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FEDERAL EMERGENCY MANAGEMENT AGENCY

Region II

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

JUL 25 2001

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

Dear Mr. Miller:

Please find enclosed a copy of the final exercise report for the November 15, 2000, Full-Participation Plume Exposure Pathway exercise of the offsite radiological emergency response plans specific to the Indian Point 3 Nuclear Power Station.

The State of New York and local emergency response organizations successfully demonstrated their capabilities to implement the New York Radiological Emergency Preparedness Plan and procedures in this exercise, and in related Out-Of-Sequence activities. There were no Deficiencies and twenty-six Areas Requiring Corrective Action (ARCAs) identified in this exercise. Thirteen ARCAs were corrected during the exercise or in Out-Of-Sequence demonstrations in accordance with new policies from the REP Program Strategic Review. The State has agreed to address the remaining ARCAs by December 31, 2001.

The State plans and preparedness are adequate to: protect the health and safety of the public living in the vicinity of the Indian Point Nuclear Power Station; and provide reasonable assurance that appropriate measures can be taken in the event of a radiological emergency. The Regional Assistance Committee is currently reviewing the latest revisions to the State and local plans and will provide comments to the State after the next RAC meeting, which is scheduled for August 21-22, 2001.

Please contact Robert F. Reynolds at 212-225-7204, if there are any questions regarding this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Joseph Picciano". The signature is fluid and cursive, with a large initial "J" and a long, sweeping underline.

Joseph Picciano
Acting Regional Director

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

Enclosure



Exercise Report

INDIAN POINT 3 NUCLEAR POWER STATION

Licensee: NEW YORK POWER AUTHORITY

Exercise Date: November 15, 2000

Report Date: April 30, 2001

**FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION II**

**26 Federal Plaza
New York, New York 10278**

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I. EXECUTIVE SUMMARY

On November 15, 2000, an exercise was conducted in the plume exposure pathway emergency planning zone (EPZ) around the Indian Point 3 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 FEMA's policies and guidance concerning the exercise of State and local radiological emergency response plans (RERP) and procedures.

The most recent exercise at this site, an ingestion exercise, was conducted on May 26, 1999. The most recent plume exercise was conducted on June 24, 1998. The qualifying emergency preparedness exercise was conducted on March 3, 1982.

FEMA wishes to acknowledge the efforts of the many individuals in New York State, Westchester, Rockland, Orange and Putnam Counties; and Bergen County, New Jersey 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: Westchester, Rockland, Orange and Putnam County Reception Centers; Westchester, Rockland/Bergen, Orange and Putnam County Congregate Care Centers; Westchester, Rockland, Orange and Putnam County Emergency Worker PMCs; Westchester, Rockland, Orange and Putnam County General Population Bus Runs; Westchester, Rockland, Orange and Putnam County School Bus Runs; Westchester, Rockland, Orange and Putnam County Traffic Control Points; Westchester, Rockland, Orange and Putnam County School Interviews; and Westchester, Rockland, Orange and Putnam County Medical Drills (MS-1).

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 26 Areas Requiring Corrective Action (ARCAs) identified as a result of this exercise.

Thirteen (13) of the Areas Requiring Corrective Action (ARCA) were corrected during the exercise or in Out-Of-Sequence demonstrations in accordance with new policies from the REP Program Strategic Review:

- Initiative 1.3: Negotiate Use of Out-Of-Sequence Demonstrations*, 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, five (5) Prior ARCAs were resolved. One (1) Prior ARCA remains unresolved, from the 1999 ingestion pathway exercise.

II. INTRODUCTION

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

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

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

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

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 Indian Point Nuclear Power Station to FEMA Region II by the State(s) of New York and involved local jurisdictions occurred on October 10, 1991. Formal approval of the RERP was granted by FEMA on May 3, 1996, under 44 CFR 350.

A REP exercise was conducted on November 15, 2000, 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 Indian Point 3 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;
- 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, titled "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, titled "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 Offsite Response Organizations' efforts to resolve them.

III. EXERCISE OVERVIEW

Contained in this section are data and basic information relevant to the November 15, 2000 exercise to test the offsite emergency response capabilities in the area surrounding the Indian Point 3 site. This section of the exercise report includes a description of the plume pathway EPZ, a listing of all participating jurisdictions and functional entities which were evaluated, and a tabular presentation of the time of actual occurrence of key exercise events and activities.

A. Plume Emergency Planning Zone Description

The Indian Point Nuclear Power Station's (IPNPS) ten mile plume pathway EPZ contains portions of four New York State Counties: Orange County, Putnam County, Rockland County and Westchester County.

The IPNPS is located on the east bank of the Hudson River about 24 miles north of the New York City boundary line at Indian Point, Village of Buchanan in upper Westchester County, New York State. The station is about 0.8 miles southwest of the city of Peekskill, 8.3 miles south of West Point, 1.5 miles northeast of the Lovett Generating Station site, 4.6 miles north of the Bowline Point Generating Station site and 2.3 miles north of Montrose Point.

The Indian Point Site is accessible by several roads in the village of Buchanan. Broadway, a two-lane paved road, borders the site to the east and is the primary access road to the site. The village roads of Bleakley Avenue and First Street enter Broadway across from the eastern site boundary. Additionally, a paved road links the eastern boundary of the site to the plants.

There are no residences within the site boundary. In addition, there are no public highways or railroads that traverse the site area.

The Indian Point Site is surrounded on almost all sides by high ground ranging from 600 to 1,000 feet above sea level. The site is on the east bank of the Hudson River which runs northeast to southwest at this point but turns sharply northwest approximately two miles northeast of the site. The west bank of the Hudson is flanked by the steep, heavily wooded slopes of the Dunderberg and West Mountains to the northwest (elevations 1,086 feet and 1,257 feet respectively) and Buckberg Mountain to the west-southwest (elevation 793 feet). These peaks extend to the west by other names and gradually rise to slightly higher peaks.

The general orientation of this mass of high ground is northeast to southwest. One mile northwest of the site, Dunderberg bulges to the east; north of Dunderberg and the site, high ground reaching 800 feet forms the east bank of the Hudson as the river makes a sharp turn to the northwest. To the east of the site, peaks are generally lower than those to the north and west. The Spitzenberg and Blue Mountains average about 600 feet in height and there is a weak, poorly defined series of ridges which again run mainly in a north-northeast direction. The river south of the site makes another sharp bend to the southeast and then widens as it flows past Croton and Haverstraw.

The IPNPS is approximately 239 acres in size and contains three pressurized water reactors. Unit 1 (615 MWt, 265 MWe, de-fueled), Unit 2 (2,758 MWt, 873 MWe) and Unit 3 (3,025

MWt, 965 MWe). Indian Point Unit 3 is adjacent to and south of Unit 1 and Unit 2 is to the north of Unit 1.

The two operating plants were designed by Westinghouse Electric Corporation.

The Indian Point pressurized water nuclear power plants each contain a nuclear reactor and closed loops of pressurized water which remove the heat energy from the reactor core and transfers the energy to a secondary water system which generates steam. The steam, in turn, drives a turbine generator set which produces electric power.

B. Exercise Participants

The following agencies, organizations, and units of government participated in the Indian Point 3 exercise on November 15, 2000.

State of New York

New York State Emergency Management Office (SEMO)
New York State Department of Health
New York State Public Service Commission (PSC)
New York State Energy Research and Development Authority
New York State Department of Transportation
New York State Department of Labor
New York Military and Naval Affairs
New York Power Authority
New York State Office of Children and Family Services
New York State Office of Parks, Recreation and Historic Preservation
New York State Department of Agriculture and Markets
New York State Criminal Justice Services
New York State Department of Fire Prevention and Control
New York State Department of Correctional Services
New York State Office of Mental Health
New York State Police
New York Power Authority
Palisades Interstate Park Police
State University of New York

Federal Agencies

Nuclear Regulatory Commission
U.S. Coast Guard
U.S. Army, United States Military Academy, West Point Liaison (in Orange County)

Risk Jurisdictions

ORANGE COUNTY

Orange County Department of Health
Orange County Emergency Management Office
Orange County Department of Public Works
Orange County Department of Social Services
Orange County Office of the Aging
Orange County Emergency Medical Services
Orange County Civil Air Patrol

Orange County Department of Labor
Orange County Sheriff's Office
Orange County Fire Department
Orange County Attorney
Orange County School Liaison

PUTNAM COUNTY

Putnam County Emergency Management Agency
Putnam County Health Department
Putnam County Sheriff's Office
Putnam County Bureau of Fire & EMS
Putnam County Social Services
Putnam County Office for the Aging
Putnam County Highway Department
Carmel School System
Putnam County Purchasing Department
Putnam County Nursing

ROCKLAND COUNTY

Rockland County Department of Health
Rockland County Sheriff's Office
Rockland County Office of the Aging
Rockland County Office of People with Disabilities
Rockland County Department of Health
Rockland County Office of Fire & Emergency Services
Rockland Director of Public Affairs
Helicopter Emergency Lift Program (HELP)
Rockland County Mental Health
Rockland County Emergency Medical Services
Rockland County Social Services
Rockland County Highway Department
Rockland County Special Facilities Coordinator
Rockland County Public Transit
Rockland Schools
Local Police Departments

WESTCHESTER COUNTY

Westchester County Department of Health
Westchester County Police
Peekskill Police
Westchester Department of Public Works
Westchester County Emergency Management Agency

Westchester County Finance Department
Westchester County Fire and Safety
Westchester County Hospitals and Emergency Medical Services
Westchester County Community Mental Health
Westchester County Department of Transportation
Westchester County Department of Social Services
Westchester County Department of Parks, Recreation & Conservation
General Services Department
Department of Schools
Civil Air Patrol
Peekskill Civil Defense
Westchester Department of Public Works
Westchester County Department of Environmental Facilities
Public Information Office
Westchester County Executive
Nuclear Power Generation Utilities Technical Representative
Westchester County Spill Control Team

Support Jurisdictions

BERGEN COUNTY

Bergen County Office of Emergency Management

Private/Volunteer Organizations

WABC AM Radio Station
American Red Cross
Volunteers from RACES
Salvation Army
Civil Air Patrol
Orange County ARES/RACES
Putnam County RACES
Putnam Emergency Amateur Repeater League (PEARL)

C. Exercise Timeline

Table 1, on the following page, presents the time at which key events and activities occurred during the Indian Point Exercise on November 15, 2000. Also included are times notifications were made to the participating jurisdictions/functional entities.

Table 1. Exercise Timeline
INDIAN POINT 3 - November 15, 2000

| Emergency Classification Level or Event | Time Utility Declared (RECS) | Time That Notification Was Received or Action Was Taken | | | | | | | | |
|--|------------------------------|---|------|------|------------|-------|-------|-------|-------|-------|
| | | EOC | EOF | JNC | EAS @ WABC | OCEOC | PCEOC | RCEOC | WCEOC | BCEOC |
| Alert | 0918 | 0918 | 0905 | NA | | 0918 | 0920 | 0920 | 0918 | 0935 |
| Site Area Emergency | 1053 | 1053 | 1041 | 1105 | | 1050 | 1101 | 1103 | 1049 | 1133 |
| General Emergency | 1121 | 1120 | 1115 | 1120 | | 1121 | 1121 | 1121 | 1121 | 1127 |
| Simulated Rad. Release Started | 1301 | 1301 | 1245 | 1304 | | 1249 | 1229 | 1253 | 1253 | 1303 |
| Simulated Rad. Release Terminated | 1445 | 1426 | 1415 | 1428 | | 1429 | 1445 | 1425 | 1430 | |
| Facility Declared Operational | | 1000 | 0942 | 1015 | | 1007 | 1015 | 1000 | 1007 | 0939 |
| Four Counties Declare Emergency | | | | | | 1112 | 1112 | 1112 | 1112 | 1112 |
| Governor Declares Emergency | | 1125 | | | | 1135 | 1137 | 1135 | 1135 | |
| 1 st ANS Activation ("Stay Tuned") | | 1029 | | | | 1029 | 1029 | 1029 | 1029 | |
| 1 st Siren Activation | | 1041 | | | | 1041 | 1041 | 1041 | 1041 | |
| 1 st EAS Message | | 1044 | | | 1044 | 1044 | 1044 | 1044 | 1044 | |
| 2 nd ANS Activation * 1 st Protective Action Decision | | 1138 | | | | 1138 | 1138 | 1138 | 1138 | |
| 2 nd Siren Activation | | 1150 | | | | 1150 | 1150 | 1150 | 1150 | |
| 2 nd EAS Message | | 1153 | | | | 1153 | 1153 | 1153 | 1153 | |

Table 1. Exercise Timeline
INDIAN POINT 3 - November 15, 2000

| Emergency Classification Level or Event | Time Utility Declared (RECS) | Time That Notification Was Received or Action Was Taken | | | | | | | | |
|---|------------------------------|---|-----|-----|------------|--------------|--------------|--------------|--------------|-------|
| | | EOC | EOF | JNC | EAS @ WABC | OCEOC | PCEOC | RCEOC | WCEOC | BCEOC |
| 2 nd EAS Message | | 1153 | | | | 1153 | 1153 | 1153 | 1153 | |
| 3 rd ANS Activation** 2 nd Protective Action Decision | | 1250 | | | | 1250 | 1250 | 1250 | 1250 | |
| 3 rd Siren Activation | | 1302 | | | | 1302 | 1302 | 1302 | 1302 | |
| 3 rd EAS Message | | 1305 | | | | 1305 | 1305 | 1305 | 1305 | |
| 4 th ANS Activation*** 3 rd Protective Action Decision | | 1333 | | | | 1333 | 1333 | 1333 | 1333 | |
| 4 th Siren Activation | | 1345 | | | | 1345 | 1345 | 1345 | 1345 | |
| 4 th EAS Message | | 1348 | | | | 1348 | 1348 | 1348 | 1348 | |
| KI Administration Discussion: Decision: | | 1345 | | | | 1345 1357 | 1345 1357 | 1345 1357 | 1345 1357 | |

* PAD for 2nd ANS – Evacuate ERPA's: Westchester 1, 2, 3, 4, 7, 8, 9, 49; Rockland 29, 38, 39/40; Orange 39/40
 Shelter ERPA's: Westchester 5, 6, 10, 11, 12, 13, 14, 15, 21, 22, 47, 48, 50, 51; Rockland 30; Putnam 16, 17, 18, 19, 20, and 23.

