



Exercise Report

INDIAN POINT 2 NUCLEAR POWER STATION

Licensee: ENTERGY

Exercise Date: September 24, 2002

Report Date: February 21, 2003

**FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION II**

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

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I. EXECUTIVE SUMMARY

On September 24, 2002, the Federal Emergency Management Agency (FEMA) evaluated an exercise in the plume exposure pathway around the Indian Point 2 Nuclear Power Station. Specifically, the purpose of the exercise was to assess the level of State and local preparedness in responding to a radiological emergency in the 10 mile Emergency Planning Zone (EPZ). 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.

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. The cooperation and teamwork of all 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 in Orange, Putnam, Rockland and Westchester counties: Reception Centers; Congregate Care Centers; Emergency Worker Personnel Monitoring Centers; General and Special Population Bus Companies; School Bus Companies; Traffic Control Points; School Interviews; Medical Drills and Siren Tests.

Exercise Results

The State and local organizations, except where noted in this report, satisfactorily demonstrated knowledge of their emergency response plans and procedures and adequately implemented them. While no Deficiencies were identified during the exercise, thirteen (13) Areas Requiring Corrective Action (ARCAs) were identified and are discussed in more detail in this report. Seven of these involved the Joint News Center and the provision of information to the media and the general public. The remaining were county operational ARCAs.

In addition, twenty-one ARCAs from the previous exercise have been resolved; thirteen were resolved either immediately (at the time of demonstration) or on follow-up before December 31, 2000. One ARCA, concerning dose assessment at the State EOC, was resolved at the full-scale exercise for the Nine Mile Point plant on December 4, 2001. Five ARCAs from the November 2000 plume phase exercise and one ARCA from the May 1999 ingestion exercise remain unresolved. The prior ARCAs that either were or were not resolved at the September 2002 exercise are described in this report.

Planning Issues

FEMA Region II staff, assisted by the Regional Assistance Committee (RAC), composed of

representatives of 11 federal agencies, performed a review of the State and county Radiological Emergency Response Plans and procedures for Indian Point. The results of that review were provided to the State on January 15, 2002. This was followed up with a letter dated December 3, 2002, which summarized remaining concerns and the State's commitment to take corrective action. Although the State and counties have responded to a number of FEMA's concerns with the plans as described in the plan review, there remain weaknesses in the plans. Some of these concerns were included in the State's own draft report "Review of Emergency Preparedness at Indian Point and Millstone"¹ (the State Report). While FEMA's review is more comprehensive, the State Report did validate a number of our previous findings. Moreover, we value many of the findings in the State Report and understand the concerns it generated among State and local officials surrounding the facility. It should be noted that all of the planning findings in the State Report were previously raised by FEMA, and the State and counties have previously agreed to correct the weaknesses or to provide missing information. FEMA's updated plan review "Reviews of the Radiological Emergency Response Plans for the State of New York, and the Indian Point Counties" (based on the State and county 2002 plans) includes similar planning issues raised by the State in its own report. This review is provided under separate cover and includes further comment on the State Report and related information. Among the issues raised in FEMA's updated plan review, the most significant outstanding planning issues include:

1. Neither the State nor the counties have submitted their *Letters of Agreement* for FEMA review in order to determine the availability of resources needed by the counties in event of an incident at the plant.
2. *The Joint News Center Procedures and Public Education Workplan*, which is the basic procedure for dissemination of information to the public during a response to an emergency at the plant, is inadequate and continues to interfere with performance, as noted during both the 2000 and 2002 exercises.
3. The plans do not yet have the information from the *Updated Evacuation Time Estimates* (ETE) that have been prepared to reflect new demographics as well as shadow evacuation. Without the updated ETEs, the plans do not reflect the latest information on the time(s) it would take to evacuate the population of an emergency response planning area under various conditions (i.e., time of day, day of week, time of year, weather conditions, etc).
4. While the procedures for schools in the plans are adequate, the individual school district, pre-school and day care center plans also need to be submitted to FEMA for review.

New York State Report Findings

On August 1, 2002, Governor George Pataki announced that James Lee Witt Associates (JLWA) would conduct a comprehensive and independent review of emergency preparedness around the

¹ "Review of Emergency Preparedness at Indian Point and Millstone – Draft," James Lee Witt Associates, LLC, January 10, 2003.

