| Emergency Classification Level or Event | Time Utility Declared | Time That Notification Was Received or Action Was Taken | | | | | |
|---|-----------------------|---|----------------|---------------|------|--------------------|------|
| | | NY State EOC | Monroe Co. EOC | Wayne Co. EOC | JNC | EAS Station @ WHAM | EOF |
| Unusual Event | -- | -- | -- | -- | -- | -- | -- |
| Alert | -- | -- | -- | -- | -- | -- | -- |
| Site Area Emergency | 0834 | 0848 | 0847 | 0849 | 0858 | -- | 0852 |
| General Emergency | 1007 | 1014 | 1014 | 1014 | 1029 | -- | 1007 |
| Simulated Rad. Release Started | 1118 | 1135 | 1122 | 1122 | 1129 | -- | 1126 |
| Simulated Rad. Release Terminated | 1325 | 1350 | 1325 | 1325 | 1325 | -- | 1325 |
| Facility Declared Operational | | 0900 | 0935 | 0945 | 0914 | -- | 0926 |
| Declaration of State of Emergency | | -- | -- | -- | -- | -- | |
| Exercise Terminated | | 1405 | 1335 | 1349 | 1350 | -- | 1405 |
| 1 st Protective Action Decision Shelter: N/A Evacuate: N/A | | 0948 | 0948 | 0948 | 0950 | -- | 1015 |
| 1 st Siren Activation | | 1000 | 1000 | 1000 | 1000 | 1000 | 1015 |
| 1 st EAS Message | | 1003 | 1003 | 1003 | 1003 | 1003 | 1015 |
| 2 nd Protective Action Decision Shelter: All Others Evacuate: W1, W2, M1 | | 1029 | 1029 | 1029 | 1032 | -- | 1035 |
| 2 nd Siren Activation | | 1041 | 1041 | 1041 | 1041 | 1041 | 1041 |
| 2 nd EAS Message | | 1044 | 1044 | 1044 | 1044 | 1044 | 1044 |
| KI Administration Decision: | | N/A | | | | | |

LEGEND: NA = Not Applicable

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IV. EXERCISE EVALUATION AND RESULTS

Contained in this section are the results and findings of the evaluation of all jurisdictions and functional entities that participated in the June 6, 2001, 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

The matrix presented in Table 2, on the following pages, 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)

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

The following are definitions of the two types of exercise issues that 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.

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Table 2. Summary Results of Exercise Evaluation

June 6, 2001 - Robert E. Ginna Nuclear Power Station

| 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 | 32 | | | |
|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|--|--|
| NEW YORK STATE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| State Emergency Operations Center | M | M | M | M | | | | | | M | M | | | | | | | | | | | | | | | | | | | | | | | | |
| Dose Assessment | | | | | A | | M | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Emergency Operations Facility | M | M | | M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Joint News Center | M | M | M | M | | | | | | M | M | A | M | | | | | | | | | | | | | | | | | | | | | | |
| Emergency Alert System (Radio Station - WHAM) | | | | M | | | | | | M | | | | | | | | | | | | | | | | | | | | | | | | | |
| MONROE COUNTY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Emergency Operations Center | M | M | M | M | | | | | | M | M | M | | | | M | M | | | | | | | | | | | | | | | | | | |
| Dose Assessment | | | | | M | M | M | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Radiological Field Monitoring Teams | M | | | M | M | M | | M | | | | | | M | | | | | | | | | | | | | | | | | | | | | |
| Warning Point | M | | | | M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| School Evacuation | | | | | M | | | | | | | | | | | | M | | | | | | | | | | | | | | | | | | |
| Reception and Congregate Care Centers | | M | | M | M | | | | | | | | | M | | | | | M | M | | | | | | | | | | | | | | | |
| Special Population Bus Run | | | | M | M | | | | | | | | | M | M | | | | | | | | | | | | | | | | | | | | |
| Traffic Control Points | | | | M | M | | | | | | | | | M | | | M | | | | | | | | | | | | | | | | | | |
| Personnel Monitoring Center | | | | M | M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| School Interviews (EV-2 Checklist = MET) | | | | | | | | | | | | | | | | | M | | | | | | | | | | | | | | | | | | |
| Medical Drill | | | | | M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| WAYNE COUNTY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Emergency Operations Center | M | M | M | M | | | | | | M | M | M | | | | M | M | M | | | | | | | | | | | | | | | | | |
| Dose Assessment | | | | | M | | M | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Radiological Field Monitoring Teams | | | | M | M | M | | M | | | | | | M | | | | | | | | | | | | | | | | | | | | | |
| Warning Point | M | | | M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| School Evacuation | | | | M | M | | | | | | | | | M | | | M | | | | | | | | | | | | | | | | | | |
| Reception and Congregate Care Center | M | M | | M | M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Special Population Bus Run | | | | M | M | | | | | | | | | M | M | | | | | | | | | | | | | | | | | | | | |
| Traffic Control Points | | | | M | M | | | | | | | | | M | | | | M | | | | | | | | | | | | | | | | | |
| Personnel Monitoring Center | | M | | M | M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| School Interviews (EV-2 Questionnaire = MET) | | | | | | | | | | | | | | | | | 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 demonstration and no unresolved prior ARCAs A' = ARCA(s) assessed and resolved during the exercise

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1 NEW YORK STATE

1.1 New York 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: Objective 5
- b. DEFICIENCY: NONE
- c. AREAS REQUIRING CORRECTIVE ACTION:

Issue: 27-01-05-A-01

Description of Issue: The staff used the RASCAL code based on an assumed noble gas and iodine release rate and a release pathway that was not appropriate for the accident in progress. The resultant factors were calculated for a filtered and a non-filtered release, neither of which was appropriate for the release path. The staff provided the factor of 1 based on the filtered release. This factor was calculated using the worksheet assuming the emergency workers had ingested KI, when in fact they had not.

Recommended Corrective Action: Emphasize in the training program the need to use actual data, the correct KI assumption, and the appropriate release pathway when making the dosimetry correction calculations.

Schedule for Corrective Action: (To be provided)

- d. NOT DEMONSTRATED: NONE

- e. **PRIOR ARCAs – RESOLVED: NONE**
- g. **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, & 13**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION:**

Issue: 27-01-12-A-02

Description of Issue: The 2001 Ginna Joint News Center Procedures and Public Education Work Plan Section entitled News Releases (page 6 of Work Plan) requires that news releases be transmitted “to the respective EOCs and the EOF”. No State or County news releases were sent to the EOF until 13:00 after prompting of the JNC exercise controller.

Corrective Action Taken: With the concurrence of the controller, the JNC staff was prompted to send news releases to the EOF. After being prompted all subsequent news releases were transmitted to the EOF in a timely manner. This issue was successfully addressed and corrected during the exercise in accordance with Strategic Review Initiative 1.5 – *Correct Issues Immediately*, which was effective March 31, 2000.

Issue: 27-01-12-A-03

Description of Issue: : The 2001 Ginna Joint News Center Procedures and Public Education Work Plan Section entitled *Objectives* (page 3 of the Work Plan) requires that the JNC staff provide the public, through the news media, information on plant conditions and any emergency protective response actions required to protect the public. The JNC staff did not display current emergency information in the Media Briefing Room until prompted.