PAD for 3rd ANS – Evacuate ERPA's (areas added to previous PAD shown in bold): Westchester 1, 2, 3, 4, 5, 6, 7, 8, 9, **48**, 49; Rockland 29, 38, 39/40; Orange 39/40
 Shelter ERPA's: Westchester 10, 11, 12, 13, 14, 15, 21, 22, 47, 50, 51; Rockland 30; Putnam 16, 17, 18, 19, 20, and 23.

PAD for 4th ANS – Evacuate ERPA's (areas added to previous PAD shown in bold): Westchester 1, 2, 3, 4, 5, 6, 7, 8, 9, **48**, 49; Rockland 29, 38, 39/40; Orange 39/40
 Shelter ERPA's: Westchester 10, 11, 12, 13, 14, 15, 21, 22, 47, 50, 51; Rockland 30; Orange **24, 26**; Putnam 16, 17, 18, 19, 20, and 23.

IV. EXERCISE EVALUATION AND RESULTS

Contained in this section are the results and findings of the evaluation of all jurisdictions and functional entities which participated in the November 15, 2000 exercise to test the offsite emergency response capabilities of State and local governments in the 10-mile EPZ surrounding the Indian Point 3 Nuclear Power Station.

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

A. Summary Results of Exercise Evaluation - Table 2

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

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

**Table 2. Summary Results of Plume Exercise Evaluation
November 15, 2000 – Indian Point 3 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 | 33 |
|--|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| NEW YORK STATE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Emergency Operations Center | M | M | M | M | | | | | | M | M | | | | | | | | | | | | | | | | | | | | | | |
| Dose Assessment | | | | | A | | M | | M | | | | | M | | | | | | | | | | | | | | | | | | | |
| Emergency Operations Facility | M | M | | A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Joint News Center | M | M | | M | | | | | | M | A | A | M | | | | | | | | | | | | | | | | | | | | |
| EAS (WABC) | | | | M | | | | | | M | | | | | | | | | | | | | | | | | | | | | | | |
| RISK COUNTIES | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ORANGE COUNTY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Emergency Operations Center | M | M | M | M | | | | | | M | M | | | | | M | M | M | | | | | | | | | | | | | | | |
| Dose Assessment/Field Team Coordination | | | | | M | | M | | M | | | | | M | | | | | | | | | | | | | | | | | | | |
| Field Monitoring Teams | | | | M | M | M | | M | | | | | | M | | | | | | | | | | | | | | | | | | | |
| Traffic Control Points | | | | M | M | | | | | | | | | M | | | M | | | | | | | | | | | | | | | | |
| Reception Center | | | | M | M | | | | | | | | | | | | | A | | | | | | | | | | | | | | | |
| Congregate Care Center | | | | M | | | | | | | | | | | | | | | M | | | | | | | | | | | | | | |
| Emergency Worker Decontamination Station | | M | | M | M | | | | | | | | | | | | | | | | | M | | | | | | | | | | | |
| General Population Bus Run | | | | M | M | | | | | | | | | | | M | | | | | | | | | | | | | | | | | |
| School Bus Run | | | | M | M | | | | | | | | | | | | M | | | | | | | | | | | | | | | | |
| School Interviews | | | | | | | | | | | | | | | | | M | | | | | | | | | | | | | | | | |
| Medical Drill | | | | | | | | | | | | | | | | | | | | M | M | | | | | | | | | | | | |
| PUTNAM COUNTY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Emergency Operations Center | M | M | M | M | | | | | | M | A | | | | | M | M | M | | | | | | | | | | | | | | | |
| Dose Assessment/Field Team Coordination | | | | | M | | M | | M | | | | | M | | | | | | | | | | | | | | | | | | | |
| Field Monitoring Teams | | | | M | M | A | | A | | | | | | M | | | | | | | | | | | | | | | | | | | |

**Table 2. Summary Results of Plume Exercise Evaluation
November 15, 2000 – Indian Point 3 Nuclear Power Station**

| November 15, 2000 – Indian Point 3 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 | 33 | | |
| Traffic Control Points | | | | M | M | | | | | | | | | M | | | M | | | | | | | | | | | | | | | | | | |
| Reception Center | | M | | M | M | | | | | | | | | | | | | M | | | | | | | | | | | | | | | | | |
| Congregate Care Center | | | | M | | | | | | | | | | | | | | | M | | | | | | | | | | | | | | | | |
| Emergency Worker Decontamination Station | | M | | | M | | | | | | | | | | | | | | | | | M | | | | | | | | | | | | | |
| General Population Bus Run | | | | M | M | | | | | | | | | | M | | | | | | | | | | | | | | | | | | | | |
| School Bus Run | | | | M | M | | | | | | | | | | | | M | | | | | | | | | | | | | | | | | | |
| School Interviews | | | | | | | | | | | | | | | | M | | | | | | | | | | | | | | | | | | | |
| Medical Drill | | | | | | | | | | | | | | | | | | | | | M | M | | | | | | | | | | | | | |
| ROCKLAND COUNTY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Emergency Operations Center | M | M | A | M | M | | | | | M | M | | | | M | M | M | | | | | | | | | | | | | | | | | | |
| Dose Assessment/Field Team Coordination | | | | | M | | M | M | | | | | | M | | | | | | | | | | | | | | | | | | | | | |
| Field Monitoring Teams | | | | M | M | M | | M | | | | | | M | | | | | | | | | | | | | | | | | | | | | |
| Traffic Control Points | | | | M | M | | | | | | | | | M | | | | M | | | | | | | | | | | | | | | | | |
| Reception Center | | | | M | M | | | | | | | | | | | | | | A | | | | | | | | | | | | | | | | |
| Congregate Care Center | | | | M | | | | | | | | | | | | | | | | M | | | | | | | | | | | | | | | |
| Emergency Worker Decontamination Station | | M | | | M | | | | | | | | | | | | | | | | | M | | | | | | | | | | | | | |
| General Population Bus Run | | | | M | M | | | | | | | | | | M | | | | | | | | | | | | | | | | | | | | |
| School Bus Run | | | | M | M | | | | | | | | | | | | A | | | | | | | | | | | | | | | | | | |
| School Interviews | | | | | | | | | | | | | | | | | A | | | | | | | | | | | | | | | | | | |
| Medical Drill | | | | | | | | | | | | | | | | | | | | | M | M | | | | | | | | | | | | | |
| WESTCHESTER COUNTY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Emergency Operations Center | M | M | M | M | | | | | | M | M | | | | M | M | M | | | | | | | | | | | | | | | | | | |
| Dose Assessment/Field Team Coordination | | | | | M | | M | | M | | | | | M | | | | | | | | | | | | | | | | | | | | | |
| Field Monitoring Teams | | | | M | M | M | | M | | | | | | M | | | | | | | | | | | | | | | | | | | | | |

**Table 2. Summary Results of Plume Exercise Evaluation
November 15, 2000 – Indian Point 3 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 | 33 |
|--|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Traffic Control Points | | | | M | M | | | | | | | | | M | | | M | | | | | | | | | | | | | | | | |
| Reception Center | | | | M | M | | | | | | | | | | | | | M | | | | | | | | | | | | | | | |
| Congregate Care Center | | | | M | | | | | | | | | | | | | | | M | | | | | | | | | | | | | | |
| Emergency Worker Decontamination Station | | | | | | | | | | | | | | | | | | | | | | M | | | | | | | | | | | |
| General Population Bus Run | | | | M | M | | | | | | | | | | M | | | | | | | | | | | | | | | | | | |
| School Bus Run | | | | M | M | | | | | | | | | | | M | | | | | | | | | | | | | | | | | |
| School Interviews | | | | | | | | | | | | | | | | M | | | | | | | | | | | | | | | | | |
| Medical Drill | | | | | | | | | | | | | | | | | | | | M | A | | | | | | | | | | | | |
| BERGEN COUNTY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Emergency Operations Center | M | M | M | M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

LEGEND:

M =Met (No Deficiency or ARCAs assessed
Blank =Not scheduled for demonstration

A =ARCA(s) assessed and/or unresolved prior ARCAs D=Deficiency(ies) assessed and no unresolved prior ARCAs N =Not Demonstrated
A = The ARCA(s) associated with objective were corrected in accordance with new policies from the REP Program Strategic Review.

B. Status of Jurisdictions Evaluated

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

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

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

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

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

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

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

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

1. NEW YORK STATE

1.1 Emergency Operations Center

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

Reason ARCA Unresolved: Objective 29 was not included in this exercise in accordance with the Extent-of-Play Agreement.

Issue No.: 32-99-29-A-01

Description: Implementation issues associated with relocation and re-entry were not adequately communicated to the staff or public, and not fully coordinated with other organizations, such as the counties.

Key decisions and instructions were not communicated to the staff or the public for proper implementation. For example, although the public was instructed to relocate from hotspots A and B, the evacuees were not provided with the length of time the relocation was estimated to last (over one year), or of the preparedness actions to take for such an extended evacuation.

Also, implementation of protective actions was not fully coordinated with other organizations such as the affected counties. For instance, implementation of the re-entry policy, which varied among the counties involved, was not fully discussed and coordinated.

Recommendation: A recorder should be designated to ensure that key information is successfully communicated from command and control to the staff and to the public. The recorder could post such information (i.e., evacuation areas, relocation areas, contamination levels, re-entry policy with exposure limits, return policy, etc.) on an automated status board that is visible to all EOC staff, including the Public Information section.

Press Releases should be followed by full briefings to fill in any information gaps, ensuring complete instruction to the public for effective implementation. Finally,

the SEOC should demonstrate more attention of implementation issues with the counties and other organizations.

Schedule of Corrective Actions: This issue will be addressed through discussion during a FEMA-evaluated exercise (at another site) prior to December 31, 2001.

1.2 Dose Assessment

- a. **MET:** Objectives 7, 9 and 14
- b. **DEFICIENCY:** NONE.
- c. **AREAS REQUIRING CORRECTIVE ACTION:**

Issue No.: 75-00-05-A-01

Description: The State did not communicate the dosimeter correction factor, which was 2.0, and associated new exposure reporting limits to Rockland and Westchester Counties. In addition the State did not provide guidance on how to use this information. (NUREG-0654, K.3.a; *New York State REPP*, Procedure H, *Assessment/Evaluation*, Attachment 1, *Dose Estimation Procedures*.)

Recommendation: The State should convey changes to the dosimeter correction factor and corresponding revised exposure reporting limit values to the counties via a hard copy system. Each County must inform their emergency workers in the field of the newly revised exposure reporting limits. In addition, the plan and procedures should be reviewed and possibly revised to clarify the process.

Schedule of Corrective Actions: This issue will be addressed through discussion during a FEMA-evaluated exercise (at another site) prior to December 31, 2001.

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

1.3 Emergency Operations Facility

- a. **MET:** Objectives 1 and 2
- b. **DEFICIENCY:** NONE.
- c. **AREAS REQUIRING CORRECTIVE ACTION:**

Issue No.: 75-00-04-A-02

Description: Inoperable Utility Supplied Data System in Rockland, Westchester and Orange Counties. The utility-supplied MIDAS (Meteorology Information and Dose Assessment System) terminal and printer was inoperative in the County EOC's for much of the exercise. Problems were encountered when attempting to print the projections and plant status information that was updated every 15 minutes automatically. In addition to the printer problems, the data displayed was not always consistent with the plant status data that was being transmitted by fax from the EOF. This is a recurring problem. The utility liaisons reported that there were problems. Considering the terrain and the potential for wind shifts, the hour-by-hour forecast information is an important tool for an effective response. (NUREG-0654, I.10; *New York State REPP*, Procedure H, *Assessment/Evaluation*.)

Recommendation: Work with the utility to resolve the cause of the problem with the MIDAS. If a permanent fix cannot be made, investigate a different approach to provide important plant status data and information.

Schedule of Corrective Actions: This issue will be addressed in an out-of-sequence demonstration to be held prior to December 31, 2001.

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

1.4 Joint News Center

- a. **MET:** Objectives 1, 2, 4, 10, and 13.
- b. **DEFICIENCY:** NONE.

c. **AREAS REQUIRING CORRECTIVE ACTION:**

Issue No.: 75-00-11-A-03

Description: The rumor control telephone number was not included in any printed information such as Special News Broadcasts, public information brochures or news releases. (NUREG-0654, G.2.c.; *2000 Joint News Center Procedures and Public Education Workplan; Planning For Emergencies*, pg.5 *Rumor Control*.)

Recommendation: The rumor control telephone number should be included in EAS messages and/or Special News Broadcasts, the public information brochure, news releases and other printed documents distributed to the media and public.

Schedule of Corrective Actions: This issue will be addressed in an out-of-sequence demonstration to be held prior to December 31, 2001.

Issue No.: 75-00-11-A-04

Description: Per joint news center procedures, "if the EAS message contains a PAR for evacuation or sheltering, EAS personnel from counties and state will assist in preparing a special news bulletin which expands the information contained in the EAS broadcast message. Immediately after sign-off, the Special News Bulletin is faxed to the EAS station. The EAS coordinator confirms receipt of faxed bulletin with the station." This did not occur during the exercise. There was no follow-up message or bulletin sent to the EAS station. (NUREG-0654, E.5; *2000 Joint News Center Procedures and Public Education Workplan*, pg. 4, *EAS Message Preparation Procedures*.)

Recommendation: Ensure that procedures regarding follow-up special news bulletins are followed at the JNC.

Schedule of Corrective Actions: This issue will be addressed in an out-of-sequence demonstration to be held prior to December 31, 2001.

Issue No.: 75-00-12-A-05

Description: At the JNC media briefing, conducted at 1035 hours, the Westchester County PIO announced that at 1039 hours sirens had been sounded at 1041 and an EAS message had been broadcast at 1044 hours. This was prior to these events. At the next media briefing at 1145, the briefing was conducted during the time the second alert and notification sequence was occurring (with sirens sounded at 1150 and the EAS being broadcast at 1153). Both of these media briefings should have been delayed until after the alert and notification activity had concluded. If these briefings had been broadcast live they could have created a

great deal of confusion. (NUREG-0654, E.7; *2000 Joint News Center Procedures and Public Education Workplan*, pg. 2, *Media Briefings*)

Recommendation: When an alert and notification sequence is scheduled, the media briefings should be delayed until after the EAS broadcast.