Indian Point Energy Center and that portion of New York that is near the Millstone Nuclear Power Plant located in Connecticut. On January 10, 2003, a draft report entitled “Review of Emergency Preparedness at Indian Point and Millstone” was released by JLWA for public comment. Comments on this draft State report were to be submitted by February 7, 2003.

FEMA has reviewed the draft State report and prepared written responses to the major findings contained in the report. FEMA believes that the draft State report raises a number of issues that should be considered for enhancing the level of preparedness in the communities surrounding the Indian Point Energy Center. These include better education of the public, more training of offsite responders and improved emergency communications. Some of these issues should be evaluated for their applicability program-wide. However, FEMA also believes that a number of issues raised by the state report are not supported by FEMA’s own exercise evaluations, plan reviews and knowledge of the REP Program.

FEMA’s detailed responses to these issues can be found in the second attachment to the letter to the Director of the New York State Emergency Management Office entitled “Reviews of the State and County Radiological Emergency Response (REP) Plans for the Indian Point Energy Center and Comments on the REP Program, Planning and Exercise Issues Raised by Others.” FEMA will obtain and review the final state report when it is released to ensure that any revisions that could affect our final determination are taken into consideration.

Out-of-Sequence Activities

Numerous out-of sequence activities were demonstrated and evaluated as part of the 2002 exercise for Indian Point. Out-of-sequence activities are demonstrations of facilities and knowledge of procedures that occur out of sequence with the full-scale exercise scenario. The following activities were conducted and evaluated by FEMA personnel in order to develop a better understanding of the level of preparedness:

- 18 School Interviews
- 10 School Bus Company Interviews
- 9 Special Population Bus Company Interviews
- 8 Congregate Care Centers
- 4 Reception Centers
- 4 Emergency Worker Personnel Monitoring Centers
- 6 Traffic Control Points
- 4 Medical MS-1 Drills
- Full-System Siren Test – March 26, 2002

Conclusions

Although, as noted above, no exercise finding rose to the level of a Deficiency as defined under 44 CFR Part 350, at this time, FEMA, in the absence of fully corrected and updated plans for the

counties and State, cannot provide “reasonable assurance” that appropriate measures can be taken in the event of a radiological emergency. However, should the State of New York provide complete plans on or before May 2, 2003, with a schedule of corrective actions to address the exercise issues, then this decision will be re-evaluated. If the State is unable to do so, FEMA will proceed with notification to FEMA Headquarters that assurance cannot be provided regarding the adequacy of the plans to protect the health and safety of the public. At that time, FEMA headquarters would notify NRC and the Governor of the decision.

FEMA and the State of New York and the counties in the emergency planning zone have worked together to assure the safety and health of the public in the event of an incident at Indian Point Energy Center. FEMA anticipates that the planning issues cited above and the exercise issues described in the report will be addressed and resolved in a timely fashion.

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 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 the following 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 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 full-scale REP exercise was evaluated on September 24, 2002 by FEMA 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 at the Indian Point 2 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; and
- "Radiological Emergency Preparedness: Exercise Evaluation Methodology," published in the *Federal Register* on September 12, 2001, and revised April 25, 2002.

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 that 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 OROs' efforts to resolve them.

III. EXERCISE OVERVIEW

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

A. Plume Emergency Planning Zone Description

The Indian Point Nuclear Power Station's (IPNPS) 10-mile plume pathway EPZ contains portions of four New York State counties: Orange, Putnam, Rockland, and Westchester.

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. 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 Mountain 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 that 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 units , #'s 2 and 3, were designed by the Westinghouse Electric Corporation.

The Indian Point pressurized water nuclear power plants each contain a nuclear reactor and closed loops of pressurized water that remove the heat energy from the reactor core and transfer the energy to a secondary water system that 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 2 exercise on September 24, 2002.