Corrective Action Taken: With the concurrence of the controller, the JNC staff was prompted to display pertinent emergency information in the JNC Media Briefing Room. After being prompted, appropriate emergency information was displayed and maintained in a timely manner. This issue was successfully addressed and corrected during the exercise in accordance with Strategic Review Initiative 1.5 – *Correct Issues Immediately*, which was effective March 31, 2000

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

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2 RISK JURISDICTIONS

2.1 MONROE COUNTY

2.1.1 Monroe County Emergency Operations Center (MC EOC)

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

Issue: 27-99-03-A-01

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

Recommendation: MC 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).

Correction Action Demonstrated: The MC EOC staff established contact with the Personnel Monitoring Center at 0910 and notified the center of the SAE at that time. Periodic updates were provided throughout the event and detailed message flow regarding changes in plant status and radiological release information was noted.

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

2.1.2 Monroe County Dose Assessment

- a. **MET:** Objectives 5, 6, and 7
- b. **DEFICIENCY:** NONE

- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

2.1.3 Monroe County Radiological Field Monitoring Teams

- a. **MET: Objectives 1, 4, 5, 6, 8, & 14**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- e. **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 Central School District – Out of Sequence on May 25, 2001 (Conducted by Interview)

- a. **MET: Objective 5 & 16**

- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**

3.2. **PRIOR ARCAs - RESOLVED:**

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.

Correction Action Demonstrated: The Transportation Manager provided briefings to bus drivers on dosimetry and exposure control. A Monroe County Group Exposure Record was available to document in issuance of dosimetry packets to bus drivers. Bus drivers knew where to obtain information to fill out an Individual Emergency Worker Reference Card. Bus drivers were also briefed on levels of radiological exposure that should be reported to their supervisors. Bus drivers were also aware that they should report to the MC PMC after completing their bus runs.

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 that was 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 did not know 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 about 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 that the primary Coordinator is unavailable to respond to the school transportation center.

Correction Action Demonstrated: This ARCA was corrected partially by interview of the Transportation Coordinator for Webster Central School District (out of sequence) and by observation of the Monroe Central School District Representative in the MC EOC.

The Transportation Coordinator understood the significance of each ECL, the actions to be taken at each level, and the necessity of being informed of each ECL change without delay. The Transportation Coordinator demonstrated sufficient knowledge of school evacuation procedures as detailed in the Monroe County Radiological Emergency Preparedness Plan. He understood his role in obtaining specific bus evacuation route directions from the Monroe County EOC and passing those directions to the drivers.

During the exercise, each notification of ECL status and subsequent changes were relayed (simulated telephone calls) from the Monroe County EOC to the Webster Central School District Transportation Center.

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

2.1.6 Reception Center (Pittsford-Mendon High School) – Out-of-sequence on July 18, 2001

a. **MET: Objectives 2, 4, 5, 14, & 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 (Pittsford-Mendon High School) - Out-of-sequence on July 18, 2001

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

b. **DEFICIENCY: NONE**

c.

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 Transport Service) – Out-of-sequence on May 24, 2001 (Conducted by Interview)

a. **MET: Objectives 4, 5, 14, & 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) – Out-of-sequence on May 25, 2001 (Conducted by Interview)

a. **MET: Objectives 4, 5, 14, & 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) – Out-of-sequence on June 6, 2001

- a. **MET: Objectives 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) – Out-of-sequence on May 24, 2001

- 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 (Pittsford-Mendon High School and Rochester General Hospital) – Out-of-Sequence on July 18, 2001

- a. **MET: Objectives 5, 20, & 21**
- b. **DEFICIENCY: NONE**

c. AREAS REQUIRING CORRECTIVE ACTION:

Issue: 27-01-05-A-04

Description of Issue: The hospital staff incorrectly recorded initial self-reading dosimeter readings on a record sheet provided. Readings for two dosimeters were recorded at 0 mr when they each were shortly later observed by an evaluator to read 400 mr. The hospital staff did not zero each dosimeter prior to issuing it. NUREG 0654 Section K.3.a requires that radiation doses be accurately monitored on a 24-hour basis using both self-reading and permanent recording devices.

Corrective Action Taken During Exercise: When the incorrect log entries and self-reading dosimeter readings were pointed out by the evaluator to the hospital Radiological Officer, she immediately had all self-reading dosimeters collected and zeroed. She also had the dosimeter log entries corrected. This issue was successfully addressed and corrected during the exercise in accordance with Strategic Review Initiative 1.5 – *Correct Issues Immediately*, which was effective March 31, 2000.

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 (WC EOC)

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

2.2.2 Wayne County Dose Assessment

- a. **MET: Objectives 5 & 7**
- 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 4, 5, 6, 8, & 14**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**

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

2.2.4 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 – Buses (Four Locations; - Marion Central School District on May 17, 2001; Williamson Central School District on May 16, 2001; Penfield Central School District for Wayne Central School District on May 16, 2001; and BOCES - Sodus Central School District on May 17, 2001) (Conducted by Interview)

a. **MET: 4, 5, 14, & 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) – Out-of-sequence on June 6, 2001

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) – Out-of-sequence on June 6, 2001

- a. **MET: Objective 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**

2.2.8 Special Population Bus Run – Out-of-sequence on May 23, 2001 (Conducted by Interview)

- a. **MET: Objectives 4, 5, 14, & 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 Traffic Control Points (2) – Out-of-sequence on June 6, 2001 (Conducted by Interview)

- a. **MET: Objectives 4, 5, 14, & 17**

- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

2.2.10 Personnel Monitoring Center (County Complex)

- a. **MET: Objectives 2, 4, 5, & 22**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- h. **PRIOR ARCAs - UNRESOLVED: NONE**

2.2.11 School Interviews (Four Locations; - Marion Central School District, Wayne-Finger Lakes Board of Cooperative Educational Services (BOCES), Williamson Central School District, and Wayne Central School District) – Out-of-Sequence on May 15, 2001 (Conducted by Interview)

- 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**

APPENDIX 1

ACRONYMS AND ABBREVIATIONS

The following is a list of the acronyms and abbreviations used during this exercise.

| | |
|-------|---|
| A&E | Assessment and Evaluation |
| A&N | Alert and Notification |
| ACP | Access Control Point |
| AFW | Auxiliary Feedwater |
| ALARA | As Low As Reasonably Achievable |
| ARC | American Red Cross |
| ARCA | Area Requiring Corrective Action |
| ARV | Automatic Relief Valve |
| BOCES | Board of Cooperative Educational Services |
| CCC | Congregate Care Center |
| CCW | Component Cooling Water |
| CEDE | Committed Effective Dose Equivalent |
| CFR | Code of Federal Regulations |
| CP | Command Post |
| cpm | counts per minute |
| CREPP | County Radiological Emergency Preparedness Plan |
| DOH | Department of Health |
| DRD | Direct-Reading Dosimeters |
| EAL | Emergency Action Level |
| EAS | Emergency Alert System |
| ECL | Emergency Classification Level |
| EEM | Exercise Evaluation Methodology |
| EMD | Emergency Management Director |
| EMO | Emergency Management Office |
| EMS | Emergency Medical Services |
| EMT | Emergency Medical Technician |
| EOC | Emergency Operations Center |
| EOF | Emergency Operations Facility |
| EPIP | Emergency Plan Implementing Procedure |
| EPZ | Emergency Planning Zone |
| ERPA | Emergency Response Planning Area |