Schedule of Corrective Actions: This issue will be addressed in an out-of-sequence demonstration to be held prior to December 31, 2001.

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

1.5 Emergency Alert System - Station WABC

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

2. RISK JURISDICTIONS - COUNTIES

2.1 ORANGE COUNTY

2.1.1 Orange County - Emergency Operations Center

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

2.1.2 Orange County - Dose Assessment/Field Team Coordination

- a. **MET:** Objectives 5, 7, 9, and 14
- b. **DEFICIENCY:** NONE.
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE.
- d. **NOT DEMONSTRATED:** NONE.
- e. **PRIOR ARCAs - RESOLVED:** NONE.
- f. **PRIOR ARCAs - UNRESOLVED:** NONE.

2.1.3 Orange County - Field Monitoring Teams

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

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

2.1.4 Orange County - Traffic Control Points [2] (Out-of-Sequence at field locations (TCPs #1 & #2) on November 15, 2000)

- a. **MET: Objectives 4, 5, 14, and 17**
- b. **DEFICIENCY: NONE.**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE.**
- d. **NOT DEMONSTRATED: NONE.**
- e. **PRIOR ARCAs - RESOLVED: NONE.**
- f. **PRIOR ARCAs - UNRESOLVED: NONE.**

2.1.5 Orange County - Reception Center (Out-of-Sequence at Middletown High School on November 13, 2000)

- a. **MET: Objectives 4, 5, and 18**
- b. **DEFICIENCY: NONE.**
- c. **AREAS REQUIRING CORRECTIVE ACTION:**

Issue No.: 75-00-18-A-06

Description: Vehicle monitoring station survey technique was not adequate at the Orange County Reception Center. The monitor held the probe several inches above the vehicle and moved the probe at approximately one foot per minute, which is too slow. (NUREG-0654, J.12; *Orange County RERP*, Procedure 3, *Health*, Attachment 6, *Exposure Control*, Section 6.7, *Vehicle Contamination Check*.)

Corrective Action Taken: With the concurrence of the controller, the drill play was stopped and the monitor was briefed on the proper survey technique. All subsequent surveys were performed appropriately. This issue was successfully addressed and corrected during the out of sequence demonstration 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.**

2.1.6 Orange County - Congregate Care Center (Out-of-Sequence at Middletown High School on October 3, 2000)

a. **MET: Objectives 4 and 19**

b. **DEFICIENCY: NONE.**

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

d. **NOT DEMONSTRATED: NONE.**

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

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

2.1.7 BOCES - Emergency Worker Decontamination Station (Out-of-Sequence at BOCES on May 18, 2000)

a. **MET: Objectives 2, 4, 5, and 22**

b. **DEFICIENCY: NONE.**

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

d. **NOT DEMONSTRATED: NONE.**

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

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

2.1.8 Orange County -General Population Bus Runs [2] (Out-of-Sequence at West Point Tours on August 29, 2000)

a. **MET: Objectives 4, 5, and 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 Orange County - School Bus Runs [2] (Out-of-Sequence at West Point Tours on August 29, 2000)

a. **MET: Objectives 4, 5, and 16**

b. **DEFICIENCY: NONE.**

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

d. **NOT DEMONSTRATED: NONE.**

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

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

2.1.10 Orange County - School Interviews [1]: (Out-of-Sequence at James O'Neill High School, Highland School District on August 22, 2000)

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.**

2.1.11 Orange County - Medical Drill, (Out-of-Sequence at Cornwall Hospital Center on October 27, 1999)

a. **MET: Objectives 20 and 21**

b. **DEFICIENCY: NONE.**

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

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

2.2 PUTNAM COUNTY

2.2.1 Putnam County - Emergency Operations Center

- a. **MET:** Objectives 1, 2, 3, 4, 10, 15, 16, and 17
- b. **DEFICIENCY:** NONE.
- c. **AREAS REQUIRING CORRECTIVE ACTION**

Issue No.: 75-00-11-A-07

Description: EAS message number four discusses how traffic control has been established to restrict access to the portion of Putnam County located within ten miles of the plant. However, during the exercise and through interview, county officials stated that access control had not been established around any of the sheltered areas. Only two Traffic Control Points had been identified through controller inject. Access to Putnam County within the Emergency Planning Zone was not restricted. It is noted that Draft EAS messages were sent to the EOC for review and approval. Information should be verified for all activities prior to release. It is also noted that a Draft message did indicate a modification that was not done by the JNC (NUREG-0654, E.5; *Putnam RERP*, Section III, *Response, e. Public Information*).

Recommendation: Ensure that Draft EAS messages are reviewed for accuracy before approval is given.

Schedule of Corrective Actions: This issue will be addressed in an out-of-sequence demonstration to be held prior to December 31, 2001.

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

2.2.2 Putnam County - Dose Assessment/Field Team Coordination

- a. **MET:** Objectives 5, 7, 9, and 14
- b. **DEFICIENCY:** NONE.
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE.

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

2.2.3 Putnam County - Field Monitoring Teams

- a. **MET:** Objectives 4, 5, and 14
- b. **DEFICIENCY:** NONE.
- c. **AREAS REQUIRING CORRECTIVE ACTION:**

Issue No.: 75-00-06-A-08

Description: Procedure 4, Attachment 4 of the *Putnam County Radiological Emergency Response Plan* calls for performing a source check on the RO-2A instrument using a Cs-137 check source, as indicated in Section 1.1.3 under *Radiation Survey Techniques* (p. D-21). Also, Procedure 4, Attachment 4, Section 2.3 under *Airborne Survey Techniques* (p. D-22) calls for doing a source check on the Eberline RM-14 meter using the Cs-137 check source. Neither of the prescribed source checks were performed by Field Monitoring Team A. (NUREG-0654, H.10; *Putnam County RERP*, Procedure 4, *Radiological Officer*, Attachment 4, *Field Monitoring*.)

Recommendation: Putnam County Field Team A should receive further training on performing source checks.

Schedule of Corrective Actions: This issue will be addressed in an out-of-sequence demonstration to be held prior to December 31, 2001.

Issue No.: 75-00-08-A-09

Description: Putnam County Field Team B's RM-14 instrument alarm and flashing light could not be turned off during check out, however, the team continued to use the instrument in the field. Under these conditions, accuracy of results and operability of the instrument would be questionable. (NUREG-0654, H.10; *Putnam County RERP*, Procedure 4, *Radiological Officer*, Attachment 4, *Field Monitoring*, p. D-23.)

Recommendation: A spare RM-14 instrument should be available to the Putnam County Field Teams, and the instrument(s) should be used in accordance with procedures.

Schedule of Corrective Actions: This issue will be addressed in an out-of-sequence demonstration to be held prior to December 31, 2001.

Issue No. 75-00-08-A-10

Description: Field Team B did not protect the detector from contamination during particulate air monitoring. It is standard practice for a field monitoring team to cover a detector with thin, transparent plastic during particulate filter measurements in order to protect the instrument from contamination and to avoid erroneous readings. (NUREG-0654, I.9; *Putnam County RERP*, Procedure 4, *Radiological Officer*, Attachment 4, *Field Monitoring*, pp. D-19 and D-23.)

Recommendation: Field Team B should receive further training on performing particulate air monitoring. In addition, the county procedures for particulate air monitoring should be reviewed and revised to emphasize the importance of avoiding contamination of the instrument. These procedures include a reference to a sample holder, which should be removed, since it is not used.

Schedule of Corrective Actions: This issue will be addressed in an out-of-sequence demonstration to be held prior to December 31, 2001.

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

2.2.4 Putnam County Traffic Control Points [2]: (Out-of-Sequence at field locations (TCPs #27 & 30) on November 15, 2000)

- a. **MET:** Objectives 4, 5, 14, and 17
- b. **DEFICIENCY:** NONE.
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE.
- d. **NOT DEMONSTRATED:** NONE.
- e. **PRIOR ARCAs - RESOLVED:** NONE.
- f. **PRIOR ARCAs - UNRESOLVED:** NONE.

2.2.5 Putnam County - Reception Center (Out-of-Sequence at Brewer High School on July 19, 2000)

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

2.2.6 Putnam County - Congregate Care Center (Out-of-Sequence at J. F. Kennedy Elementary School on July 13, 2000)

- a. **MET:** Objectives 4 and 19
- b. **DEFICIENCY:** NONE.
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE.
- d. **NOT DEMONSTRATED:** NONE.
- e. **PRIOR ARCAs - RESOLVED:** NONE.
- f. **PRIOR ARCAs - UNRESOLVED:** NONE.

2.2.7 Putnam County - Emergency Worker Decontamination Station (Out-of-Sequence at North Highland Fire Department on June 22, 2000)

- a. **MET:** Objectives 2, 5, and 22
- b. **DEFICIENCY:** NONE.
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE.
- d. **NOT DEMONSTRATED:** NONE.

e. PRIOR ARCAs - RESOLVED:

Issue No.: 32-98-22-A-01

Description: Monitors [at the Putnam County Emergency Worker Decontamination Station] were unfamiliar with the minimum reporting levels for contamination on vehicles. Various reports were given by monitors. (NUREG-0654, K.5.a.).

Recommendation: Provide additional training [to Putnam County Decontamination Station Emergency Workers] on contamination levels.

Corrective Action Demonstrated: This ARCA was corrected during the June 22, 2000 out-of-sequence drill at the North Highland Fire Station. Monitors were familiar with the level of contamination, which required that vehicles be decontaminated.

f. PRIOR ARCAs - UNRESOLVED: NONE.

2.2.8 Putnam County - General Population Bus Runs (Out-of-Sequence at Royal Coach on May 5, 2000 and Putnam Valley on May 4, 2000)

- a. MET:** Objectives 4, 5, and 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 Putnam County - School Bus Runs [2] (Out-of-Sequence at Mahopac Central School District on May 2, 2000 and Haldane Central School District on May 2, 2000)

- a. MET:** Objectives 4, 5 and 16
- b. DEFICIENCY:** NONE.
- c. AREAS REQUIRING CORRECTIVE ACTION:** NONE.

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

2.2.10 Putnam County - School Interviews Out-of-Sequence on May 16, 2000 at:

- [1] **The Nest High School, Garrison School District;**
- [2] **St. Luke's Nursery School, Putnam Valley School District; and**
- [3] **Community Nursery School, Haldane Central School District**

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

2.2.11 Putnam County - Medical Drill, (Out-of-Sequence at Putnam Hospital Center on May 11, 2000)

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

2.3 ROCKLAND COUNTY

2.3.1 Rockland County - Emergency Operations Center

- a. **MET:** Objectives 1, 2, 4, 5, 10, 11, 15, 16, and 17
- b. **DEFICIENCY:** NONE.
- b. **AREAS REQUIRING CORRECTIVE ACTION:**

Issue No.: 75-00-03-A-11

Description: Rockland County did not keep Bergen County abreast of important information and developments. For example, Rockland County did not notify Bergen County that a Site Area Emergency had been declared until after notifying Bergen that a General Emergency had been declared. Bergen County learned of the SAE only after calling back to Rockland to confirm the General Emergency. In addition, Bergen County was only notified of the first siren activation and EAS message. No notice was given of the final three activations and messages, nor was Bergen County notified of the termination of the radioactive release. (NUREG-0654, A.1.d., 2.a.,b.; *Rockland County REPP*, Procedure RC/BC-1, *Rockland County/Bergen County Liaisons*, Section 5.3.1, *EOC Operations*.)

Recommendation: Rockland County should provide a standard operating procedure checklist for the Bergen County liaison to use that will prompt the liaison to notify Bergen County of all ECL's, all EAS activations, any significant change in conditions at the plant and other pertinent information, at least once every half hour. Training on the procedure should be provided to the Rockland County/Bergen County liaison at Rockland County.

Schedule of Corrective Actions: This issue will be addressed in an out-of-sequence demonstration to be held prior to December 31, 2001.

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

2.3.2 Rockland County - Dose Assessment/Field Team Coordination

- a. **MET:** Objectives 5, 7, 9, and 14
- b. **DEFICIENCY:** NONE.

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

2.3.3 Rockland County - Field Monitoring Teams [2]

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

2.3.4 Rockland County - Traffic Control Points [2]: (Out-of-Sequence at field locations (TCPs #R-62 & R-14) on November 15, 2000)

- a. **MET: Objectives 4, 5, 14, and 17**
- b. **DEFICIENCY: NONE.**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE.**
- d. **NOT DEMONSTRATED: NONE.**
- e. **PRIOR ARCAs - RESOLVED: NONE.**
- f. **PRIOR ARCAs - UNRESOLVED: NONE.**

2.3.5 Rockland County - Reception Center (Out-of-Sequence at Tappan Zee High School on October 16, 2000)

- a. **MET:** Objectives 4 and 5
- b. **DEFICIENCY:** NONE.
- c. **AREAS REQUIRING CORRECTIVE ACTION:**

Issue No.: 75-00-18-A-12

Description: There was only one female monitor for the female shower at the Tappan Zee Reception Center and two are required (per Rockland County Procedures and the Extent-of-Play Agreement). (NUREG-0654, J.10.h., 12; *Rockland County REPP*, Procedure DOH-2, *Personnel Monitoring Centers*, Section 5.1.1.)

Recommendation: Additional female monitors should be trained to assure staffing for the female decontamination area is sufficient.

Schedule of Corrective Actions: This issue will be addressed in an out-of-sequence demonstration to be held prior to December 31, 2001.

Issue No.: 75-00-18-A-13

Description: Holding areas in the cafeteria at the Tappan Zee Reception Center are not designated for evacuees awaiting transportation to shelters or private transportation. (NUREG-0654, J.12; *Rockland County REPP*, Procedure DSS-2, *Department of Social Services Emergency Response Actions*, Section 5.3.3.)

Recommendation: The diagram of the reception center should include designated areas for evacuees awaiting transportation to shelters or private transportation.

Schedule of Corrective Actions: This issue will be addressed in an out-of-sequence demonstration to be held prior to December 31, 2001.