Federal Agencies

United States Military Academy

State of New York

New York State Department of Health

New York State Department of Highways

New York State Department of Social Services

New York State Department of Transportation

New York State Emergency Management Office

New York State Emergency Medical Services Coordinator

New York State Energy Research and Development Authority

New York State Police

New York State Public Service Commission

Risk Jurisdictions

Orange County

Orange County Attorney

Orange County Department of Health

Orange County Department of Public Works

Orange County Department of Social Services

Orange County Emergency Management Office

Orange County Emergency Medical Services

Orange County Executive

Orange County Radiological Officer

Orange County Public Information Officer

Orange County School Liaison

Orange County Sheriff's Office

Putnam County

Putnam County Bureau of Fire and Emergency Medical Services

Putnam County Fire Department

Putnam County Health Department

Putnam County Highway Department
Putnam County Office for the Aging
Putnam County Office of Personnel
Putnam County School District
Putnam County Sheriff's Office
Putnam County Social Services

Rockland County

Local Police Departments
Rockland County Department of Health
Rockland County Mental Health
Rockland County Office of the Aging
Rockland County Public Information Office
Rockland School Representative

Westchester County

Bureau of Environmental Quality
Bureau of Public Health Protection
City of Peekskill
Civil Air Patrol
Department of Schools
General Services Department
Westchester County Community Mental Health
Westchester County Department of Environmental Facilities
Westchester County Department of Health
Westchester County Department of Parks, Recreation & Conservation
Westchester County Department of Social Services
Westchester County Emergency Management Agency
Westchester County Emergency Medical Services
Westchester County Executive Office
Westchester County Finance Department
Westchester County Fire and Safety
Westchester County Local Emergency Planning Committee
Westchester County Medical Center
Westchester County Office of Emergency Services
Westchester County Police
Westchester County Public Information Office
Westchester Department of Public Works
Yorktown Municipal Police Department

Support Jurisdictions

Bergen County

Bergen County Office of Emergency Management

Private/Volunteer Organizations

American Red Cross

Civil Air Patrol

Nuclear Power Generation Utilities Technical Representative

Orange County Amateur Radio Emergency Services (ARES)/

Radio Amateur Civil Emergency Service (RACES)

Putnam County RACES

Putnam Emergency Amateur Repeater League

Rockland County RACES

Salvation Army

Volunteers from RACES

WABC AM Radio Station

Westchester County RACES

Out-of-Sequence Activities

The out-of sequence activities that were demonstrated and evaluated as part of the 2002 exercise for Indian Point are listed below:

School Interviews

Orange County

- James O'Neil High School (September 23, 2002)

Putnam County

- Putnam Valley Middle School/High School (May 2, 2002)
- Bonous Montessori (May 23, 2002)
- Garrison U.F.E.S (June 12, 2002)

Rockland County

- Lime Kiln Elementary School (May 28, 2002)
- St. Paul's School (June 10, 2002)
- Clarkstown North Senior High School (September 18, 2002)
- James A. Farley Middle School (September 18, 2002)
- Robin Hill Nursery School (September 18, 2002)

Westchester County

- Buchanan-Verplanck Elementary School (June 10, 2002)
- Croton-Harmon High School (June 12, 2002)
- Hillcrest Elementary School (June 12, 2002)
- West Orchard Elementary School (June 13, 2002)
- Pinesbridge School (June 14, 2002)
- St. Patrick's School (June 14, 2002)
- Briarcliff High School (June 17, 2002)
- Benjamin Franklin Elementary School (June 17, 2002)
- St. Ann's School (June 17, 2002)

School Bus Company Interviews

Orange County

- West Point Tours (August 15, 2002)

Putnam County

- Putnam County School District (May 2, 2002)
- Hudson Valley Bus (June 12, 2002)

Rockland County

- Chestnut Ridge (June 11, 2002)
- Clarkstown Central School District (June 12, 2002)
- Haverstraw (June 13, 2002)
- Peter Brega (June 14, 2002)

Westchester County

- Liberty Lines (September 10, 2002)
- Hendrick Hudson School District (September 16, 2002)
- Lakeland Central School District (September 19, 2002)

Special Population Bus Company Interviews

Orange County

- West Point Tours (August 15, 2002)

Putnam County

- Mahopac School District (April 18, 2002)
- Haldane School District (June 19, 2002)

Rockland County

- Chestnut Ridge (June 11, 2002)
- Clarkstown Central School District (June 12, 2002)
- Haverstraw (June 13, 2002)
- Peter Brega (June 14, 2002)

Westchester County

- Liberty Lines (September 10, 2002)
- Royal Coach (September 10, 2002)

Congregate Care Centers

Orange County

- Twin Towers Middle School (August 20, 2002)