| | |
|-------------|---|
| FA | Field Activity |
| FEMA | Federal Emergency Management Agency |
| FMT | Field Monitoring Team |
| FR | Federal Register |
| FTC | Field Team Coordinator |
| GE | General Emergency |
| Ginna Plant | Robert E. Ginna Nuclear Power Station |
| JNC | Joint News Center |
| HAZ-MAT | Hazardous Materials |
| KI | Potassium Iodide |
| L/m | liters per minute |
| MCC | Monroe Community College |
| MC EOC | Monroe County Emergency Operations Center |
| MCSO | Monroe County Sheriff's Office |
| MC WP | Monroe County Warning Point |
| MDAFW | Motor-Driven Auxiliary Feedwater |
| MOU | Memorandum of Understanding |
| MOV | Motor-Operated Valve |
| mR | milliroentgen |
| mR/h | milliroentgen per hour |
| NAWAS | National Warning System |
| NG/I | Noble Gas to Iodine Ratio |
| 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," November 1980</i> |
| NYS | New York State |
| OEP | Office of Emergency Preparedness |
| ORO | Offsite Response Organization |
| OSC | Operational Support Center |

| | |
|--------|---|
| PAD | Protective Action Decision |
| PAG | Protective Action Guideline |
| PAR | Protective Action Recommendation |
| PIO | Public Information Officer |
| PMC | Personnel Monitoring Center |
| POR | Points of Review |
| | |
| R | Roentgen |
| R/hr | Roentgen(s) per hour |
| RAC | Regional Assistance Committee |
| RACES | Radio Amateur Civil Emergency Service |
| RC | Reception Center |
| RECS | Radiological Emergency Communications System |
| REM | Roentgen Equivalent in Man |
| REP | Radiological Emergency Preparedness |
| RERP | Radiological Emergency Response Plan |
| RG&E | Rochester Gas and Electric |
| RO | Radiological Officer |
| RTS | Regional Transport Service |
| | |
| SAE | Site Area Emergency |
| SECC | State Emergency Communication Center |
| SEMO | State Emergency Management Office |
| SEOC | State Emergency Operations Center |
| S/G | Steam Generator |
| SOP | Standard Operating Procedure |
| SRD | Self-Reading Dosimeter |
| | |
| TCP | Traffic Control Point |
| TDD | Telecommunications Device for the Deaf |
| TEDE | Total Effective Dose Equivalent |
| TLD | Thermoluminescent Dosimeter |
| TSC | Technical Support Center |
| | |
| WATS | Wayne Area Transit Service |
| WC EOC | Wayne County Emergency Operations Center |
| WC PMC | Wayne County Personnel Monitoring Center |
| WCFTF | Wayne County Fire Training Facility |
| WHAM | Emergency Alert System Radio Station for Ginna Plant area |

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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 June 6, 2001, 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 |
| ICF | ICF Consulting |
| NRC | Nuclear Regulatory Commission |

| <u>EVALUATION SITE</u> | <u>EVALUATOR</u> | <u>ORGANIZATION</u> |
|---|-------------------|---------------------|
| EXERCISE OVERSIGHT | R. Reynolds | FEMA |
| NEW YORK STATE | | |
| SEOC - Direction & Control | B. Hasemann (TL) | FEMA |
| SEOC - Warning Point | A. Davis | FEMA |
| SEOC - Communications & Operations | R. Swartz | FEMA |
| SEOC - Dose Assessment | E. Wojnas | ICF |
| EOF | B. Black | ICF |
| JNC | M. Beeman (TL) | FEMA |
| JNC | E. Penner | USDA |
| JNC | C. McCoy | ICF |
| EAS Activation (Station WHAM) | C. McCoy | ICF |
| MONROE COUNTY | | |
| MC EOC - Direction & Control | K. McCarroll (TL) | FEMA |
| MC EOC - Facilities, Schools, Special Pops. | D. Petta | USDOT |
| MC EOC - Dose Assessment | J. Keller | ICF |
| MC EOC - Communication & Operations | J. Sutton | FEMA |
| RGE Radiological Field Monitoring Team | J. Staroba | ICF |
| County Radiological Field Monitoring Team | D. Thome | ICF |
| Personnel Monitoring Center | S. Nelson | ICF |

| <u>EVALUATION SITE</u> | <u>EVALUATOR</u> | <u>ORGANIZATION</u> |
|--|------------------|---------------------|
| MONROE COUNTY (Cont.) | | |
| Personnel Monitoring Center | F. Bold | ICF |
| Special Population Bus Company Interviews* | A. Ball | ICF |
| TCP* | A. Ball | ICF |
| School Evacuations* | A. Ball | ICF |
| School Interview* | A. Ball | ICF |
| Medical Drill* | C. McCoy | ICF |
| Medical Drill* | S. Nelson | ICF |
| Reception and Congregate Care Centers* | S. Nelson | ICF |
| WAYNE COUNTY | | |
| WC EOC - Direction & Control | J. Young (TL) | FEMA |
| WC EOC - Communications & Operations | P. Malool | FEMA |
| WC EOC - Dose Assessment | L. Thomas | USDA |
| RGE Radiological Field Monitoring Team | R. Bores | USNRC |
| County Radiological Field Monitoring Team | R. Bernacki | FDA |
| Reception Center | S. Nelson | ICF |
| Reception Center | F. Bold | ICF |
| Congregate Care Center | S. Nelson | ICF |
| Congregate Care Center | F. Bold | ICF |
| Personnel Monitoring Team | S. Nelson | ICF |
| Personnel Monitoring Team | F. Bold | ICF |
| Special Population Bus Company Interviews* | A. Ball | ICF |
| School Evacuations* | S. Nelson | ICF |
| School Interview* | A. Ball | ICF |

* 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 June 6, 2001.

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 May 29, 2001.

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, JNC, EOF, MC EOC, WC EOC, MCFA and 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, JNC, WC EOC, and MC EOC

OBJECTIVE 3: DIRECTION AND CONTROL

Demonstrate the capability to direct and control emergency operations.

Locations: SEOC, MC EOC, WC EOC, MCFA, and WCFA

OBJECTIVE 4: COMMUNICATIONS

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

Locations: SEOC, EOF, JNC, WC EOC, MC EOC, WCFA and MCFA

OBJECTIVE 5: EMERGENCY WORKER EXPOSURE CONTROL

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

Locations: SEOC, WC EOC, MC EOC, MCFA and WCFA

OBJECTIVE 6: FIELD RADIOLOGICAL MONITORING - AMBIENT RADIATION MONITORING

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

Locations: WC EOC, MC EOC, WCFA and MCFA

OBJECTIVE 7: PLUME DOSE PROJECTION

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

Locations: SEOC, WC EOC, and MC EOC

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: WCFA and MCFA

OBJECTIVE 9: PLUME PROTECTIVE ACTION DECISION MAKING

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

Locations: SEOC, MC EOC, and WC EOC

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, JNC, WC EOC, and MC EOC

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, JNC, WC EOC, and MC EOC

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: JNC

OBJECTIVE 13: EMERGENCY INFORMATION - RUMOR CONTROL

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

Locations: JNC

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, WC EOC, MC EOC, WCFA and MCFA

OBJECTIVE 15: IMPLEMENTATION OF PROTECTIVE ACTIONS - SPECIAL POPULATIONS

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

Locations: MC EOC, WC EOC

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: WC EOC, MC EOC, WCFA, and MCFA