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

2.3.6 Rockland County - Congregate Care Center (Out-of-Sequence at Ramapo College on October 19, 2000 and Fairleigh Dickinson University on February 11, 1999)

- a. **MET:** 4 and 19
- b. **DEFICIENCY:** NONE.
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE.
- d. **NOT DEMONSTRATED:** NONE.
- e. **PRIOR ARCA's - RESOLVED:**

Issue No.: 32-98-04-A-02

Description: Rockland County did not demonstrate the ability to provide communications at a congregate care center for evacuees following an incident at the Indian Point Power Plant. (NUREG-0654, F.)

Recommendation: Rockland County will demonstrate all functions associated with congregate care, including communications.

Corrective Actions Demonstrated: Corrected February 11, 1999 during an out-of-sequence drill demonstrating all functions associated with congregate care at the Rothman Center at Fairleigh Dickinson University in Hackensack, Bergen County New Jersey.

Issue No.: 32-98-05-A-03

Description: Rockland County did not demonstrate the ability to provide emergency worker exposure control at a congregate care center for evacuees following an incident at the Indian Point Power Plant. (NUREG-0654, K.3.)

Recommendation: Rockland County will demonstrate all functions associated with congregate care, including emergency worker exposure control.

Corrective Actions Demonstrated: The requirement for providing emergency worker exposure control does not apply at Congregate Care Centers outside the Plume EPZ. This issue is corrected.

Issue No.: 32-98-19-A-04

Description: Rockland County did not demonstrate the ability to provide congregate care for evacuees following an incident at the Indian Point Power Plant. (NUREG-0654, J.10, 12).

Recommendation: Rockland County will demonstrate all functions associated with congregate care.

Corrective Actions Demonstrated: Corrected February 11, 1999 during an out-of-sequence drill demonstrating all functions associated with congregate care at the Rothman Center at Fairleigh Dickinson University in Hackensack, Bergen County New Jersey.

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

2.3.7 Rockland County - Emergency Worker Decontamination Station (Out-of-Sequence at Rockland County Sewer District on June 19, 2000)

a. **MET:** Objectives 2, 5, and 22

b. **DEFICIENCY:** NONE.

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

d. **NOT DEMONSTRATED:** NONE.

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

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

2.3.8 Rockland County - General Population Bus Runs [2] (Out-of-Sequence at Haverstraw Transit on November 29, 2000 and Clarkstown Central School District on October 17, 2000)

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

b. **DEFICIENCY:** NONE.

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

d. **NOT DEMONSTRATED:** NONE.

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

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

2.3.9 Rockland County - School Bus Run (Out-of-Sequence East Ramapo Central School District on October 5, 2000 and Brega Bus Company on September 28, 2000)

a. **MET:** Objectives 4, 5, and 16

b. **DEFICIENCY:** NONE.

c. **AREAS REQUIRING CORRECTIVE ACTION:**

Issue No.: 75-00-16-A-14

Description: One of the bus drivers at Brega Bus Company was not aware of the fact that teachers are required to be with children on evacuation buses. (NUREG-0654, J.10.g; Guidance Memorandum EV-2, *Protective Actions for School Children*; Rockland County REPP, pp. III-2, III-40, and Procedure DPT-3, *Transportation Providers and Bus Drivers Emergency Response Actions*, Section 5.2 and Attachment 2, *Bus Driver Instructions*.)

Corrective Action Taken: With the concurrence of the controller, the drill play was stopped and the bus driver was informed of this requirement. This issue was successfully addressed and corrected during the out of sequence demonstration in accordance with Strategic Review Initiative 1.5 - *Correct Issues Immediately*, which was effective March 31, 2000. Also, the County Controller agreed this information would be added to Procedure DPT-3, Attachment 2, *Bus Driver Instructions*.

d. **NOT DEMONSTRATED:** NONE.

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

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

2.3.10 Rockland County - School Interviews [5] Out of Sequence at:

- [1] Robin Hill Nursery School, Ramapo Central S.D. on November 28, 2000;
- [2] New City Elementary, Clarkstown Central S.D. on November, 29 2000;
- [3] Cornerstone Christian, East Ramapo S.D. on November 29, 2000;
- [4] Playgarten Preschool, Nyack Public S.D. on November 29, 2000; and
- [5] North Rockland High School, North Rockland Central S.D. on November 29, 2000.

a. MET: Objective 16, EV-2 Questionnaire

[1] **Robin Hill Nursery:** (a private school) - no issues, Objectives Met: 16

[2] **New City Elementary School:** - no issues, Objectives Met: 16

[3] **Cornerstone Christian School:** (a private school) - second interview, no new issues, two prior issues successfully addressed, Objectives Met: 16

Issue No.: 75-00-16-A-15

Description: A school official at the Cornerstone Christian School in Rockland County was not familiar with the school plan on October 17, 2000. In addition, staff training had not been done by Rockland County Office of Emergency Services. (NUREG-0654, J.10.g; Guidance Memorandum EV-2, *Protective Actions for School Children*; *Rockland County REPP*, pp. III-2, III-40, and Procedure SCH-1, *School Emergency Response Actions*.)

Recommendation: Provide training to both the principal and staff of the Cornerstone Christian School on the details and logistics to accomplish all actions needed to protect school children during a radiological event.

Corrective Action Demonstrated: The principal and staff of the school received training on radiological emergency response actions on November 13, 2000 from the Rockland County Office of Emergency Services. This training included a review of the School Emergency Plan. The principal demonstrated her knowledge of the plan on November 29, 2000 and was aware that if she had any questions regarding emergency response actions, she should contact the East Ramapo School District Superintendent, the Rockland County School Coordinator, or the Rockland County Office of Emergency Services.

Issue No.: 75-00-16-A-16

Description: A school official at the Cornerstone Christian School in Rockland County was only able to provide estimated travel times to reach the school reception center, and was unfamiliar with the Evacuation Time on

October 17, 2000. (NUREG-0654, J.10.i; Guidance Memorandum EV-2, *Protective Actions for School Children; Rockland County REPP*, pp. III-2, III-40, and Procedure SCH-1, *School Emergency Response Actions*.)

Recommendation: Review the plan to ensure the Evacuation Time Estimate for the staff of the Cornerstone Christian School is current and travel planning is accurate.

Corrective Action Demonstrated: The principal of the Cornerstone Christian School demonstrated she was familiar with the plan on November 29, 2000 and correctly indicated that the Evacuation Time Estimate for her school is one hour.

[4] Playgarten Preschool – (a private school) - no new issues, three prior issues cleared, Objectives Met: 16

Issue No.: 75-00-16-A-17

Description: Copies of the appropriate plans and procedures were not available for review at the Playgarten Preschool in Rockland County nor were copies of the information that is sent to the parents concerning possible emergency response actions to be taken in event of an incident at the Indian Point NPS available for examination on October 17, 2000. A school official indicated that the school had not been solicited for input to the plans and procedures. (NUREG-0654, J.10.c.,d.,g.; Guidance Memorandum EV-2, *Protective Actions for School Children; Rockland County REPP*, pp. III-2, III-40, and Procedure SCH-1, *School Emergency Response Actions*.)

Recommendation: The Rockland County Office of Fire and Emergency Services should provide the Playgarten Preschool with copies of the appropriate plans and procedures which should be kept at hand for reference in event of an emergency. The school should be solicited for their input on the plans and procedures.

Corrective Action Demonstrated: The director of the Playgarten Preschool in Rockland County had copies of and demonstrated her knowledge of the applicable plans and procedures for a radiological emergency on November 29, 2000. Copies of the Rockland County version of the public information brochure *Planning for Emergencies*; the *Rockland County School Emergency Plans and Procedures*; and letters sent to the parents of all students were available for review. In addition, the director indicated that she would provide any input, or direct questions on the plans to Nyack School District Superintendent, Rockland County Schools Coordinator, or the Rockland County Office of Emergency Services.

Issue No.: 75-00-16-A-18

Description: A school official at the Playgarten Preschool in Rockland County was not sufficiently familiar with the notification procedures in the event of an incident at the Indian Point NPS. Training had not been provided by the Rockland County emergency response agency to school personnel. (NUREG-0654, J.10.c.,d.,g.; Guidance Memorandum EV-2, *Protective Actions for School Children*; *Rockland County REPP*, pp. III-2, III-40, and Procedure SCH-1, *School Emergency Response Actions*.)

Recommendation: The Rockland County Office of Fire and Emergency Services should provide regular training to the director and teachers of the Playgarten Preschool to ensure that they are completely familiar with the notification process and the protective actions to be taken.

Corrective Action Demonstrated: The director of the Playgarten Preschool in Rockland County demonstrated on November 29, 2000 that she was familiar with and understood the notification procedures for a radiological emergency. The Rockland County Office of Emergency Services provided training to the school on November 10 and 24, 2000. The director confirmed that the school staff are now aware of and understand their roles and responsibilities during a radiological emergency.

Issue No.: 75-00-16-A-19

Description: A school official at the Playgarten Preschool in Rockland County indicated on October 17, 2000 that although the teachers would be expected to accompany their classes to the host school, this could not be guaranteed since they might have concerns about their own families that they would feel took precedence over the school children in their care. (NUREG-0654, J.10.g.; Guidance Memorandum EV-2, *Protective Actions for School Children*; *Rockland County REPP*, pp. III-2, III-40, and Procedure SCH-1, *School Emergency Response Actions*.)

Recommendation: The evacuation of school children under the continuous supervision of teachers is a viable and reasonable approach when confronted with a radiological emergency. The Rockland County Office of Fire and Emergency Services should visit the Playgarten Preschool and determine if the teachers would be willing to stay with their classes if they are evacuated to a host school. If they are not, then some alternate remedy should be determined so that the school children will be cared for and protected in event of an evacuation.

Corrective Action Demonstrated: The Rockland County Office of

Emergency Services provided training to the Playgarten Preschool in Rockland County on November 10 and 24, 2000. The director confirmed on November 29, 2000 that the school staff are now aware of and understand their roles and responsibilities during a radiological emergency. She also indicated that she did not anticipate any problems with teachers accompanying children onto the buses.

[5] North Rockland High School - no new issues, six prior issues cleared, Objectives Met: 16

Issue No.: 75-00-16-A-20

Description: School Officials at North Rockland High School did not have a copy of the radiological emergency response plan or procedures readily available on October 17, 2000. They thought the plan was out for revision. (NUREG-0654 J.10.g.; Guidance Memorandum EV-2, *Protective Actions for School Children*; *Rockland County REPP*, pp. III-2, III-40; Procedure SCH-1, *School Emergency Response Actions*.)

Recommendation: Keep the North Rockland High School's radiological emergency response plan in the principal's office and distribute copies to officials responsible for emergency procedures. Copies of the plan should be kept in appropriate administrative areas.

Corrective Action Demonstrated: The principal of the North Rockland High School had a copy of the School Emergency Plan available for reference on November 29, 2000. He indicated a copy will remain in his office at all times and copies will be distributed as appropriate.

Issue No.: 75-00-16-A-21

Description: Two hundred students registered at North Rockland High School drive themselves to school. School officials stated, on October 17, 2000 that in the event of an evacuation the students who drive would be released first to drive themselves off the North Rockland High School Campus. There is no accountability system for students who self-evacuate. (NUREG-0654 J. 10; Guidance Memorandum EV-2, *Protective Actions for School Children*; *Rockland County REPP*, pp. III-2, III-40; Procedure SCH-1, *School Emergency Response Actions*.)

Recommendation: Evacuation of North Rockland High School children should be continuously supervised by their teachers. The plans and procedures should be revised to indicate that all high school students will evacuate together on the buses.

Corrective Action Demonstrated: The issue of permitting the 200 students who bring cars to drive themselves in case of an evacuation was discussed with the North Rockland Central School District Assistant Superintendent and the Rockland County Assistant Director of Emergency Services on October 26, 2000. It was agreed that this practice would be reviewed by the school district. The North Rockland High School was reevaluated on November 29, 2000 and the principal confirmed that all students who drive to school will not be allowed to self evacuate during a radiological emergency. The principal also stated that this policy would be announced over the school public address system in the event of an evacuation.

Issue No.: 75-00-16-A-22

Description: School officials at North Rockland High School reported October 17, 2000 that 86 buses would be needed to evacuate the school. The Rockland County Plan, Procedure DPT-2, *Emergency Transportation*, Attachment 7, page 1, has North Rockland High School requiring 46 buses, indicating a possible shortage. (NUREG-0654 J. 10.g; Guidance Memorandum EV-2, *Protective Actions for School Children; Rockland County REPP*, pp. III-2, III-40; Procedure DPT-2, *Emergency Transportation*, Attachment 7, page 1.)

Recommendation: Determine the correct number of buses needed to evacuate the North Rockland High School and revise the plans and procedures to be consistent. Ensure that the needed resources will be available.

Corrective Action Demonstrated: The North Rockland High School principal confirmed on November 29, 2000 that the radiological emergency plan had been reviewed and that the correct number of buses needed for an evacuation is 46, as stated in the plan.

Issue No.: 75-00-16-A-23

Description: School officials at North Rockland High School indicated on October 17, 2000 that the students would be reloaded onto the same buses they arrive at school in and transported to the School Reception Center. This is inconsistent with the practice of students evacuating by class groups accompanied by their teachers. (NUREG-0654, J.10.g; Guidance Memorandum EV-2, *Protective Actions for School Children; Rockland County REPP*, pp. III-2, III-40; Procedure DPT-2, *Emergency Transportation*, and SCH-1, *School Emergency Response Actions*.)

Recommendation: The North Rockland School District should review its plans and procedures for an evacuation in light of Federal guidance on this subject.

Corrective Action Demonstrated: The issue of evacuating students on the same bus they came to school on was discussed with the North Rockland Central School District Assistant Superintendent and the Rockland County Assistant Director of Emergency Services on October 26, 2000. It was agreed that this practice would be reviewed by the school district. The North Rockland High School was reevaluated on November 29, 2000 and the principal confirmed that the School District would use the same evacuation procedures for a radiological emergency as are used for an early dismissal for a winter storm, which includes busing those students who walk or drive themselves to school. The School District believes this is the safest, quickest and most reliable method for evacuation.