Putnam County

- George Fisher Middle School (July 30, 2002)

Rockland/Bergen Counties

- Fairleigh Dickinson University (September 4, 2002)
- Bergen Community College (September 9, 2002)
- Ramapo College (September 9, 2002)

Westchester County

- Westchester Community College (August 14, 2002)

Reception Centers

Orange County

- Heritage Middle School (August 1, 2002)

Putnam County

- Carmel High School (July 30, 2002)

Rockland County

- Suffern High School (August 19, 2002)

Westchester County

- Westchester Community College (August 14, 2002)

Emergency Worker Personnel Monitoring Centers

Orange County

- Board of Cooperative Educational Services (BOCES) (September 19, 2002)

Putnam County

- Carmel Fire Department (April 30, 2002)

Rockland County

- County Sewer District (June 25, 2002)

Westchester County

- Fire Training Center (July 10, 2002)

Traffic Control Points (Conducted during the exercise, but out-of-sequence)

- Orange County Sheriff's Department (September 24, 2002)
- Putnam County Sheriff's Department (September 24, 2002)
- Rockland County – Clarkstown (September 24, 2002)
- Rockland County – Stony Point (September 24, 2002)
- Westchester County – County Police (September 24, 2002)
- Westchester County – Yorktown Police (September 24, 2002)

Medical MS-1 Drills

- Putnam Hospital (May 15, 2002)
- Westchester Medical Center (June 11, 2002)
- Cornwall Hospital (October 24, 2001)
- Good Samaritan Hospital (May 4, 2001)

Full-System Siren Tests – March 26, 2002.

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 September 24, 2002. Also included are times notifications were made to the participating jurisdictions/functional entities.

(See attached file IP2 Ex Report Timeline Final)

(See attached file IP2 Ex Report Timeline Final)

(See attached file IP2 Ex Report Timeline Final)

IV. EXERCISE EVALUATION AND RESULTS

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

Each jurisdiction and functional entity was evaluated on the basis of its demonstration of criteria contained in the September 12, 2001, *Federal Register* Notice (revised April 25, 2002). Detailed information on the exercise criteria and the extent-of-play agreement used in this exercise are found in Appendix 3 of this report.

A. Summary Results of Exercise Evaluation – Table 2

The matrix presented in Table 2, on the following page(s), presents the status of all exercise criteria which were scheduled for demonstration during this exercise by all participating jurisdictions and functional entities. Exercise criteria are listed by number and the demonstration status of those criteria 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
- N - Not Demonstrated (Reason explained in Subsection B)
- U - Unresolved ARCA(s) from prior exercises

(See attached file IP2 SERF TABLE 2 final)

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A. Summary Results of Exercise Evaluation

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 were 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** - Description of ARCAs assessed during previous exercises which were resolved in this exercise and the corrective actions demonstrated.
- **Prior ARCAs - Unresolved** - Description 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.
- **Evaluation Area Criterion** - A letter and number corresponding to the criteria in the FEMA REP Exercise Evaluation Methodology.
- **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.

B. Status of Jurisdictions Evaluated

1. NEW YORK STATE

1.1 Emergency Operations Center

- a. MET: Evaluation Area Criteria** 1.a.1, 1.b.1, 1.d.1, 1.e.1
2.a.1, 2.b.1, 2.b.2, 2.c.1
3.a.1, 3.c.1
5.a.1, 5.b.1
- b. DEFICIENCY: NONE**
- c. AREAS REQUIRING CORRECTIVE ACTION: ONE**

Issue No.: 32-02-1.c.1-A-01

Criterion: 1.c.1

Condition: At 1112 hours, it was announced in the State Command Center, that the Governor had declared a State of Disaster Emergency for the counties of Orange, Putnam, Rockland, and Westchester and contiguous areas. The State Plan indicates that, once the State of Disaster Emergency has been declared, the State assumes the lead in decision-making and a State Coordinating Officer will be designated; however, this was not done. There was no announcement or mention to the counties that a change in the decision making process had occurred; decisions still occurred within the counties in coordination with the State Command Center even though the State EOC issued a news release (News Release No. 4, at 1:09 PM) indicating response actions were being coordinated by the Disaster Preparedness Commission.