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: MC EOC, WC EOC, MCFA, and 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: Pittsford-Mendon 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: Pittsford-Mendon 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

B. Extent-of-Play Agreement

The extent-of-play agreement on the following pages was submitted by 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>NYState</u> | <u>Monroe</u> | <u>Wayne</u> |
|---------------------------|----------------------------|---------------------------------|---------------------------------|
| Warning Point | actual | actual | actual |
| EOC | actual | actual | actual |
| EOF | actual | actual | actual |
| JNC | actual | actual | actual |
| Reception Center | n/a | actual* | actual* |
| Congregate Care | n/a | actual* | actual* |
| Emergency Worker PMC | n/a | actual* | actual* |
| 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 | n/a | n/a | n/a |
| Backup (Siren/failure) | n/a | (1 EOC Discussion) | (1 EOC Discussion) |
| Field Monitoring Teams | n/a | actual (1) Team RGE (1) Team | actual (1 Team) RGE (1 Team) |
| Special Population Bus | n/a | Interview* | Interview* |

| <u>Facility/Activity</u> | <u>NYState</u> | <u>Monroe</u> | <u>Wayne</u> |
|--|----------------|----------------------------|-----------------|
| School Evacuation Bus | n/a | Interview* | Interview* |
| Notification of Hearing Impaired (discussion) | n/a | simulated (EOC discussion) | simulated (EOC) |
| Evacuation of Mobility Impaired (Non-Institutionalized) (discussion) | n/a | simulated (EOC discussion) | simulated (EOC) |
| Evacuation of Mobility Impaired (Special Population in EPZ) | n/a | simulated (EOC discussion) | n/a (none) |
| Traffic Control Points | n/a | actual (2)* | actual (2)* |
| Impediments to Evacuation (discussion) | n/a | simulated (EOC discussion) | simulated (EOC) |
| KI Administration | discussion | discussion | discussion |
| School Interview | n/a | actual (1)* | actual (4)* |
| Medical Drill -Hospital -Offsite Transport | n/a | actual* | n/a |

Footnotes

* Out of Sequence

Extent-of-Play Ground Rules

- 1. REAL LIFE EMERGENCIES TAKE PRIORITY OVER EXERCISE PLAY.**
2. Scenario Development Team will develop free play messages. State Controller will inject the message to the County Emergency Management Director or designee for action.
3. Free play messages for public inquiry at the JNC will be developed by the Scenario Development Team. Public inquiry messages will be injected at the JNC by a control cell.
4. The State Controller will inject radiological data for any radiological field activities. (Field Teams, PMCs, Reception Centers). Monroe County will use radio-controlled survey instrumentation for field team, emergency worker personnel monitoring centers and reception center. (Used for training, 2 sets available)
5. In accordance with the REP Program Strategic Review Initiative 1.5 during tabletop exercises, drills and other demonstrations conducted out-of-sequence from the integrated exercise, if FEMA and the offsite response organizations agree, the FEMA evaluator may have the participants re-demonstrate any activity that is determined to be not satisfactorily demonstrated. This initiative is not applicable to EOC, EOF demonstrations during the June 6, 2001 exercise.
6. RG& E will set the simulator clock on the computer as to close to real time as possible, which is available in each A&E room (Wayne/Monroe/State). The simulator time is available in each (Wayne, Monroe, State Assessment and Evaluation room).

OBJECTIVES AND EXTENT-OF-PLAY FOR THE JUNE 6, 2001 GINNA EXERCISE

OBJECTIVE #1: MOBILIZATION OF EMERGENCY PERSONEL

EXTENT-OF-PLAY

1. WARNING POINTS

During the exercise, the following three (3) Warning Points will be notified:

- New York State
- Monroe County
- Wayne County

Demonstrations will include:

- Notification telephone calls from the utility via the RECS line including notification times. Back-up systems will be utilized in the event of primary systems failure.
- Notification of the designated agency representatives in accordance with their respective plans and procedures.

Call lists may change on a weekly basis. The latest quarterly revision lists will be available to FEMA one (1) week before the exercise. The lists will contain the business telephone numbers only. Home telephone numbers and pager numbers are available at the EOC.

- Wayne County will utilize an autodialer system to notify responders.
- There will be no free play messages introduced at the Warning Points.

EXTENT-OF-PLAY AGREEMENT:

- ECL Notifications from the utility are not verified.

2. EOCs

All activities associated with the activation and operation of the EOC are to be performed as they would be in an actual emergency. (see below)

Demonstrations will include:

- Notification of staff - Monroe County will use a call-out

- Wayne County will use a call-out

- Timeliness of activation – (see above)

EXTENT-OF-PLAY AGREEMENT:

- State liaisons will arrive at EOCs when notified of an ECL.
- Utility liaisons will report to their respective EOCs when activated by utility.

RECS LINE

- ECL notifications from the licensee are not verified, if the RECS Line fails, commercial telephones will be used to transmit the part I form. Information, part 1 will be faxed to appropriate locations.

3. EOF

All activities associated with activation and operation of EOF are to be performed as they would be in an actual emergency.

Demonstrations will include:

- Notification of staff.
- Timeliness of activation.

EXTENT OF PLAY AGREEMENT:

- State liaisons will report to EOF when notified of an ECL
- County staff will report to EOF when notified of an ECL.

4. JNC

All activities associated with the activation and operation of the JNC are to be performed as they would be in an actual emergency.

Demonstrations will include:

- Ability to fully staff and operate facility in accordance with JNC procedures.

EXTENT-OF-PLAY AGREEMENT:

- State JNC staff will report when notified of an ECL.
- County JNC staff will report when notified of an ECL.

OBJECTIVE #2: FACILITIES, ACTIVATION, EQUIPMENT AND DISPLAYS

EXTENT-OF-PLAY

EXTENT-OF-PLAY AGREEMENT:

- Back-up power is available and will not be demonstrated for the State and two County EOCs.
- Maps and displays will vary with each facility and may include printouts.
- Displays regarding ingestion pathway EPZ agricultural information are not applicable to this exercise.
- Displays regarding radiological monitoring points and traffic control points are not applicable to the JNC.
- Displays in the EOC regarding Congregate Care Centers and special facilities will be listings only.
- At the JNC, the status boards to be updated are located in the utility/state/county workrooms.

OBJECTIVE # 3: DIRECTION AND CONTROL

EXTENT-OF-PLAY

1. EOC

Demonstrations will include:

- Decision making
 - Coordination with other counties and state;
 - Notification of public (sirens and EAS messages):
 - Protective actions recommendations including consultation with appropriate staff

- Managing an orderly evacuation, if required;
- Messages inserts may include:
 - Siren failure and back-up route alerting;
 - Impediment(s) to evacuation;
 - Requests for transportation assistance;
 - Requests for unmet needs;
 - Notification of local business and
 - Requests for information from local elected officials.

EXTENT-OF-PLAY AGREEMENT:

- Direct coordination with other jurisdictions applies to the state and two counties only.

OBJECTIVE # 4: COMMUNICATIONS

EXTENT-OF-PLAY

Primary communication systems:

- Radiological Emergency Communication System (RECS)- connects utility with the State and Wayne and Monroe counties
- Executive Hotline- connects State with two counties (conferencing capability);
- Commercial telephones- connect agency representatives at the EOC with their staff in the field, including the EOF and JNC
- Radios-connect the dose assessment staff with the field teams. (Monroe County may utilize cellular phones).