Issue No.: 75-00-16-A-24

Description: School officials at North Rockland High School indicated on October 17, 2000 that they could not guarantee that teachers would accompany students during an evacuation. This was expressed as a possible contractual issue that may not be resolved at this point. School officials also said that the bus driver could provide student supervision. Assigning the task of student supervision to the bus driver is not an acceptable practice for an evacuation. In addition, student supervision while at the school reception center would be minimal when the bus drivers leave to return to Rockland County to assist with additional evacuations. (NUREG-0654, J. 10.g; Guidance Memorandum EV-2, *Protective Actions for School Children*; *Rockland County REPP*, pp. III-2, III-40; Procedure SCH-1, *School Emergency Response Actions*.)

Recommendation: The evacuation of North Rockland High School school children under the continuous supervision of teachers is a viable and reasonable approach when confronted with a radiological emergency. The Rockland County Office of Fire and Emergency Services should visit North Rockland High School and determine if the teachers would be willing to stay with their classes if they are evacuated to a host school. If they are not, then some alternate remedy should be determined so that the school children will be cared for and protected in event of an evacuation, and during a stay at the school reception center.

Corrective Action Demonstrated: The issue of teachers accompanying students in the event of an evacuation was discussed with the North Rockland Central School District Assistant Superintendent and the Rockland County Assistant Director of Emergency Services on October 26, 2000. It was agreed that this would be investigated by the school district. The North Rockland High School was reevaluated on November 29, 2000 and the principal confirmed that the teachers would board the school buses with their students

during a radiological emergency. The principal also noted that there is more than enough coverage available for this since 190 teachers are employed at the high school and only 46 buses are needed for an evacuation.

Issue No.: 75-00-16-A-25

Description: School officials at North Rockland High School were only able to provide estimated travel times to reach the school reception center, and were unfamiliar with the Evacuation Time Estimate on October 17, 2000. (NUREG-0654 J.10.i; Guidance Memorandum EV-2, *Protective Actions for School Children; Rockland County REPP*, pp. III-2, III-40; Procedure SCH-1, *School Emergency Response Actions*.)

Recommendation: Review the plan to ensure that the Evacuation Time Estimate for the North Rockland High School is current and travel planning is accurate.

Corrective Action Demonstrated: The North Rockland High School principal confirmed on November 29, 2000 that the plan has been reviewed and stated correctly that the Evacuation Time Estimate for the high school is one hour.

- b. **DEFICIENCY:** NONE.
- c. **AREAS REQUIRING CORRECTIVE ACTION:** None Outstanding (see above Section a).
- d. **NOT DEMONSTRATED:** NONE.
- e. **PRIOR ARCAs - RESOLVED:** NONE.
- f. **PRIOR ARCAs - UNRESOLVED:** NONE.

2.3.11 Rockland County - Medical Drill, (Out-of-Sequence at Good Samaritan Hospital on April 15, 2000)

- a. **MET:** Objectives 20 and 21
- b. **DEFICIENCY:** NONE.
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE.
- d. **NOT DEMONSTRATED:** NONE.

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

2.4 WESTCHESTER COUNTY

2.4.1 Westchester County - Emergency Operations Center

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

2.4.2 Westchester County - Dose Assessment/Field Team Coordination

- a. MET:** Objectives 5, 7, 9, and 14
- b. DEFICIENCY:** NONE.
- c. AREAS REQUIRING CORRECTIVE ACTION:** NONE.
- d. NOT DEMONSTRATED:** NONE.
- e. PRIOR ARCAs - RESOLVED:** NONE.
- f. PRIOR ARCAs - UNRESOLVED:** NONE.

2.4.3 Westchester County - Field Monitoring Teams

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

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

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

2.4.4 Westchester County - Traffic Control Points [2]: (Out-of-Sequence at field locations (TCPs: Red D-3 and Blue C-4) on November 15, 2000)

a. **MET:** Objectives 4, 5, 14, and 17

b. **DEFICIENCY:** NONE.

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

d. **NOT DEMONSTRATED:** NONE.

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

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

2.4.5 Westchester County - Reception Center (Out-of-Sequence at Valhalla Middle School and High School on November 3, 2000)

a. **MET:** Objectives 4, 5, and 18

b. **DEFICIENCY:** NONE.

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

d. **NOT DEMONSTRATED:** NONE.

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

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

2.4.6 Westchester County - Congregate Care Center (Out-of-Sequence at Valhalla Middle School and High School on November 3, 2000)

- a. MET: Objectives 4 and 19**
- b. DEFICIENCY: NONE.**
- c. AREAS REQUIRING CORRECTIVE ACTION: NONE.**
- d. NOT DEMONSTRATED: NONE.**
- e. PRIOR ARCAs - RESOLVED: NONE.**
- f. PRIOR ARCAs - UNRESOLVED: NONE.**

2.4.7 Westchester County -Emergency Worker Decontamination Station (Out-of-Sequence at Fire Training Center on October 17, 2000)

- a. MET: Objective 22**
- b. DEFICIENCY: NONE.**
- c. AREAS REQUIRING CORRECTIVE ACTION: NONE.**
- d. NOT DEMONSTRATED: NONE.**
- e. PRIOR ARCAs - RESOLVED: NONE.**
- f. PRIOR ARCAs - UNRESOLVED: NONE.**

2.4.8 Westchester County - General Population Bus Runs (Out-of-Sequence at Royal Coach Bus Company and Liberty Lines on November 8, 2000)

- a. MET: Objectives 4, 5, and 15**
- b. DEFICIENCY: NONE.**
- c. AREAS REQUIRING CORRECTIVE ACTION: NONE.**
- d. NOT DEMONSTRATED: NONE.**

e. PRIOR ARCAs - RESOLVED:

Issue No.: 32-98-05-A-05

Description: The Ossining Bus driver was not familiar with the reporting requirements for contamination. He responded 100R not 1, 3, and 5R. (NUREG-0654 K3.b).

Recommendation: Provide additional training on emergency worker exposure control.

Corrective Actions Demonstrated: This ARCA was cleared by providing additional training on emergency worker exposure control and during a subsequent interview of another bus driver on July 24, 1998.

f. PRIOR ARCAs - UNRESOLVED: NONE.

2.4.9 Westchester County - School Bus Runs (Out-of-Sequence at Hendrick Hudson Central School District on November 9, 2000 and at Liberty Lines on November 8, 2000)

a. MET: Objectives 4, 5 and 16

b. DEFICIENCY: NONE.

c. AREAS REQUIRING CORRECTIVE ACTION: NONE.

d. NOT DEMONSTRATED: NONE.

e. PRIOR ARCAs - RESOLVED: NONE.

f. PRIOR ARCAs - UNRESOLVED: NONE.

2.4.10 Westchester County - School Interviews [9] Out-of-Sequence at:

- [1] Assumption School, Peekskill City School District on October 20, 2000;**
- [2] Frank G. Lindsey Elementary School, Hendrick Hudson City School District on October 23, 2000;**
- [3] Walden School, BOCES School District on November 2, 2000;**
- [4] Todd Elementary School, Briarcliff Manor Public School District on October 31, 2000;**
- [5] Pierre VanCortlandt Middle School, Croton Harmon School District on October 26, 2000;**
- [6] Benjamin Franklin Elementary School, Lakeland School District on October 20, 2000;**
- [7] Park Early Childhood Center, Ossining School District on October 23, 2000;**
- [8] West Orchard Elementary School, Chappaqua Central School District on October 31, 2000; and**
- [9] Mildred E. Strang Middle School, Yorktown School District on October 17, 2000.**

- 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.**

2.4.11 Westchester County - Medical Drill, (Out-of-Sequence at Westchester County Medical Center on September 12, 2000)

- a. MET: Objective 20.**
- b. DEFICIENCY: NONE.**
- c. AREAS REQUIRING CORRECTIVE ACTION:**

Issue No.: 75-00-21-A-26

Description: The medical team failed to isolate and control radioactive contamination within the treatment room. The patient was brought on an ambulance gurney into a Radiological Emergency Treatment Area (REA) within

the Westchester County Medical Center and immediately transferred onto a hospital treatment table. The initial radiological scanning of the patient was performed on this table, while the patient was still fully clothed, immediately after his vital signs had been checked and the Demerol had been administered. This scanning revealed radiological contamination was present. The patient was undressed (his clothing was cut away) and rescanned. Radiological contamination was still present. The medical team spent approximately one hour attempting to determine the location and extent of radiological contamination, without success. At this point, the Drill Controller intervened in order to continue the drill and advised the medical team that they had contaminated the treatment area by transferring the patient from the gurney without first undressing him. The Drill Controller also gave the medical team some suggestions on how to properly scan the patient, in order to determine the extent of contamination. (NUREG-0654, L.1; *Westchester County REPP*, Procedure 10, *Emergency Medical Services and Transport of Potentially Contaminated, Injured People*.)

Recommendation: The medical team at the Westchester County Medical Center should be given additional training in techniques to identify and control radioactive contamination.

Schedule of Corrective Actions: This issue will be addressed in an out-of-sequence demonstration to be held prior to December 31, 2001.

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

3. SUPPORT COUNTY

3.1 BERGEN COUNTY

3.1.1 Bergen County - Emergency Operations Center

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

APPENDIX 1

ACRONYMS AND ABBREVIATIONS

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

| | |
|-------|--|
| ANL | Argonne National Laboratory |
| ARCA | Area Requiring Corrective Action |
| ARES | Amateur Radio Emergency Service |
| BCEOC | Bergen County Emergency Operations Center |
| BCFA | Bergen County Field Activities |
| BOCES | Board of Cooperative Educational Services |
| CFR | Code of Federal Regulations |
| DOE | U.S. Department of Energy |
| DOT | U.S. Department of Transportation |
| EAL | Emergency Action Level |
| EAS | Emergency Alert System |
| EMS | Emergency Medical Service |
| EOC | Emergency Operations Center |
| EOF | Emergency Operations Facility |
| EPA | U.S. Environmental Protection Agency |
| EPZ | Emergency Planning Zone |
| ERF | Emergency Response Facility |
| EV-2 | REP School Interview Questionnaire |
| FAA | Federal Aviation Administration |
| FDA | U.S. Food and Drug Administration |
| FEMA | Federal Emergency Management Agency |
| GE | General Emergency |
| HELP | Helicopter Emergency Lift Program |
| INEL | Idaho National Engineering Laboratory |
| IPNPS | Indian Point Nuclear Power Station |
| JNC | Joint News Center |
| MIDAS | Meteorology Information and Dose Assessment System |

| | |
|------------|---|
| NOUE | Notification of Unusual Event |
| 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 |
| OCEOC | Orange County Emergency Operations Center |
| OCFA | Orange County Field Activities |
| ORO | Offsite Response Organization |
| PCEOC | Putnam County Emergency Operations Center |
| PEARL | Putnam County Emergency Amateur Repeater League |
| PIO | Public Information Officer |
| PMC | Personnel Monitoring Center |
| PSC | New York State Public Service Commission |
| RAC | Regional Assistance Committee |
| RACES | Radio Amateur Civil Emergency Service |
| RCEOC | Rockland County Emergency Operations Center |
| RCFA | Rockland County Field Activities |
| REA | Radiological Emergency Treatment Area |
| RECS | Radiological Emergency Communications System |
| REP | Radiological Emergency Preparedness |
| REPP | Radiological Emergency Preparedness Plan |
| RERP | Radiological Emergency Response Plan |
| SAE | Site Area Emergency |
| SEMO | New York State Emergency Management Office |
| SEOC | State Emergency Operations Center |
| TCP | Traffic Control Point |
| TDD | Telephone Device for the Deaf |
| TEDE | Total Effective Dose |
| TL | Team Leader |
| USDA | U.S. Department of Agriculture |
| WCEOC | Westchester County Emergency Operations Center |
| WCFA | Westchester County Field Activities |

APPENDIX 2

EXERCISE EVALUATORS AND TEAM LEADERS

The following is a list of the personnel who evaluated the Indian Point 3 exercise on November 15, 2000. 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 |
| DOT | - Department of Transportation |
| USDA | - US Department of Agriculture |
| NRC | - Nuclear Regulatory Commission |
| EPA | - Environmental Protection Agency |
| ANL | - Argonne National Laboratory |
| INEEL | - Idaho National Environmental and Engineering Laboratory |

| <u>EVALUATION SITE</u> | <u>EVALUATOR</u> | <u>ORGANIZATION</u> |
|-------------------------------|------------------|---------------------|
| Exercise Oversight | Robert Reynolds | FEMA |
| New York State: | | |
| Emergency Operations Center | B. Poole (TL) | FEMA |
| Emergency Operations Center | C. Herzenberg | ANL |
| Emergency Operations Center | A. Lookabaugh | ANL |
| Emergency Operations Center | M. Meshenberg | ANL |
| Emergency Operations Facility | B. Bores (TL) | NRC |
| Emergency Operations Facility | N. Chipman | INEEL |
| Emergency Operations Facility | R. Rospenda | ANL |
| Joint News Center | M. Beeman (TL) | FEMA |
| Joint News Center | C. McCoy | ANL |
| Joint News Center | P. Tenorio | FEMA |
| Joint News Center | S. O'Neill | FEMA |
| WABC | B. Young | ANL |

EVALUATION SITE**EVALUATOR****ORGANIZATION****Orange County, New York:**

| | | |
|-----------------------------|-------------------|-------|
| Emergency Operations Center | K. McCarroll (TL) | FEMA |
| Emergency Operations Center | B. Swartz | FEMA |
| Emergency Operations Center | J. Sutton | FEMA |
| Emergency Operations Center | J. Keller | ANL |
| Field Monitoring Team | J. Gibeault | INEEL |
| Field Monitoring Team | J. Staroba | ANL |
| Traffic Control Point | C. Bebrich | ANL |

Orange County - Out-of-Sequence:

| | | |
|-----------------------------------|------------|------|
| Reception Center | J. Keller | ANL |
| Congregate Care Center | S. O'Neill | FEMA |
| Emergency Worker PMC | T. Carroll | ANL |
| General Population Bus Runs | R. Thomson | ANL |
| School Bus Runs | C. McCoy | ANL |
| School Interview - Highlands S.D. | R. Thomson | ANL |
| Medical Drill (MS-1) | T. Carroll | ANL |