Possible Cause: This particular process in the State Plan has not been practiced in recent drills or exercises. Specific players may not have been aware that the decision-making authority changes after a declaration of emergency has been made by the Governor for a nuclear power plant emergency.

Reference: State Plan, Section III, paragraph 2.8

Effect: Risk counties were not informed that the State was now the lead decision-maker for protective actions during the emergency response and may have been unaware that additional resources may have been available for the response.

Recommendation: When a decision is made by the Governor to declare a State

of Disaster Emergency, an announcement should be made over the Radiological Emergency Communication System (RECS line) indicating that the State is assuming overall command of response operations and is making available additional State resources. In addition, the State Plan should be reviewed to determine if this provision agrees with State law and the county plans. Annual training is required to ensure that all response personnel are aware of this procedure.

Schedule of Corrective Actions :

The State has not submitted a Schedule of Corrective Actions.

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

1.2 Emergency Operations Facility

- a. **MET:** Evaluation Area Criteria 1.b.1, 1.c.1, 1.d.1, 1.e.1
3.b.1
4.a.2

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** ONE

Issue No.: 32-02-3.a.1-A-02

Criterion: 3.a.1

Condition: The Westchester County, Rockland County, Orange County, and State Department of Health (DOH) personnel assigned to the EOF traveled through the Emergency Planning Zone, enroute to the EOF, without personnel monitoring dosimetry or potassium iodide (KI). They also were not aware of dose limits or administrative and decontamination reporting requirements.

Possible Cause: These individuals were not issued dosimetry or KI, as is required for all emergency workers.

Reference: NUREG-0654, Criteria K.3.a and J.10.e

Effect: The exposures received by these emergency workers coming to or leaving the facility would not be recorded. In addition, the EOF is not a shielded facility and these emergency workers could receive additional exposure while inside the EOF.

Recommendation: Provide all personnel assigned to the EOF a dosimetry/KI kit and training in the dose limits and reporting requirements.

Schedule of Corrective Actions:

The State has not submitted a Schedule of Corrective Actions.

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED: ONE**

Issue No.: 75-00-04-A-02 (1.d.1)

Description: Inoperable Utility supplied data system in Rockland, Westchester, and Orange Counties. The Utility-supplied Meteorological Information and Dose Assessment System (MIDAS) terminal and printer were inoperative in the County Emergency Operations Centers (EOCs) for much of the exercise. Problems were encountered when attempting to print the projections and plant status information that were updated every 15 minutes automatically. In addition to the printer problems, the data displayed were not always consistent with the plant status data that were 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*.)

Corrective Action Demonstrated: The MIDAS system has been replaced by the Meteorological Radiological Plant Data System (MRP-DAS). The MRP-DAS provides technical data (containment temperature, containment pressure, containment radiation levels, stack vent release rates, and meteorological parameters) from the EOF to the State and County EOCs on a continuous basis. This system functioned properly throughout the exercise. This ARCA is resolved.

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

1.3 Joint News Center

- a. **MET:** Evaluation Area Criteria 1.a.1, 1.b.1, 1.c.1
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** SEVEN

Issue No.: 32-02-1.d.1-A-03

Criterion: 1.d.1

Condition: The videoconference link in the Media Briefing room, (both audio and visual), between Orange County and the Joint News Center (JNC) was non-operational through the first three briefings.

Possible Cause: According to State personnel working on the failed link, "it is an AT&T problem, not ours."

Reference: NUREG-0654

Effect: As the videoconference equipment was located in the media briefing room in lieu of a Public Information Officer (PIO) from Orange County, the ability of the County and the media to discuss and disseminate accurate information was adversely affected. The media would have had to contact the Orange County Emergency Operations Center (EOC) directly for information, and would have received information that had not been coordinated through the JNC.

Recommendation: The videoconference equipment requires two dedicated telephone lines to allow two-way data flow for a video connection. This equipment should have been tested and the link established early for the exercise. When the link does fail to operate, a representative PIO from Orange County should be repositioned to the JNC, or a telephone conference line should be added to the media briefing room.

Schedule of Corrective Actions:

The State has not submitted a Schedule of Corrective Actions.

Issue No.: 32-02-1.e.1-A-04

Criterion: 1.e.1

Condition: The Main Briefing room audio multi-box was non-functional throughout the exercise.