Backup communications systems:

- Amateur Radio (RACES), cellular phones, Monroe only.
- Cellular phones – Monroe only.

EXTENT-OF-PLAY AGREEMENT:

- The use of RACES as a back-up to commercial telephones or radios will be demonstrated at the State and two counties.

- Wayne County – (PMC to EOC) primary – telephones backup – county highway radio.

OBJECTIVE #5: EMERGENCY WORKER EXPOSURE CONTROL

EXTENT- OF- PLAY

EXTENT-OF-PLAY AGREEMENT:

- A TLD will be used as a non-self reading dosimeter.
- Monroe County plans specify: 0-5R outside EPZ, 0-20R inside EPZ.
- Wayne County plans specify 0-5R outside EPZ and 0-20R inside EPZ.
- Monroe County reporting requirements are .5R, 1R, 3R, and 5R (turn back value) inside EPZ, and .2R, 1R, 3R, and 5R (turn back) outside EPZ, 5 R is maximum authorized mission limit.
- Wayne County plan does not utilize a turn back limit, emergency workers will report to their supervisors at 1R, 3R and 5R for limiting exposures
- Direct reading dosimeters are read every 15-30 minutes.
- According to plans, supervisors will contact their emergency workers regarding KI administration.
- Monroe County and Wayne County dosimeter maintenance records are maintained with the Radiological office.

OBJECTIVE # 6: Field Radiological Monitoring-Ambient Radiation Monitoring

EXTENT-OF-PLAY

FIELD MONITORING TEAMS

Each county in the plume EPZ will dispatch one (1) radiological monitoring team. In addition, RG&E will dispatch offsite teams in accordance with county plans and MOU to provide off-site radiological data. This information is shared among the utility, counties and state. Each team will be supplied with a controller. The controller will have simulated field data, (Monroe County will use radio-controlled instruments) which is provided to the teams to determine local dose rate readings consistent with the scenario. Each team should have the necessary equipment to

determine area gamma dose rates, presence of beta radiation and airborne radioiodine concentrations. The monitoring teams will not be suited in anti-contamination clothing. The clothing will be available for inspection. When multi-channel radios are used, 1 channel is primary, 2nd channel is backup.

EXTENT-OF-PLAY AGREEMENT

- If a county is not affected by the plume, field monitoring teams may not be able to demonstrate all capabilities in the POR (Points of Review), EEM. However those teams may be asked to demonstrate the capabilities necessary to satisfy the objective.
- An equipment inventory list is available at dispatch location.
- Wayne County uses a Victoreen 450, Monroe County uses Eberline Ro-20 which does not have a check source, does not have an external probe and neither instrument will be covered in plastic.
- Field monitoring data is shared in accordance with the MOU signed by RG&E, Wayne County, Monroe County and New York State.
- County Field teams report exposure rate measurement to the EOCs.
- Prior to deployment, field teams are briefed on:
 - PARS
 - Release Status
 - ECLs
 - Meteorological Conditions
- The primary mission of the county field teams is to validate the initial PARs once a release occurs (e.g. monitoring ERPA boundaries). All Teams can define the plume centerline and edges.

OBJECTIVE #7: PLUME DOSE PROJECTION

EXTENT-OF-PLAY

DOSE ASSESSMENT

All activities associated with dose assessment are to be performed as they would be in an actual emergency. The lead responsibility for dose assessment functions rests with the following:

- New York State - Director, Bureau of Env. Rad Protection

- Monroe County - Radiological Officer
- Wayne County - Radiological Officer

The dose assessment team should direct the field teams to locations consistent with the initial projections of the plume location. The dose assessment team should make determinations of the actual plume based on parameters such as boundaries and centerline. Centerline data may be provided by the utility & county field teams.

Plume dose projections should be used to develop protective action recommendations which could modify or expand upon the initial PARs. The dose assessment team should demonstrate the capability to provide the dose projection results to the Chief Elected Official responsible for protective action decision making in a manner and a time frame that supports decision making.

Dose assessment and accident evaluation personnel will provide recommendations to the decision maker taking into account all relevant factors including:

- utility recommendations
- independent county dose assessment
- plant conditions

EXTENT-OF-PLAY AGREEMENT:

- There will be no actual packaging or transport of samples to the laboratory. EOC staff will be questioned regarding means of transportation of air samples to a central point and location of the laboratory, (State Laboratory or Fitzpatrick Environmental Laboratory).
- A scenario dependent noble gas/iodine ratio is used to translate gamma exposure rate measurements from the plume into corresponding radioiodine concentrations.
- Scenario that data will be utilized by all facilities during an exercise.
- Buffalo district National Weather Service forecast data will be scenario data.

OBJECTIVE #8: FIELD RADIOLOGICAL MONITORING-AIRBORNE RADIODINE AND PARTICULATE ACTIVITY MONITORING

EXTENT-OF-PLAY

FIELD MONITORING TEAMS:

Each County will dispatch one team in the plume EPZ. Additional teams will be dispatched by RGE to support each county in accordance with the plan and procedures. Each team will have a controller who will supply simulated field data in accordance with the scenario. (Monroe County will use radio-controlled instruments).

EXTENT-OF-PLAY AGREEMENT:

If a county is not affected by the plume, field monitoring teams may not be able to demonstrate all capabilities listed in the POR, EEM- Objective 8. However, the team may be asked to perform all capabilities necessary to satisfy the objective.

- Silver zeolite cartridges will be used for air sampling. (Note: purging not necessary for this type of cartridge)
- The teams can be questioned regarding procedures and resources to transport samples to a central point for transfer to the laboratory. There will be no actual transport of samples to the transfer point or the laboratory.
- The teams will not suit up in anti-contamination clothing, however, one member may suit up at FEMA's request following return to the respective EOC.
- The teams will take radiation measurements, some of which may be at the same locations, but at different times in the scenario, and communicate this data per the respective plans.
- Calibration data available from Radiological Officer.
- Calibration curve or exposure rate correction factors not used.

OBJECTIVE #9: PLUME PROTECTIVE ACTION DECISION MAKING

EXTENT-OF-PLAY

EXTENT-OF-AGREEMENT

All protective action decisions will be coordinated among the counties and the State over the Executive Hotline.

Initial PADs consider dose assessment team recommendations

As specified in the plans, subsequent PADs do not consider:

- Shelter availability
- Relative dose savings between evacuation and sheltering

OBJECTIVE #10: ALERT AND NOTIFICATION

EXTENT-OF-PLAY

During the exercise there will be simulated siren sounding and no broadcasting of the EAS messages. Federal evaluators will expect to see actual demonstration of all the steps leading to siren sounding and broadcasting the EAS messages within 15 minutes following the decision to alert and notify the public. Recommendations such as park/school closings do not require an EAS message, but rather a news release. For simulated siren activations, the activation times will be coordinated over the Executive Hotline.

EXTENT-OF-PLAY AGREEMENT

- 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 time to be recorded (clock stopped) is the time at which the EAS message begins to be broadcast (first three words of the talk-up after “this is a drill”).
- The first alert and notification sequence will be evaluated regardless of whether or not the accompanying EAS message contains a protective action recommendation.
- As specified in the plans, there is no primary or supplementary route alerting.
- There will be no actual telephone calls to individuals or institutions.
- If the radio station refuses to voluntarily cooperate during the exercise, this action would not negatively impact the evaluation of this objective.