Putnam County, New York:

| | | |
|-----------------------------|---------------|------|
| Emergency Operations Center | J. Young (TL) | FEMA |
| Emergency Operations Center | R. Jennings | FEMA |
| Emergency Operations Center | J. Muzzarelli | ANL |
| Emergency Operations Center | F. Wilson | ANL |
| Field Monitoring Team | J. Jacobson | ANL |
| Field Monitoring Team | P. Kier | ANL |
| Traffic Control Point | A. Teotia | ANL |

Putnam County - Out-of-Sequence:

| | | |
|---|--------------|------|
| Reception Centers | T. Carroll | ANL |
| Congregate Care Center | T. Carroll | ANL |
| Emergency Worker PMC | C. McCoy | ANL |
| General Population Bus Runs - Royal Coach | K. Reed | FEMA |
| General Population Bus Runs - P. Valley | K. McCarroll | FEMA |
| School Bus Runs - Mahopac | B. Hasemann | FEMA |
| School Bus Runs - Haldane | K. Reed | FEMA |
| School Interview - Garrison S.D. | R. Ohlsen | FEMA |
| School Interview - Putnam Valley Central S.D. | R. Ohlsen | FEMA |
| School Interview - Haldane Central S.D. | R. Ohlsen | FEMA |
| Medical Drill (MS-1) | R. Acerno | FEMA |

| <u>EVALUATION SITE</u> | <u>EVALUATOR</u> | <u>ORGANIZATION</u> |
|---|-------------------------|----------------------------|
| Rockland County, New York: | | |
| Emergency Operations Center | K. Reed (TL) | FEMA |
| Emergency Operations Center | A. Davis | FEMA |
| Emergency Operations Center | R. Thomson | ANL |
| Emergency Operations Center | R. Converse | ANL |
| Emergency Operations Center | D. Blunt | ANL |
| Field Monitoring Team | J. Flynn | ANL |
| Field Monitoring Team | B. Gasper | ANL |
| Traffic Control Point | T. Green | ANL |
| Rockland County - Out-of-Sequence: | | |
| Reception Center | T. Carroll | ANL |
| Congregate Care Center | T. Carroll | ANL |
| Congregate Care Center | K. Reed | FEMA |
| Emergency Worker PMC | C. McCoy | ANL |
| General Population Bus Run - Haverstraw | R. Thomson | ANL |
| General Population Bus Run - Clarkstown | R. Thomson | ANL |
| School Bus Run - East Ramapo | C. McCoy | ANL |
| School Bus Run - East Ramapo | K. Reed | FEMA |
| School Bus Run - Brega | C. McCoy | ANL |
| School Interview - Nyack S.D. | R. Reynolds | FEMA |
| School Interview - Nyack. S.D. | R. Thomson | ANL |
| School Interview - Clarkstown S.D. | R. Reynolds | FEMA |
| School Interview - Clarkstown S.C. | K. Reed | FEMA |
| School Interview - North Rockland S.D. | R. Reynolds | FEMA |
| School Interview - North Rockland S.D. | K. Reed | FEMA |
| School Interviews - East Ramapo S.D. | B. Hasemann | FEMA |
| School Interviews - Ramapo S.D. | B. Hasemann | FEMA |
| Medical Drill (MS-1) | T. Carroll | ANL |
| Westchester County, New York: | | |
| Emergency Operations Center | B. Hasemann (TL) | FEMA |
| Emergency Operations Center | D. Newsom | ANL |
| Emergency Operations Center | D. Petta | DOT |
| Emergency Operations Center | B. Salmonson | INEEL |
| Field Monitoring Team | J. Eng | EPA |
| Field Monitoring Team | R. Graham | USDA |
| Traffic Control Points | T. Carroll | ANL |

EVALUATION SITE**EVALUATOR****ORGANIZATION****Westchester County - Out-of-Sequence:**

| | | |
|---|-------------|------|
| Reception Center | C. McCoy | ANL |
| Congregate Care Center | C. McCoy | ANL |
| Emergency Worker PMC | T. Carroll | ANL |
| General Population Bus Run – Royal Bus Co. | B. Hasemann | FEMA |
| General Population Bus Run – Liberty Lines | B. Hasemann | FEMA |
| School Bus Run - Hendrick Hudson C.S.D. | K. Reed | FEMA |
| School Bus Run - Liberty Lines | B. Hasemann | FEMA |
| School Interview – Peekskill City S.D. | B. Hasemann | FEMA |
| School Interview – Hendrick Hudson C.S.D. | B. Hasemann | FEMA |
| School Interview - BOCES S.D. | C. McCoy | ANL |
| School Interview – Briarcliff Manor Public S.D. | C. McCoy | ANL |
| School Interview – Croton Harmon S.D. | C. McCoy | ANL |
| School Interview – Lakeland S.D. | B. Hasemann | FEMA |
| School Interview – Ossining S.D. | B. Hasemann | FEMA |
| School Interview – Chappaqua S.D. | C. McCoy | ANL |
| School Interview – Yorktown S.D. | T. Carroll | ANL |
| Medical Drill (MS-1) | T. Carroll | ANL |

Bergen County, New York:

| | | |
|-----------------------------|-----------|------|
| Emergency Operations Center | S. Nelson | ANL |
| Emergency Operations Center | P. Malool | FEMA |

APPENDIX 3

EXERCISE OBJECTIVES AND EXTENT-OF-PLAY AGREEMENT

This appendix lists the exercise objectives which were scheduled for demonstration in the Indian Point 3 exercise on November 15, 2000 and the extent-of-play agreement approved by FEMA Region II on August 2, 2000.

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.

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.

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

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

OBJECTIVE 3: DIRECTION AND CONTROL

Demonstrate the capability to direct and control emergency operations.

OBJECTIVE 4: COMMUNICATIONS

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

OBJECTIVE 5: EMERGENCY WORKER EXPOSURE CONTROL

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

OBJECTIVE 6: FIELD RADIOLOGICAL MONITORING - AMBIENT RADIATION MONITORING

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

OBJECTIVE 7: PLUME DOSE PROJECTION

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

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.

OBJECTIVE 9: PLUME PROTECTIVE ACTION DECISION MAKING

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

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.

OBJECTIVE 11: PUBLIC INSTRUCTIONS AND EMERGENCY INFORMATION

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

OBJECTIVE 12: EMERGENCY INFORMATION - MEDIA

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

OBJECTIVE 13: EMERGENCY INFORMATION - RUMOR CONTROL

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

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.

OBJECTIVE 15: IMPLEMENTATION OF PROTECTIVE ACTIONS - SPECIAL POPULATIONS

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

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.

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.

**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.

OBJECTIVE 19: CONGREGATE CARE

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

OBJECTIVE 20: MEDICAL SERVICES - TRANSPORTATION

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

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.

**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.

B. Extent-of-Play Agreement

The extent-of-play agreement on the following pages was submitted by the State of New York, and was approved by FEMA Region II on August 2, 2000, in preparation for the Indian Point 3 exercise on November 15, 2000. 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.

OBJECTIVES AND EXTENT-OF-PLAY FOR THE NOVEMBER 15, 2000 INDIAN POINT PLUME EXPOSURE PATHWAY EXERCISE

OBJECTIVE #1: MOBILIZATION OF EMERGENCY PERSONNEL

Demonstrate the ability to fully alert and mobilize personnel for both emergency facilities and field operations.

Locations Observed: SEOC, JNC, EOF, WCEOC, RCEOC, PCEOC, OCEOC, BCEOC, WCFA, RCFA, PCFA, and OCFA.

ARCAs: None

EXTENT OF PLAY

1. WARNING POINTS

During this exercise, the following six (6) Warning Points will be notified:

- New York State
- Westchester County
- Rockland County
- Orange County
- Putnam County
- City of Peekskill

Demonstrations will include:

- Telephone calls from the utility via the RECS lines including the notification times and call verification procedures. Back-up systems will be utilized in the event of primary systems failure.
- Notification of the designated agency representatives in accordance with the plan/procedures.
- Coordination with the EOC.

It should be understood that the call lists may change on a weekly basis. The latest quarterly revision call lists will be provided to FEMA one (1) week before the exercise or at the Federal/State evaluators briefing session the day before the exercise. The lists will contain the business telephone numbers only. Home telephone numbers and pager numbers are available at the EOC.

There will be no free play messages introduced at Warning Points.

Extent-of-Play Agreement:

- **ECL notifications from the licensee are not verified.**

2. EOCs

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

Demonstrations will include:

- Notification of staff;
- Timeliness of activation; and
- Bergen County's coordination with Rockland EOC – Activation and operation of Bergen EOC in accordance with host plan.

Extent-of-Play Agreement:

- **State liaisons will be pre-positioned in the area and will arrive at respective EOCs no sooner than 45 minutes after Alert declaration or higher is received over RECS line. Utility technical liaisons will be pre-positioned in the area and will arrive at respective EOCs no sooner than 30 minutes after being requested by the respective counties.**
- **An automatic dialing system will be used by Orange County to notify the response organization.**
- **ECL notifications from the licensee are not verified.**

3. EOF

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

Demonstrations will include:

- Notification of staff; and
- Timeliness of activation.

Extent-of-Play Agreement:

- State liaisons will be pre-positioned in the area and will arrive at EOF no sooner than 45 minutes after Alert declaration or higher is received over RECS line.
- County liaisons will arrive at EOF no sooner than 30 minutes after Alert declaration or higher is received over RECS line.

4. JNC

All activities associated with the activation and operation of 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 the JNC procedures.

Extent-of-Play Agreement:

- State JNC Staff will arrive no sooner than 45 minutes after Alert declaration or higher is received by State and County over the RECS line. County JNC staffs will arrive no sooner than 30 minutes after the first ECL declaration (NUE or higher) is received over RECS line.

OBJECTIVE #2: FACILITIES: ACTIVATION, EQUIPMENT, AND DISPLAYS

Demonstrate the adequacy of facilities and their equipment, displays, and other materials to support emergency operations. Demonstrate the ability to activate and staff emergency facilities for emergency operations.

Locations Observed: SEOC, EOF, JNC, WCEOC, RCEOC, PCEOC, OCEOC BCEOC, WCFA, RCFA, PCFA, OCFA, and BCFA.

ARCAs: None

EXTENT-OF-PLAY

Extent-of-Play Agreement:

- Back-up power is available for the State and four county EOCs only.
- 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 and access control points are not applicable to the JNC.

- Displays 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

Demonstrate the ability to direct and control emergency operations.

Locations Observed: SEOC, WCEOC, RCEOC, PCEOC, OCEOC, BCEOC.

ARCAs: None

EXTENT-OF-PLAY

1. EOCs

Demonstrations will include:

- Decision making;
 - Coordination with other counties and state;
 - Notification of public (sirens and EAS messages); and
 - 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:

- Directed coordination with other jurisdictions applies to the State and four counties only.

OBJECTIVE #4: COMMUNICATIONS

Demonstrate the ability to communicate with all appropriate organizations and field personnel.

Locations Observed: SEOC, EOF, JNC, WCEOC, RCEOC, PCEOC, OCEOC, BCEOC, WCFA, RCFA, PCFA, OCFA, and BCFA.

ARCAs: None

EXTENT-OF-PLAY

Primary communication systems:

- Radiological Emergency Communication System (RECS) Line – connects utility with the State and four counties;
- Executive Hotline – connects the State with four counties (conferencing capability);
- Commercial telephones – connect agency representatives at the EOC with their staff in the field, including the EOF and JNC; and
- Radios – connect the dose assessment staff with the field teams.

Back-up communication systems:

- Amateur Radio (RACES)

Extent-of-Play Agreement:

- **The use of RACES as a back-up to commercial telephones or radios will be demonstrated at the State and four county EOCs only.**

OBJECTIVE #5: EMERGENCY WORKER EXPOSURE CONTROL

Demonstrate the ability to continuously monitor and control emergency worker exposure.

Location Observed: SEOC, WCEOC, PCEOC, OCEOC, RCEOC, WCFA, RCFA, PCFA, and OCFA.

ARCAs: None

EXTENT-OF-PLAY

Extent-of-Play Agreement:

- A TLD will be used as a non-self reading dosimeter.
- County plans specify the use of 0-5R and 0-200R direct reading dosimeters.
- According to the plans, there are no maximum authorized mission exposure limits. Emergency workers should be aware of their reporting requirements (1R, 3R, 5R) to their supervisor.
- Direct reading dosimeters are read every 15-30 minutes.
- According to the plans, supervisors should contact their emergency workers regarding KI administration.

OBJECTIVE #6: FIELD RADIOLOGICAL MONITORING – AMBIENT RADIATION MONITORING

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

Locations Observed: WCEOC, RCEOC, PCEOC, OCEOC, WCFA, RCFA, PCFA, and OCFA.

ARCAs: None

EXTENT-OF-PLAY

FIELD MONITORING TEAMS

Each county in the plume exposure EPZ will dispatch two (2) radiological monitoring teams. Each team will be supplied with a controller. The controllers will have simulated field data, which is to be provided to the field teams to determine local dose rate readings consistent with the scenario. Each team should have the necessary equipment to determine both actual area gamma dose rates, presence of beta radiation and airborne radioiodine concentrations.

The monitoring teams will not be suited up in anti-contamination clothing. However, the clothing will be available for inspection.

Extent-of-Play Agreement:

- For those counties not affected by the plume, field monitoring teams may not be able to demonstrate all capabilities listed in the Points of Review, Exercise Evaluation Methodology – Objective 6. However, those teams may still be asked to demonstrate all capabilities necessary to satisfy the above objective.
- The instruments that are used for field monitoring are the RO-2A (Gamma and Beta-mR/hr or R/hr) and RM-14 (Gamma and Beta – CPM).
- An equipment inventory list is available at dispatch location.
- The RO-2A and RM-14 do not have installed check sources. Instruments are not labeled with calibration curves or exposure rate correction factors.
- Prior to deployment, field teams are briefed on:
 - PARs
 - Release Status
 - ECLs
 - Meteorological Conditions
- The primary mission of county field teams is to validate the initial PARs once a release occurs (e.g., monitoring ERPA boundaries). Licensee teams define the plume centerline and edges. Secondly, county teams may verify the plume definition if requested by their respective EOC.
- Field monitoring data is shared at the EOF.
- County field teams report exposure rate measurements to EOCs.

OBJECTIVE #7: PLUME DOSE PROJECTION

Demonstrate the ability to project dosage to the public via the plume exposure pathway, based on plant status and field data.