Possible Cause: The audio multi-box in the main briefing room had a problem somewhere in the wiring.

Reference: NUREG-0654, E.5, E.7

Effect: The media was unable to gather and transmit good quality audio coming from the microphone located at the front podium. Media personnel were forced to place microphones against speakers for sound. Eventually, additional microphones were added to the podium.

Recommendation: The multi-box should be tested, repaired, or replaced. A back-up wire from the podium to the rear platform could also be installed, or provide one long enough to run the length of the room, to the rear platform.

Schedule of Corrective Actions:

The State has not submitted a Schedule of Corrective Actions.

Issue No.: 32-02-5.a.1-A-05

Criterion: 5.a.1 – Activation of the Prompt Alert and Notification System

Condition: The EAS messages and the Follow-On-News Bulletins did not provide timely, accurate information to the public. For example, the initial EAS message concluded with the phrase “Stay tuned to this Emergency Alert System station for further information and instructions.” Since there was no Follow-On-News Bulletin for airing on the EAS station, and the EAS message did not contain a public inquiry number, the public would have had to wait two hours and 12 minutes until the second EAS airing at 1226 to receive the public inquiry number and further information and instructions.

Possible Cause: The staff developing the EAS messages and Follow-On-News Bulletins most likely did not develop a Follow-On-News Bulletin for the first EAS message since there were no detailed emergency instructions or protective action recommendations in the EAS message, and they did not realize that the EAS message did not include the public inquiry number.

Reference: NUREG-0654, E.5, 7

Effect: The public would have had to wait over two hours before hearing the public inquiry number. This is too long; many members of the public would have had important questions to ask of public safety officials.

Recommendation: Revise the EAS messages to include the public inquiry telephone number. Provide a Follow-On-News Bulletin for every EAS message. Provide additional training to the personnel who will compose the public information messages so that they will check to make sure that the public inquiry telephone number is broadcast in a timely fashion.

Schedule of Corrective Actions :

The State has not submitted a Schedule of Corrective Actions.

Issue No.: 32-02-5.b.1-A-06

Criterion: 5.b.1 – Emergency Information and Instructions for the Public and the Media

Condition: There were major delays between the actual times events occurred and the times that information was given to members of the media during briefings at the Joint News Center. Specific instances are documented in press briefings # 3, 4 & 5.

- The utility spokesperson, who introduced each press briefing, in press briefing # 3 announced at 1256 that a General Emergency (GE) had been declared, but failed to explain the significance of the event. He was followed by the Westchester County spokesperson who began reading EAS message #2 at 1257, describing a Site Area Emergency at the plant. Upon completion, the Westchester County spokesperson did refer to the previously announced GE condition at the plant, but also did not offer an explanation or additional information. Near the conclusion of this briefing, the State of New York spokesperson finally expressed grave concern about the GE, but offered no guidance.
- Press briefing # 4 began at 1356 and continued until 1423. At 1358, the Westchester County spokesperson read EAS message # 3 that had aired at 1318 hours. The message stated that there was no radiation release at the plant. Actually, a radiation release had been detected at the plant at 1354.

- Press briefing # 5 began at 1456 hours. The Westchester County spokesperson announced that EAS Follow-On-News Bulletin # 3, distributed at 1338 hours – an hour and 18 minutes earlier – had inadvertently stated that there had been a radiation release at the plant. The spokesperson asked that persons holding copies of Follow-On-News Bulletin # 3 destroy them, replacing them with “revised” Follow-On-News Bulletin #3. It was later learned that the JNC personnel had been aware of the incorrect bulletin by about 1353, several minutes before press briefing #4 began. However, a decision was made to hold on to the corrected announcement for more than an hour.

Possible Cause: There were instances during the exercise when press briefings were scheduled in order to deliver specific information, but even before the information was delivered to the media, it was being superseded by new and more serious information. Decisions were made to withhold the new information until a later press briefing instead of delaying or interrupting a press briefing in order to disseminate the most current information about conditions and protective actions to the media, and, therefore, the public.

Reference: NUREG-0654; E.5, 7.

Effect: The delays between the actual times that events occurred and the times that information was given to members of the media during briefings at the Joint News Center resulted in the most urgent and needed information being delayed for up to ninety minutes until the next scheduled press briefing.