OBJECTIVE #11: PUBLIC INSTRUCTIONS AND EMERGENCY INFORMATION

EXTENT-OF-PLAY

All activities associated with the activation and operation of the JNC are to be performed as they would be in an actual emergency.

- Ability to coordinate PADs with respective EOCs.

- Ability to formulate clear and accurate EAS messages;
- Ability to initiate the EAS messages (simulated) within the 15 minute timeframe
- Ability to formulate and disseminate follow-up “Special News Broadcasts” to media outlets.

EXTENT-OF-PLAY AGREEMENT

- PIOs at the JNC develop and release emergency information and instructions to the public
- Chief Elected Officials authorize release of EAS messages.
- Pre-scripted EAS messages are contained in the JNC procedures.
- EAS message and Special News Broadcasts will be prepared in accordance with JNC plans, policies and procedures.
- **Note:** Broadcast stations are not required to provide any government EAS user with “repeat” broadcasts of individual EAS messages. Therefore, no EAS message shall include any reference to repetition.
- Recommendations such as park/school closings do not require an EAS message, but rather a news release.
- All EAS messages are broadcast in English.

OBJECTIVE #12: EMERGENCY INFORMATION – MEDIA

EXTENT-OF-PLAY

All activities associated with the operation of the JNC are to be performed as they would be in an actual emergency.

- Ability to operate facility in accordance with JNC procedures;
- Ability to formulate clear and accurate news releases;
- Ability to provide accurate information to media at press briefings.

EXTENT-OF-PLAY AGREEMENT:

- PIOS at the JNC are responsible for media briefings.
- Media kits are provided by licensee and State.

OBJECTIVE #13: EMERGENCY INFORMATION – RUMOR CONTROL

EXTENT-OF-PLAY

All activities associated with the activation and operation of rumor control are to be performed as they would be in an actual emergency.

- Ability to operate rumor control will be demonstrated during the Site Area Emergency and General Emergency levels in accordance with the JNC procedures.

EXTENT-OF-PLAY AGREEMENT:

- There will be at least six calls per operator per hour during the SAE and GE levels.
- At least 5 false or misleading rumors will be included for which corrective measures should be taken. At least three trends will be demonstrated.
- Public inquiry will be staffed by at least 6 operators with one supervisor.
- Rumor control staff monitors radio and television broadcasts for false or misleading rumors.
- Public Inquiry = Rumor Control

OBJECTIVE #14: IMPLEMENTATION OF PROTECTIVE ACTIONS-USE OF KI FOR EMERGENCY WORKERS, INSTITUTIONALIZED PERSONS, AND THE GENERAL PUBLIC

EXTENT-OF-PLAY

Adequate supplies of KI will available at the EOC or other designated location for distribution to emergency workers.

Each county will provide its emergency field workers at risk of exposure supplies of KI and dosimetry equipment prior to dispatch to the field.

EXTENT-OF-PLAY AGREEMENT:

- NYS policy does not recommend the use of KI for the general public
- Institutionalized individuals are dealt with in accordance with the plans.

OBJECTIVE #15: IMPLEMENTATION OF PROTECTIVE ACTIONS- SPECIAL POPULATIONS

EXTENT-OF-PLAY

SPECIAL POPULATION BUS COMPANIES INTERVIEWS - General Public

All bus companies interviews are to be completed out of sequence with the exercise scenario.

Each company will provide a dispatcher and two drivers.

One designated bus company per EPZ county will be interviewed. See offsite extent-of-play schedule.

The bus drivers are to assemble at their normal dispatch location and are to be assigned appropriate routes and briefed by the dispatcher in accordance with appropriate procedures. The driver will be questioned about the location of pickup points and location of appropriate reception center designated in the route maps/instructions.

DEMONSTRATIONS WILL INCLUDE:

- One bus dispatcher understand and follow briefing procedures for drivers;
- Two bus drivers receive an informational packet specific to his/her route; (will not run actual routes).
- Bus driver's knowledge of the prescribed route, including pick-up points, dosimetry, KI and location of reception center will be evaluated by interview.

EXTENT-OF-PLAY AGREEMENT

- During the June 6 exercise, there will be an initial contact with the bus company(ies) (telephone call) by the Monroe EOC RTS representative and Wayne County Highway Superintendent. All subsequent calls will be simulated. The MC-RTS & WATS will perform all other actions in accordance with the plan.

OBJECTIVE 15: NOTIFICATION OF HEARING IMPAIRED

During the exercise, the hearing impaired list will be available for inspection at each EOC. The list will be reviewed, but not retained by the evaluator.

The responsible agency in each EOC will simulate the alert and notification of hearing impaired individuals by describing the following:

- Notification procedures;
- Means of notification;

EXTENT-OF-PLAY

- There will be no actual notification of hearing impaired individuals during the exercise

OBJECTIVE 15: EVACUATION OF NON INSTITUTIONALIZED MOBILITY IMPAIRED INDIVIDUALS

During the exercise, the list of non-institutionalized mobility impaired individuals will be available for inspection at each EOC. The lists will be reviewed, but not retained.

The responsible agency in each EOC will describe the following:

- Notification procedures;
- Type of disability and transportation resource requirements;
- Availability of appropriate transportation for evacuation.

EXTENT-OF-PLAY AGREEMENT

- There will be no actual dispatch of vehicles for transport of non-institutionalized mobility impaired individuals.
- During the exercise there will be no contact of mobility impaired individuals on the list.

OBJECTIVE #16: IMPLEMENTATION OF PROTECTIVE ACTIONS - SCHOOLS

EXTENT-OF-PLAY

SCHOOL EVACUATION BUS COMPANY INTERVIEWS

All bus companies are to be demonstrated out of sequence with the exercise scenario. Each company will provide a dispatcher and two drivers to be interviewed by FEMA. See offsite extent-of-play activities schedule.

Bus routes to be discussed will be pre-designated. A controller will provide the bus routes to the bus dispatcher for briefing of the drivers.

The bus drivers are to assemble at their normal dispatch location and are to be assigned and briefed by the dispatcher in accordance with procedures. The bus drivers will be questioned about the location of the school to be evacuated and the location of the school reception center designated in the plan.

Demonstrations will include:

One bus dispatcher understands and provides briefings for drivers;

Two bus drivers receive information packet specific to route; (bus route will not be run).

Monroe – has map packet

Wayne – does utilize map packets

EXTENT-OF-PLAY AGREEMENT

- During the exercise there will be initial contact with the bus company (ies) (telephone call) by the Transportation Coordinator. All subsequent drills will be simulated. The Coordinator will perform all other actions in accordance with plan.
- Protective actions for schools are decided upon by the Chief elected Official (EOC discussion).
- Monroe County will establish and maintain communication with Webster School on 06/06/01.
- Parents are notified of school cancellations in accordance with respective county plans.
- Bus dispatchers communicate with drivers en route (discussion).
- Routes will be discussed at schools, including route to reception/student center.

SCHOOL INTERVIEWS

One school per district will be interviewed. Interviews will be conducted out of sequence. The interviews will utilize the EV-2 checklist. The interviews will be conducted in accordance with the offsite extent-of-play activities schedule.