Locations Observed: SEOC, WCEOC, RCEOC, PCEOC, and OCEOC.

ARCAs: None

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 function rests with the following individuals:

- New York State - Director, Bureau of Env. Radiation Protection
- Westchester County - Dose Assessment Emergency Director
- Rockland County - Dose Assessment Team Leader
- Orange County - Radiological Officer
- Putnam County - Radiological Officer

The dose assessment team should direct the field teams to locations consistent with its initial projections of the plume location. The dose assessment team should then make determinations of the actual plume based on parameters such as its boundaries and center line. Center line data may be provided by the utility field teams.

Plume dose projections should be used to develop protective action recommendations which could modify or expand upon the PARs made originally. Thus the dose assessment team should have the capability to provide the results of dose projection activities to the County Executive responsible for protective action decision making in a manner and with a time frame that supports such 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; and
- Plant conditions.

Extent-of-Play Agreement:

- There will be **no** actual packaging or transport of sample to the laboratory. EOC staff will be questioned regarding means of transportation of air samples to a central point and the location of the laboratory.
- Utility recommendations are displayed at the EOF. In the counties, dose assessment personnel compare the utility recommendations to their own assessment.
- Whole body gamma dose projections are expressed at "TEDE" and iodine inhalation dose projections are expressed as "TODE" as specified in the plans.
- Licensee field teams will provide maximum gamma exposure rates from plume crossings at the EOF.
- A scenario dependent noble gas/iodine ratio is used to translate gamma exposure rate measurements from the plume into radiological concentrations.

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} (.0000001) microcuries per cubic centimeter in the presence of noble gases and obtain samples of particulate activity in the airborne plume.

Locations Observed: WCFA, RCFA, PCFA, and OCFA.

ARCAs: None

EXTENT-OF-PLAY

FIELD MONITORING TEAMS

Each county in the plume exposure EPZ will dispatch two (2) radiological monitoring teams. Each team will be supplied with a controller. The controllers will have simulated field data, which is to be provided to the field teams to determine local dose rate readings consistent with the scenario. Each team should have the necessary equipment to determine both actual area gamma dose rates, presence of beta radiation and airborne radioiodine concentrations. However, each team will have a Federal evaluator. The monitoring teams will not be suited up in anti-contamination clothing. However, the clothing will be available for inspection. Each team will take at least two air samples.

Extent-of-Play Agreement:

- For those counties not affected by the plume, field monitoring teams may not be able to demonstrate all capabilities listed in the Points of Review, Exercise Evaluation Methodology – Objective 8. However, those teams may still be asked to demonstrate all capabilities necessary to satisfy the above objective.
- The use of silver zeolite cartridges will be simulated and charcoal cartridges will be used. However, the silver zeolite cartridges should be available at dispatch point of kit.
- There will be no actual packaging or transport of samples to the laboratory. EOC staff will be questioned only regarding means of transportation of air samples to a central point and the location of the laboratory. Field teams will demonstrate how to obtain air samples during the exercise and will be questioned only regarding the procedures for the pick-up point of air samples.
- The RO-2A and RM-14 do not have installed check sources. Instruments are not labeled with calibration curves or exposure rate correction factors.
- County field teams are dispatched by their respective EOC's.
- Licensee field teams take air samples in sufficient gamma exposure rate areas.
- County field teams take a gamma exposure rate measurement during the taking of each air sample.

OBJECTIVE #9: PLUME PROTECTIVE ACTION DECISION MAKING

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

Locations Observed: SEOC, WCEOC, RCEOC, PCEOC, and OCEOC.

ARCAs: None

EXTENT-OF-PLAY

At the EOC, personnel within the dose assessment group should be aware of the procedures regarding the distribution of KI and the individual responsible for authorizing the administration of KI. At each EOC, the following officials or their designees should have an on-going discussion regarding the need to authorize the administration of KI:

- New York State - Disaster Preparedness Commission Chairman and Commissioner of Health
- Westchester County - Commissioner of Health and the County Executive
- Rockland County - Commissioner of Health and County Executive
- Orange County - Commissioner of Health and County Executive
- Putnam County - Public Health Director and Radiological Officer

Extent-of-Play Agreement:

- All protective action decisions will be coordinated among the counties and 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

Demonstrate the ability to alert and notify the public within the 10 mile EPZ and begin dissemination of instructional messages within 15 minutes of each decision by appropriate State or local officials.

Locations Observed: SEOC, JNC, WCEOC, RCEOC, PCEOC, and OCEOC.

ARCAs: None

EXTENT-OF-PLAY

PUBLIC NOTIFICATION

During the exercise there will be no actual siren sounding and no broadcasting of EAS messages.

However, Federal evaluators will expect to see actual demonstration of all the actions (steps) leading to siren sounding and broadcasting the EAS messages within 15 minutes following the decision to alert and notify the public and to issue protective action recommendations. There will be no physical activation of siren control systems.

It is required that all EAS messages be actually drafted and ready for broadcasting within 15 minutes following each decision that requires an EAS message. The broadcast from the JNC to the radio station is a remote pick-up, live broadcast.

Recommendations such as park/school closings do not require an EAS message, but rather a news release. For the simulated siren activations, the activation times will be coordinated over the Executive Hotline.

Activities to be simulated:

- Airing of one EAS message will be simulated. The JNC is only required to make two (2) contacts with the EAS station for each EAS message to get credit:
 - During EAS message formulation, contact radio station and place it on stand-by; and
 - Call again with EAS message **(the clock will be stopped after the announcer says the first three (3) words of the talk-up).**

Contact with the radio station for subsequent EAS messages will be simulated.

During the exercise, back-up route alerting (EOC discussion) is to be simulated after a siren failure message is inserted.

Extent-of-Play Agreement:

- As specified in the plans, there is no primary or supplementary route alerting.
- There are no exception areas that require supplementary route alerting.
- There will be no actual telephone calls to individuals or institutions.
- Mobile alerting units and vehicles will not be deployed.
- The siren system does not include a public address system capability.
- As specified in the plans, NOAA weather radio is not part of the initial notification.
- TDD is used in Rockland County only.

- All protective action decisions will be coordinated among the State and four counties over the Executive Hotline.
- If the radio station refuses to voluntarily cooperate during the 11/15/00 exercise, this action would not negatively impact the evaluation of the exercise.

OBJECTIVE #11: PUBLIC INSTRUCTIONS AND EMERGENCY INFORMATION

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

Locations Observed: SEOC, JNC, WCEOC, RCEOC, PCEOC, and OCEOC.

ARCAs: None

EXTENT-OF-PLAY

JNC

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

- Ability to coordinate PADs with respective EOCs;
- Ability to formulate clear and accurate EAS messages;
- Ability to initiate the EAS messages (simulated) within prescribed 15 minute timeframe; and
- 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.
- The County Executives authorize release of EAS messages.
- Pre-scripted EAS messages are contained in the JNC procedures.
- As specified in the JNC procedures, EAS messages may not be re-broadcast.
- EAS messages and "Special News Broadcasts" address the topics specified in FEMA memorandum "Guidance for providing emergency information and instructions to the public for radiological emergencies using the new Emergency Alert System (EAS)" dated February 2, 1999.
- 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

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

Location Observed: JNC

ARCAs: None

EXTENT-OF-PLAY

JNC

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

- Ability to operate facility in accordance with the JNC procedures;
- Ability to formulate clear and accurate news releases; and
- 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 the licensee.
- News releases address the topics specified in FEMA memorandum "Guidance for providing emergency information and instructions to the public for radiological emergencies using the new Emergency alert System (EAS)" dated February 2, 1999.

OBJECTIVE #13: EMERGENCY INFORMATION – RUMOR CONTROL

Demonstrate the ability to establish and operate rumor control in a coordinated and timely fashion.

Location Observed: JNC

ARCAs: None

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. Demonstrations will include:

- The 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 Site Area Emergency and General Emergency levels. At least 5 false or misleading rumors will be included for which measures should be taken. According to JNC procedures, there are 12 telephones available. During the exercise, rumor control will be staffed by at least six operators with one supervisor.
- Rumor control staff at the JNC monitors radio and television broadcasts for false or misleading rumors.

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

Demonstrate the ability and resources to implement KI protective actions for emergency workers, institutionalized persons and the general public, if the State plan so specifies.

Locations Observed: SEOC, WCEOC, RCEOC, PCEOC, OCEOC, WCFA, RCFA, PCFA, and OCFA

ARCAs: None

EXTENT-OF-PLAY

KI ADMINISTRATION

The decision making process on whether or not to administer KI to emergency workers will be demonstrated.

There will be an adequate supply of KI 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 along with their dosimetry equipment before dispatch to the field. Emergency workers will be aware of how and where to obtain KI and that only a supervisor can authorize on the consumption of KI.

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

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

Locations Observed: WCEOC, RCEOC, PCEOC, OCEOC, WCFA, PCFA, and OCFA.

ARCAs: None

EXTENT-OF-PLAY

SPECIAL POPULATION BUS COMPANY INTERVIEWS (for General Public)

All bus company interviews are to be demonstrated out-of-sequence with the exercise scenario.

Two designated bus companies per EPZ county will be interviewed. See offsite extent of play activities schedule.

Each company will provide a dispatcher and two drivers.

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

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 the appropriate procedures. The bus driver will be questioned about the location of pickup points and the location of the appropriate reception center designated in the route maps/directions.

Demonstrations will include:

- Bus dispatchers understand and follow activation procedures for drivers;
- Bus drivers receive an information packet specific to his/her route; and
- Bus driver's knowledge of the prescribed route, including pick-up points, dosimetry, KI and location of reception center.

Extent-of-Play Agreement:

- During the November 15, 2000 exercise, there will be initial contact only with the bus company(ies) (telephone call) by the Transportation Coordinator. The Coordinator will perform all other actions in accordance with the plan.

NOTIFICATION OF HEARING IMPAIRED

During the November 15, 2000 exercise, the hearing impaired list will be available for inspection at each respective EOC. The list will be reviewed, but not retained by the Federal evaluator.

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

- Notification procedures; and
- Means of notification.

Extent-of-Play Agreement:

- There will be no actual notification of hearing impaired individuals during the exercise.
- TDD will be demonstrated in Rockland County only.

EVACUATION OF NON-INSTITUTIONALIZED MOBILITY IMPAIRED INDIVIDUALS

During the November 15, 2000 exercise, the list of non-institutionalized mobility impaired individuals will be available for inspection at each respective EOC. The lists will be reviewed, but not retained by the Federal evaluator.

The responsible agency in each County will describe through discussion the following:

- Notification procedures;
- Type of disability and transportation resource requirements; and
- Availability of appropriate transportation for their 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 actual contact of mobility impaired individuals identified on the list.

OBJECTIVE #16: IMPLEMENTATION OF PROTECTIVE ACTIONS – SCHOOLS

Demonstrate the ability and resources necessary to implement protective actions for school children within the plume EPZ.

Locations Observer: WCEOC, RCEOC, PCEOC, OCEOC, WCFA, RCFA, PCFA, and OCFA.

ARCAs: None

EXTENT-OF-PLAY

SCHOOL EVACUATION BUS COMPANY INTERVIEWS

All bus company interviews are to be demonstrated out-of-sequence with the exercise scenario. Two designated bus companies per EPZ county will be interviewed. Each company will provide a dispatcher and one driver 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 the briefing of drivers.

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 the appropriate 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 after briefing by dispatcher.

Demonstrations will include:

- Bus dispatchers understand and follow activation procedures for drivers;
- Bus drivers receive an information packet specific to his/her route; and
- Bus drivers knowledge of the location of the school to be evacuated, dosimetry, KI and location of school reception center.

Extent-of-Play Agreement:

- During the November 15, 2000 exercise there will be initial contact only with the bus company(ies) (telephone call) by the Transportation Coordinator. The Coordinator will perform all other actions in accordance with the plan.
- Protective actions for schools are decided upon by the County Executive or his/her designee.
- Parents are notified of school cancellations/early dismissals in accordance with each school district/school's policy.

- **Sheltering of students is performed in accordance with each school district/school's policy.**
- **Bus dispatchers communicate with bus drivers en route.**

SCHOOL INTERVIEWS

In each of the four 10 mile plume exposure pathway EPZ counties, one school per school district will be interviewed. Only those schools that lie within the EPZ will be visited.

Interviews will be conducted out of sequence prior to the exercise. The interviews are all to be arranged by each county. The interviews will utilize the EV-2 checklist.

The interviews will demonstrate the following:

- Availability of written plans and procedures;
- How parents are kept informed about the plans, procedures and reception centers; and
- Chain of command that would be involved during an evacuation.

Total number of schools to be interviewed:

- Westchester County – 9 schools
- Rockland County – 5 schools
- Orange County – 1 school
- Putnam County – 3 schools

The school contact telephone numbers will be available for inspection at the time of the interview.

These interviews will take place according to the offsite extent of play activities schedule.

OBJECTIVE #17: TRAFFIC AND ACCESS CONTROL

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

Locations Observed: WCEOC, RCEOC, PCEOC, OCEOC, WCFA, RCFA, PCFA, and OCFA.

ARCAs: None

EXTENT-OF-PLAY

TRAFFIC AND ACCESS CONTROL POINTS (TCPs and ACPs)

During the November 15, 2000 exercise, law enforcement officials will discuss how to activate TCPs/ACPs in the field in mutually agreed upon locations. There will be two interviews of law enforcement officials per EPZ county.

Each designated law enforcement agency will provide a dispatcher and one officer. The State Controller will select a TCP/ACP assigned to that agency and provide this information via a free play message to the dispatcher for the briefing of the TCP/ACP officer.

During the interview, the law enforcement officials should be prepared to discuss the following:

- How promptly TCPs/ACPs could be staffed (from time of notifications);
- Whether the officers are equipped with dosimetry and know how often they have to read and record the values as appropriate (may not apply to all ACP);
- Whether the officers were supplied with KI and are familiar with KI procedures and that only a supervisor can authorize the consumption of KI (may not apply to all ACPs);
- Location of Reception Centers (does not apply to ACPs).

Extent-of-Play Agreement:

- **The Coast Guard, Metro-North, Amtrak and FAA are notified by Westchester County.**

IMPEDIMENTS TO EVACUATION

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

Each of the four 10 mile plume exposure pathway EPZ counties is to demonstrate the organizational ability to deal with two (2) impediments to evacuation.