Recommendation: The plan and procedures for conduct of press briefings must be revised to permit the introduction of new information and late-breaking news if it arises shortly before or during briefings. Press briefings should be delayed or interrupted in order to disseminate the most current information and protective actions. In addition, all public information staff, particularly those who would report to the JNC, should be trained on how to manage the situation when there is new information arriving just before or during a press briefing.

Schedule of Corrective Actions :

The State has not submitted a Schedule of Corrective Actions.

Issue No.: 32-02-5.b.1-A-07

Criterion: 5.b.1 - Emergency Information and Instructions for the Public and the Media

Condition: The Joint News Center personnel used emergency response protective area (ERPA) numbers only in announcing protective action decisions, rather than explaining the ERPAs by geographic descriptions as well.

Possible Cause: Since emergency response protective area zone numbers are published and made available to residents living within close proximity to the Indian Point Energy Center, it is assumed that all residents know “their” ERPA number, evacuation route and designated reception center. This is an unrealistic expectation. It also does not take into account how transients are given geographic information.

Reference: NUREG-0654; E.5, 7

Effect: Using ERPA zone numbers in public information, without giving the appropriate geographical information, could result in confusion on the part of residents and transients and cause them to respond incorrectly to emergency information and emergency instructions.

Recommendation: Review and revise the plan and procedures for providing protective action decision information to the public in order to clearly identify for residents and transients the area in which they are at the time of the announcement, and the correct protective actions to take at that time from that location. Provide additional training to all public information staff on the revised plan and procedures.

Schedule of Corrective Actions :

The State has not submitted a Schedule of Corrective Actions.

Issue No.: 32-02-5.b.1-A-08

Criterion: 5.b.1 - Emergency Information and Instructions for the Public and the Media

Condition: There were discrepancies between information in the EAS messages and the Follow-On-News Bulletins as well as missing or incorrect information in the Follow-On-News Bulletins. Specifically:

- EAS message #2 did not list ERPA 9 as evacuating, yet the Follow-On-News Bulletin references the evacuation route for ERPA 9 on page 2.
- EAS message #3 stated that there had not been a release of radioactive materials, while the first issuance of Follow-On-News Bulletin #3 stated that there was a release (see below).
- Follow-On-News Bulletins #'s 3 & 4 did not contain evacuation route instructions for previously evacuated ERPAs that were still under an evacuation

directive.

- Follow-On-News Bulletin # 5 stated that all ERPAs in Putnam County were sheltered when all ERPAs in Putnam County were evacuated.
- There was no explanation in any of the Follow-On-News Bulletins that the numbers preceding each paragraph are referring to the ERPA numbers.

The Follow-On-News Bulletin for EAS message # 3 had to be retracted and revised because the Bulletin stated that there *had* been a radioactive release when there *had not been a release*. EAS message # 3 was aired (simulated) at 1318; the original Bulletin was faxed (simulated) to the EAS station at 1336. At 1428, the State Public Information Officer (PIO) informed the County PIOs that the first version of the Bulletin contained erroneous information and had been retracted and replaced by a revised Bulletin. At 1501, during briefing # 5, the Westchester County PIO told the media representatives that they were to destroy the originals of the Bulletin and pick up the revised Bulletin. This was too late to prevent confusion on the matter.

Possible Cause: The pre-scripted EAS messages do not include the public inquiry telephone number. Also, the persons composing and approving the EAS messages and Follow-On-News Bulletins did not catch the errors and discrepancies noted above.

Reference: NUREG-0654; E.5, 7

Effect: Potential confusion on the part of the media and the public on (1) what the status of the emergency situation was, (2) how to get additional information via a public inquiry number, and (3) what to do in response to the emergency situation.

Recommendation: Review and revise the Joint News Center plan and procedures to include revised pre-scripted EAS messages and Follow-On-News Bulletins. The revisions should include necessary information (such as the public inquiry number) and a method to reduce the possibility of discrepancies between the EAS messages and the Follow-On-News Bulletins. One way to do this is to provide a *series* of pre-scripted EAS messages and Follow-On-News Bulletins that are consistent with each other that would cover a variety of emergency situations and protective responses, as is found in many other radiological plans and procedures for other sites in the country. The current “One Size Fits All” pre-scripted EAS message and Follow-On-News Bulletin included in the JNC plan and procedures is not sufficient. Also, provide additional training to the personnel who will compose and approve the EAS messages and Follow-On-News Bulletins during an exercise or incident.