EXTENT-OF-PLAY AGREEMENT

The interviews will demonstrate the following

- Availability of written plans and procedures
- How parents are kept informed about the plans, procedures and reception centers
- Chain of command that would be involved during an evacuation.
- Wayne County-interviews with Superintendent of Schools and BOCES principal.
- Monroe-interview with Webster School District Emergency Coordinator and Transportation Director.

OBJECTIVE #17: TRAFFIC AND ACCESS CONTROL

EXTENT-OF-PLAY

TRAFFIC CONTROL POINTS (TCPS)

Two Traffic Control Points in each county will be demonstrated at mutually agreed upon locations. The interview schedule will be listed in the activities list.

Monroe County – Zone Sargent and two Officers. Wayne County will provide one officer and State Police will provide one officer. Wayne County and Department of State Police have dosimetry, dispatch from E-911 will be simulated. The State controller will select a TCP assigned to that agency and provide that information for briefing of the officer.

(Monroe – Zone A Head quarters – Linden Avenue.)

(Wayne - County EOC.)

During the interviews the law enforcement agency should be prepared to discuss the following:

- How promptly TCPs could be staffed (from time of notification);
- Appropriate dosimetry
- KI procedures and authorization for administration of KI
- Location of Reception Centers, for that TCP
- Location of Emergency PMC for that officer
- No heavy equipment or trucks will be dispatched
- No barricades or signs will be placed
- Police Officers will be released upon completion
- Rail and water notification will be simulated

IMPEDIMENTS TO EVACUATION:

The demonstration of resources necessary to deal with impediments to evacuation will be simulated.

In each EPZ county, EOC will demonstrate the organizational ability to deal with three (3) impediments to evacuation. State controllers in the EOC will input free play message for traffic impediments. The EOC staff needs to be able to assess the significance of the impediments, re-route traffic (if appropriate), identify resources that are required for removal, discuss how dosimetry will be provided to workers in the EPZ, estimate time of arrival of resources to the scene and estimate time for clearing

EXTENT-OF-PLAY AGREEMENT

- No equipment will be deployed to the field
- This demonstration will not involve the actual contact of resource providers or dispatching of emergency vehicles to the simulated event.

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

EXTENT-OF-PLAY

All facilities are to be demonstrated out of sequence with the exercise scenario, see the offsite extent play activities schedule.

Reception Centers will not be set-up in advance. Demonstrations will include:

- Arrival of staff
- Setting-up
- Operations

EXTENT-OF-PLAY AGREEMENT

- One registration station with 2 personnel registering at least 2 individuals each, Monroe County registration is a function of Congregate Care.
- One portal monitoring station monitoring at least 6 individuals (Wayne County at Pal-Mac needs 2 portals for the 1/3 capacity. 1 demonstrated and second available).
- One personnel decon station with 2 monitors to simulate at least one personnel decon
- One vehicle monitoring station with at least one monitor monitoring at least 2 vehicles
- One vehicle decon station with at least 1 monitor to simulate at least 2 vehicle decons
- Monitors will not suit up in anti-contamination clothing, in accordance with plans.
- Other staff will be demonstrated through the use of rosters.
- Communications with EOC's will be simulated discussion with PMC manager.

OBJECTIVE # 19: CONGREGATE CARE

EXTENT-OF-PLAY

All facilities will be demonstrated out of sequence with the exercise.

One congregate care center per county will be opened in accordance with each county's plan.

(Congregate Care centers are operated by ARC). See offsite extent-of-play activities schedule.

Each center will demonstrate the following staffing

- Shelter Manager
- Registrar
- Support staff (1)
- Communicator
- Shelter supplies will be discussion only
- Monroe County – 1 registration station with two people processing at least 1 persons each

OBJECTIVE #20: MEDICAL SERVICES – TRANSPORTATION

EXTENT-OF-PLAY

There will be a medical drill conducted at Pittsford Mendon High School.

The drill will demonstrate the adequacy of ambulance providers and procedures for handling contaminated injured individuals.

The functions to be demonstrated include: (1) initial medical assessment to determine the problem (i.e., life-threatening injury or other type of injury; (2) radiological monitoring (may be done by EMS or Reception Center staff or hospital staff), (3) contamination control procedures and (4) transport to the appropriate medical facility (discussion only).

EXTENT-OF-PLAY AGREEMENT

- Prepositioning of ambulance at Pittsford Mendon High School
- One ambulance crew, one monitor, one recorder
- Radio – Controlled Survey instruments may be used for demonstration
- Communications from the scene to hospital will be simulated
- Contaminated materials will be handled in accordance with county plan

OBJECTIVE #21: MEDICAL SERVICES- FACILITIES

EXTENT-OF-PLAY

The medical drill scenario will necessitate transporting the victim to the hospital. A person will

play the role of the victim; he or she will be transported to a hospital designated in the plan. However, the use of flashing lights and sirens for exercise play is not authorized.

The drill must also demonstrate the adequacy of hospital facilities and procedures for handling contaminated injured individuals. The demonstration should include:

- Effective preparation for the arrival of the victim, including appropriate contamination control measures;
- Setting appropriate priorities between contamination control and medical treatment;
- The hospital personnel should survey and simulate decontamination of the victim.

OBJECTIVE #22 : DECONTAMINATION- EMERGENCY WORKERS, EQUIPMENT AND VEHICLES

EXTENT-OF-PLAY

See off-site extent-of-play agreement schedule.

Each county will set up and demonstrate one PMC for local emergency workers.

- Monroe County--- 145 Culver Road Armory
- Wayne County----County Fire Training Facility

Emergency Worker PMCs will not be set-up in advance. Demonstrations will include:

- Arrival of Staff
- Setting-up
- Operations

Each PMC will be setup as it would be in an actual emergency, with all route markings and contamination control measures in place with the exception that floors may not be covered in paper/plastic. Procedures and techniques for monitoring emergency workers will be demonstrated. Staff will be provided to simulate emergency workers.

EXTENT-OF-PLAY AGREEMENT:

- Liquid waste from decontamination does not have to be contained and can be discharged to a sanitary sewer or directed as run-off, per FEMA policy and NYS Sanitary Code, Part 16.
- 90 sec/person monitoring speed for hand held instrumentation is not applicable to PMC.
- One lane for vehicle monitoring with at least 1 monitor monitoring at least 2 vehicles.
- One vehicle decon station with at least 1 monitor to simulate at least 1 vehicle decon.
- One personnel monitoring station to monitor at least 2 individuals.
- One personnel decon station with at least 1 monitor to simulate at least 2 personnel decons.
- Other staff will be demonstrated through the use of rosters.
- Monitors will not suit up in anti-contamination clothing, although one monitor may suit up at FEMA's request.
- Monroe County may use radio-controlled survey instruments.
- Monroe is activated at ALERT or >, Wayne is activated at SAE or >.
- Automobile Air Intake filters will not be monitored.
- Communications to EOC's will be simulated, RACES personnel will be available for discussion.
- Fixed contamination action levels will be in accordance with respective plans.