State Controllers in the county EOCs will hand the free play messages to the County Emergency Management Director or his designee for action to test the procedures for the removal of traffic impediments.

The EOC staff needs to be able to assess the significance of impediments, re-route the traffic (if appropriate), identify the resources that are required for its removal (e.g., tow trucks, public works equipment, etc.), discuss how dosimetry will be provided to workers in the EPZ, estimate the time of arrival of resource to the scene and estimate the time for clearing the impediments. The list of resource providers will be available at the EOC.

Extent-of-Play Agreement:

- **No equipment will be deployed to the field.**
- **This demonstration will not involve the actual contact of resource providers or dispatch of a police or other emergency vehicle to the scene of a simulated accident.**

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 Observed: WCFA, RCFA, OCFA, and PCFA.

ARCAs: None

EXTENT-OF-PLAY

All facilities are to be demonstrated prior to the November 15, 2000 exercise, out of sequence with the exercise with the exercise scenario.

One (1) reception center is to be opened for evacuees in each of the four counties in accordance with respective local emergency response plans. Because of logistics and the need to arrange access to facilities before a demonstration, reception centers have been preselected. See off-site extent of play activities schedule.

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

- Arrival of staff;
- Setting-up;
- Operation.

Westchester, Rockland, Orange, and Putnam Counties will use hand held monitoring and portal monitors to demonstrate the 1/3 of one shift monitoring capability.

Support staff will be demonstrated as tabulated below. Procedures and techniques for monitoring evacuees will be demonstrated. Staff will be provided to simulate evacuees.

| Number of Persons for Initial Monitoring | | | | |
|--|-----------------|-----------------|-----------------|-----------------|
| Category | Orange Co. | Rockland Co. | Westchester Co. | Putnam Co. |
| Radiological Monitors for initial monitoring | 2 See Note 1 | 3 See Note 4 | 3 See Note 4 | 2 See Note 1 |
| Recorders | 1 See Note 1 | See Note 2 | 2 | See Note 3 |
| No. of Portal Monitors | 1 | 2 | 2 | 1 |

Note 1: One monitor for portal monitoring; one monitor for hand held monitoring.

Note 2: Evacuees will be monitored, then either given a "clean" card or directed to decontamination area.

Note 3: Evacuees will be monitored, then either hand-stamped clean or directed to decontamination area.

Note 4: Two monitors for portal monitoring, one monitoring for hand held monitoring.

At a minimum, the additional monitoring personnel will include:

- 4 monitors for decontamination (2 male and 2 female)
- 1 monitor for vehicle monitoring
- 1 monitor for vehicle decontamination

With regard to registrars (social services), the following staffing will be present at a minimum:

- 1 individual, Orange County
- 2 individuals, Rockland County
- 1 individual, Putnam County
- 2 individuals, Westchester County

Organizational ability and resources to determine compliance with the 20% planning basis for a 12-hour period including:

- adequate space;
- adequate instrumentation;
- adequate staffing by rosters (remaining monitors);
- ninety seconds/person monitoring speed using hand held monitoring;
- thirty seconds/person monitoring speed using portal monitor

Two people/minute = 120/hr = 1440/12 hrs.

Each vehicle monitor will process two (2) vehicles. All facilities to be evaluated should be set up, as they would be in an actual emergency, with all route markings and contamination control measures in place. Facilities and equipment for decontamination will be in place for

evaluator “walk throughs”, and decontamination procedures will be explained. There will be only a representative (small) sample of supplies available at each facility.

Decontamination techniques will be simulated. At the PMC, activities that may damage property (such as parking vehicle on grass) are to be simulated. Persons responsible for decontamination should be aware of action levels in organizational plans for determining the need for decontamination. The monitoring and decontamination teams will not be suited up in anti-contamination clothing. The Federal evaluator may request one (1) monitor to suit-up in anti-contamination clothing for demonstration purposes.

Extent-of-Play Agreement:

- Reception Center floors are not to be covered with paper/plastic during this demonstration; however, all required materials will be available for inspection.
- Liquid waste from decontamination will not be contained and can be discharged to sanitary sewer or directed as run-off, per prior FEMA policy guidance and the NYS Sanitary Code Part 16.
- As specified in the plans, an action level of 0.1 mR/hr above background is used to decide whether or not an individual, vehicle or item requires decontamination.
- Both male and female decon technique will be demonstrated, though only 1 decon area needs to be set up.
- Instruments are not labeled with calibration curves or exposure rate correction factors.
- Portal monitors will be operated in accordance with manufacturer’s specifications. Portal monitors are checked with a check source to verify operability.
- Individuals with fixed contamination will be dealt with in accordance with the plans.
- Individuals are registered with a monitoring record or form.

OBJECTIVE # 19: CONGREGATE CARE

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

Locations Observed: WCFA, OCFA, BCFA, and PCFA.

ARCA's: None

EXTENT-OF-PLAY

CONGREGATE CARE CENTERS

All facilities to be demonstrated prior to the November 15, 2000 exercise, out-of-sequence with the exercise scenario.

One (1) congregate care center per county will be opened in accordance with respective local emergency response plans. Because of logistics and the need to arrange access to facilities before a demonstration, congregate care center were preselected. See offsite extent-of-play activities schedule.

Each center will demonstrate the following staffing:

- Shelter Manager;
- Registrar;
- Support staff (one individual);
- Communicator.

Availability of additional personnel will be determined by interview discussion.

One individual may perform two (2) functions (e.g. Shelter Manager could also serve as communicator). Each activated center is to demonstrate its equipment and supplies and will not be set-up in advance.

In addition, evaluations will include:

- sleeping accommodation area;
- feeding facility capability;
- sanitary facilities;
- parking areas;
- facility activation.

Extent-of-Play Agreement:

- **Supplies required for long-term mass care (cots, blankets, food, etc.) are not to be acquired or brought to the centers. However, the Center Manager should be aware of the center's capacity. The center personnel are then to make the necessary**

estimates of supplies required for the potential evacuees. Sources of the required supplies are to be located and the means for transportation of these supplies are to be discussed. Staff will be asked to discuss the methods for verifying that incoming evacuees from the reception center have been monitored and are free of contamination. Each center must have the capacity signs posted.

- The American Red Cross follows its plan and procedures to implement the activities associated with this objective.

OBJECTIVE # 20: MEDICAL SERVICES – TRANSPORTATION

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

Locations Observed: WCFA and PCFA

ARCAs: None

EXTENT-OF-PLAY

MEDICAL DRILLS

There will be two (2) medical drills conducted and evaluated prior to the November 15, 2000 exercise:

Westchester County – West. Medical Center – September 12, 2000
Putnam County – Putnam Hospital Center – May 11, 2000

Both drills will demonstrate the adequacy of ambulance providers and procedures for handling contaminated injured individuals.

The functions to be demonstrated include: (1) prompt arrival at the accident scene; (2) initial medical assessment to determine the presenting problems (i.e., life-threatening injury or other type of injury); (3) radiological monitoring (may be done by EMS or Reception Center Staff or hospital staff), if person does not have a life-threatening injury; (4) contamination control procedures if person does not have life-threatening injury or such measures can be effected en route without delay of treatment; and (5) transport to the appropriate medical facility.

OBJECTIVE # 21: MEDICAL SERVICES – FACILITIES

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

Locations Observed: WCFA and PCFA

ARCAs: None

EXTENT-OF-PLAY

The medical drill scenario will necessitate transporting the victim to a 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 required and not recommended.

Each drill must also demonstrate the adequacy of hospital facilities and procedures for handling contaminated injured individuals. This 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

Demonstrate the adequacy of procedures for decontamination of emergency workers, equipment, vehicles, and the materials used for the disposal of contaminated waste.

Locations Observed: WCFA, RCFA, OCFA, and PCFA.

ARCAs: 32-98-22-A-01 (Putnam County)

EXTENT-OF-PLAY

EMERGENCY WORKER PMCs

All facilities to be demonstrated prior to the November 15, 2000 exercise, out-of-sequence with the exercise scenario. See off-site extent-of-play agreement schedule.

Each county will set up and demonstrate one (1) PMC for local emergency workers. The following PMCs were pre-selected:

Westchester County (1) Fire Training Center, Valhalla

Rockland County (1) Rockland County Sewer District, Rt., 340 Sparkill, NY

Orange County (1) BOCES, Goshen, NY

Putnam County (1) North Highlands, F.D.

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

- Arrival of Staff;
- Setting-up;
- Operation.

Each PMC will be set up as it would be in an actual emergency, with all route markings and contamination control measures in place. Procedures and techniques for monitoring emergency workers will be demonstrated. Staff will be provided to simulate emergency workers.

Each facility will demonstrate the following:

- One (1) monitor for personnel monitoring;
- Two (2) monitors for personnel decontamination (1 male and 1 female);
- One (1) monitor for vehicle monitoring;
- One (1) monitor for vehicle decontamination.

The monitoring and decontamination teams are not to be suited up in anti-contamination clothing. However, the Federal evaluator may request one (1) monitor only to suit-up in anti-contamination clothing for demonstration purposes.

Decontamination actions are to be simulated. At the PMC, activities that may damage property (such as parking vehicles on grass) are to be simulated.

Extent-of-Play Agreement

- **Liquid waste from decontamination does will not have to be contained and can be discharged to sanitary sewer or directed as run-off, per prior FEMA policy guidance and the NYS Sanitary Code, Part 16.**
- **Facilities and equipment for decontamination will be in place and decontamination procedures explained, including solid waste disposal procedures.**
- **90 sec/person monitoring speed for hand held instrumentation is not applicable to EW PMC.**
- **EW PMC floors are not to be covered with paper/plastic during this demonstration, however, all required materials will be available for inspections.**
- **Instruments are not labeled with calibration curves or exposure rate correction factors.**

- **One (1) portal monitor for personnel monitoring will be demonstrated by Rockland County only.**
- **Both male and female decon technique will be demonstrated though only 1 decon area needs to be set up.**
- **Portal monitor will be operated in accordance with manufacturers specifications. Portal monitors are checked with a check source to verify operability.**
- **As specified in the plans, an action level of 0.1 mR/hr above background is used to decide whether or not an individual, vehicle or item requires decontamination.**
- **Individuals with fixed contamination will be dealt with in accordance with the plans.**

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 Indian Point Nuclear Power Station exercise on November 15, 2000.

This exercise scenario was submitted by the State of New York and the New York Power Authority, and approved by FEMA Region II on October 4, 2000.

NEW YORK POWER AUTHORITY
INDIAN POINT #3 NUCLEAR POWER PLANT
NRC/FEMA OBSERVED FULL PARTICIPATION EXERCISE
NOVEMBER 15, 2000

0800 INITIAL CONDITIONS AND SHIFT TURNOVER INFORMATION

NOTE: Due to the use of the IP-3 simulator, all times are approximate.

0800 The Indian Point Unit #3 Nuclear Power Plant is at EOL and has been operating for the last 325 days at 100% power. Boron concentration is 95 ppm. Plant Operations personnel are completing shift turnover and the following occurrences have been noted:

- The Appendix R diesel is out of service. A 30 day LCO has been entered.

EXERCISE COMMENCES:

0855 An electrical fault on the transmission system will cause the generator output breakers to open. This will trip the turbine and close the turbine stop valves. The reactor will also trip. The operators will respond to the reactor trip and identify a loss of all offsite AC power. The Operators will be following steps in the appropriate Operations procedures to attempt power restoration.

All three emergency diesel generators will start, but 32 Emergency Diesel Generator will not tie into 480V Bus 6A due to an electrical fault on the bus. 480V Busses 2A, 3A and 5A will initially be energized by 31 and 33 Emergency Diesel Generators.

After approximately 30 seconds, Emergency Diesel Generator 31 will mechanically fail and 480V busses 2A and 3A will be de-energized, leaving bus 5A as the only available bus. The conditions for an ALERT are met according to EAL 6.1.3.

- 0910 An ALERT should be declared based on EAL 6.1.3, 480V safeguard bus power supplies reduced to only one of the following for > 15 minutes:
- 480V EDG 31
 - 480V EDG 32
 - 480V EDG 33
 - Appendix R Diesel
 - Unit Auxiliary Transformer
 - Station Auxiliary Transformer
 - 13W92 Feeder
 - 13W93 Feeder
- Emergency Response Facilities (ERFs) are being manned and non-essential personnel are being relocated to the Training Building.
- 1010 A large break LOCA will occur. If not already actuated, an automatic Safety Injection will occur. Reactor coolant inventory begins to decrease due to inadequate injection flow to the Reactor Coolant System.
- 1015 The Reactor Vessel level should trend below 33% with no RCPs running. If that condition exists, then the criteria for a **Site Area Emergency (SAE)** will be met according to EAL 3.1.3. An orange path in F-02, core cooling may also exist according to EAL 1.2.1.
- 1030 A **Site Area Emergency (SAE)** will be declared based on EAL 3.1.3, RVLIS cannot be maintained > 33% with no RCPs running or EAL 1.2.1, orange path in F-02, core cooling, or EAL 2.2.2, Containment Radiation Monitor R-25 or R-26 > 17 R/hr at 1040.
- Accountability will commence in the ERFs and non-essential personnel should be evacuated after the completion of accountability. (The evacuation will be simulated).
- 1045 Safety Injection pump #31 trips due to overcurrent
- 1115 Containment Radiation monitors R-25 and R-26 are indicating > 68R/hr. in the Vapor Containment Building. The conditions for a General Emergency (GE) are met according to EAL 2.2.3. The conditions for a GE may also exist according to EAL 1.2.2, Red path in F-02, core cooling.
- 1130 A **General Emergency (GE)** will be declared based on EAL 2.2.3 or 1.2.2.
- 1245 A release is in progress. The release point is Containment Penetration ZZ.
- 1345 Offsite power is restored via 13.8KV feeder 13W93.

- 1415 The ED will authorized, as necessary, repair teams to secure the release at penetration ZZ. The release will be terminated at 1415.
- 1430 A time advance of 48 hours occurs. The Emergency Director will use Emergency Planning Procedure IP-2600 to terminate the event or transition into Recovery. The Emergency Director will conduct a turnover with the Recovery Manager.
- 1500 The Exercise is terminated.