The following objectives are not included for this exercise:

Objective 23: Supplementary Assistance (Federal/Other)

Date demonstrated – May 1999 Next required demonstration-2005

Objective 24: Post Emergency Sampling

Date demonstrated – May 1999 Next required demonstration-2005

Objective 25: Laboratory Operations

Date demonstrated – May 1999 Next required demonstration-2005

Objective 26: Ingestion Exposure Pathway – Dose Projection and Protective Action Decision Making

Date demonstrated – May 1999 Next required demonstration-2005

Objective 27: Ingestion Exposure Pathway-Dose Protective Action Implementation

Date demonstrated – May 1999 Next required demonstration-2005

Objective 28: Relocation, Re-Entry and Return – Decision Making

Date demonstrated – May 1999 Next required demonstration-2005

Objective 29: Relocation, Re-entry and Return-Implementation

Date demonstrated–May 1999 Next required demonstration-2005

Objective 30: Continuous, 24-Hour Staffing

Date demonstrated – November 1999 Next required demonstration-2005

Objective 31: Offsite Support for the Evacuation of Onsite Personnel

Date demonstrated–November 1999 Next required demonstration-2005

Objective 32: Unannounced Exercise or Drill

Date demonstrated–1996 Next required demonstration-2002

Objective 33: Off-Hours Exercise or Drill

Date demonstrated-1996

Next required demonstration-2002

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 June 6, 2001.

This exercise scenario was submitted by the New York State and approved by FEMA Region II on May 29, 2001.

GINNA STATION 2001 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 |
| 07:35 | +00:35 | Level transmitter (LT-428) fails low causing letdown isolation. <u>Anticipated results</u> Operators should receive the following annunciators: F-4 "PZR level deviation," F-6 "PZR heater breaker trip," F-11 "PZR low level," and f-14 "Charging pump speed." Operators should defeat the channel per ER-INST.1 and restore letdown per S-3.2E. |
| 07:55 | +00:55 | A thermal barrier leak develops on the "B" Reactor Coolant Pump. Operators receive annunciator B-10 "RCP 1B Labyr seal low Diff pressure" and alarm on R-17 "Component Cooling." <u>Anticipated results</u> |

| APPROPRIATE TIME | SCENARIO TIME | <u>EVENT DESCRIPTION</u> |
|---------------------|------------------|--|
| 08:00 | +01:00 | <p>Operators should observe increasing level in the Component Cooling Water (CCW) surge tank.</p> <p>Operators should close the Thermal Barrier CCW return valve (MOV-754A) to isolate the leak.</p> <p>MOV-754B is shut by this time.</p> |
| 08:20 | +01:20 | <p><u>Anticipated results</u> The CCW surge tank level has stabilized and Labyrinth seal DP has returned to normal.</p> <p>SITE AREA EMERGENCY</p> <p>A large feedline break occurs on the "A" feedline. All Auxiliary Feedwater (AFW) pumps fail to start due to the high-energy break. The "D" SAFW pump fails to start due to the breaker for the "B" MDAFW pump failing closed. Collateral damage causes failure of other components such as air line breaks and Feed Regulating valve problems.</p> <p><u>Anticipated results</u> Operators will respond to the event by implementing procedure E-0 in response to the reactor trip and then transition to FR-H.1 for a loss of heat sink.</p> <p>A SITE AREA EMERGENCY should be declared in accordance with EPIP 1-0 "Ginna Station Event Evaluation and Classification." EAL number 1.3.1 "ORANGE or RED path in F-0-3, HEAT SINK."</p> <p>Operators should implement procedure EPIP 1-3 "Site Area Emergency."</p> <p>Procedure EPIP 1-6 "Site Evacuation" should be implemented to evacuate unessential personnel from the plant.</p> |

If a Site Area Emergency is not declared in approximately 15 minutes, a contingency message should be given out to declare it.

| APPROPRIATE <u>TIME</u> | SCENARIO <u>TIME</u> | <u>EVENT DESCRIPTION</u> |
|----------------------------|-------------------------|--|
| 09:05 | +02:05 | <p>Due to the containment isolation signal, containment radiation monitors R-2 and R-7 increase to approximately 200 mR/hr due to the thermal barrier leak into the CCW system causing; the relief valve on the CCW system to lift inside containment.</p> <p><u>Anticipated results</u> The plant should determine that the only method to isolate the leak is to make an entry into containment. The plant should discuss what precautions would be required to enter containment.</p> <p>Operators should be using procedural guidance to determine that the only option available to cool the core is to feed and bleed the reactor coolant system</p> <p>The TSC, OSC, ESC, EOF, JNC, and Survey Center should be activated and checking operational readiness.</p> |
| 09250 | +02:20 | <p>The plant should be determining that the feed and bleed of the reactor coolant system is not adequate to remove the heat from the reactor and that core exit thermocouple (CET) temperatures are increasing.</p> <p><u>Anticipated results</u> The TSC should have all of the minimum functions staffed and should be making preparations to assume command and control from the control room.</p> |
| 10:20 | +03:20 | <p>Core Exit Thermocouple temperatures exceed 700 degrees Fahrenheit.</p> |

Anticipated results

Operators enter procedure FR-C.1 and depressurize the "B" Steam Generator to atmospheric pressure to attempt to cool the core and provide more cooling options.

| <u>APPROPRIATE TIME</u> | <u>SCENARIO TIME</u> | <u>EVENT DESCRIPTION</u> |
|-------------------------|----------------------|---|
| 10:35 | +03:35 | <p>GENERAL EMERGENCY</p> <p>Operators determine that the FR procedure were not effective.</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 number 1.2.2 "RED path in F-0.2 "CORE COOLING and Functional restoration procedures not effective within 15 minutes."</p> <p>Operators should implement procedure EPIP 1-4 "General Emergency" and implement EPIP 2-1 to recommend protective actions to offsite authorities. (The RED path will be entered due to the RCS temperature of 700F, not the 1200F temperature).</p> |
| 11:12 | +04:12 | <p>The "D" SAFW pump is restored.</p> <p><u>Anticipated results</u> Operators start to feed the "B" Steam Generator and open the associated ARV to remove heat from the reactor core.</p> |
| 11:15 | +04:15 | <p>Due to the thermal shock of the cold water in the "B" S/G, a primary to secondary leak develops in the "B" S/G. Since there is no other method to remove heat from the reactor core, the plant will have to continue to steam the "B" S/G.</p> |

A release to the environment starts. The release path is a primary to secondary leak in the "B" S/G and an open Atmospheric Relief Valve (ARV) on the "B" S/G.

Anticipated results

Dose projections should be performed. Results should be verified by survey teams in the field.

| <u>APPROPRIATE TIME</u> | <u>SCENARIO TIME</u> | <u>EVENT DESCRIPTION</u> |
|-------------------------|----------------------|--|
| 12:00 | +05:00 | <p>The plant should be continuing cooldown on the "B" Steam Generator.</p> <p><u>Anticipated results</u> The plant should be determining if they can isolate the "B" Steam Generator ARV (They cannot due to the damage from the feedwater line break). The plant should also be assessing if they can fill the "A" Steam Generator to cool the core.</p> <p>The plant should discuss how they plan to transition from FR-C.1 to procedure E-3.</p> |
| 12:45 | +05:45 | <p>The reactor coolant system temperatures allow the plant to cool down on RHR and stop the release from the "B" Steam Generator ARV.</p> <p><u>Anticipated results</u> The plant terminates the release. Survey teams conduct surveys to ensure that the release has ended.</p> <p>Recovery/Re-entry discussions commence.</p> |
| 13:00 | +06:00 | <p>Terminate the exercise when all objectives are met.</p> |