Schedule of Corrective Actions:

The State has not submitted a Schedule of Corrective Actions.

Issue No.: 32-02-5.b.1-A-09

Criterion: 5.b.1 - Emergency Information and Instructions for the Public and the Media

Condition: Personnel at the Joint News Center did not explain the protective action decisions that had been made for residents and transients under the various emergency classification levels (ECLs) that were included in the EAS messages and Follow-On-News Bulletins.

Possible Cause: There may be a misconception among emergency management officials that residents understand emergency classification levels and know exactly what to do when given instructions in an EAS message and/or a Follow-On-News Bulletin, without further explanation provided at the press briefings.

Reference: NUREG-0654; E.5, E.7

Effect: A failure to completely inform residents and transients of what the emergency classification levels (ECLs) mean, and what protective action decisions are based on the ECLs, could result in the public not following appropriate and timely emergency instructions.

Recommendation: Review and revise the plan and procedures, and the text of the pre-scripted EAS messages and Follow-On-News Bulletins, to include explanations of the emergency classification levels and what they mean to the public. Provide all public information staff with additional training on the revised plan and procedures.

Schedule of Corrective Actions :

The State has not submitted a Schedule of Corrective Actions.

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

Issue No.: 75-00-11-A-03 (5.b.1)

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*.)

Reason ARCA Unresolved: Although the number was announced at the media briefings, the rumor control telephone number is not printed in the Westchester, Rockland, Orange or the Putnam Counties' *Important Information on Indian Point and Planning for Emergencies* Brochure. Orange County did not publicize the public inquiry telephone number in its press releases at the Alert, SAE or the GE classification levels.

Recommendation: A listing in the public information brochure of a toll-free (800) emergency telephone number for public inquiries is necessary. It is confusing and misleading to print a toll-free (800) number for non-emergency questions and general information when it does not provide the public an immediate service during emergency situations. The plan and public information brochure should be revised to specify the dedicated public inquiry number that will be operational during an emergency. Once the predominant and significant rumors are identified, government officials must address them with the public through press releases and media briefings.

Schedule of Corrective Actions :

The State has not submitted a Schedule of Corrective Actions.

Issue No.: 75-00-11-A-04 (5.a.1)

Description: Per joint news center procedures, "if the EAS [Emergency Alert System] message contains a PAR [Protective Action Recommendation] 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*.)

Reason ARCA Unresolved: The initial EAS message did not include a Follow-

On-News Bulletin, and so none was faxed to the EAS station. Subsequent EAS messages did have Follow-On-News Bulletins, but these, in accordance with the Extent-of-Play, were also not faxed to the EAS station. Therefore, the ARCA has not been resolved.

Recommendation: Demonstrate that Follow-On-News Bulletins will be faxed to the EAS station in the event of an emergency.

Schedule of Corrective Actions :

The State has not submitted a Schedule of Corrective Actions.

Issue No.: 75-00-12-A-05 (5.a.1)

Description: At the Joint News Center (JNC) media briefing, conducted at 1035 hours, the Westchester County Public Information Officer (PIO) announced that at 1039 hours sirens had been sounded at 1041 hours and an EAS message had been broadcast at 1044 hours. This was prior to these events. At the next media briefing at 1145 hours, the briefing was conducted during the time the second alert and notification sequence was occurring (with sirens sounded at 1150 hours and the EAS being broadcast at 1153 hours). 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*.)

Reason ARCA Unresolved: As noted in the new issue #32-02-5.b.1-A-06 described above, there were, again, significant disconnects between the time that events occurred and the times that information was given to members of the media during briefings at the Joint News Center.

Recommendation: The plan and procedures for conduct of press briefings must be revised to permit the introduction of new information and late-breaking news, if it arises shortly before or during briefings. Press briefings should be delayed or interrupted in order to disseminate the most current information and protective actions. Additionally, when an alert and notification sequence is scheduled, the media briefings should be delayed until after the EAS broadcast. In addition, all public information staff, particularly those who would report to the JNC, should be trained on how to manage the situation when there is new information arriving just before or during a press briefing.

Schedule of Corrective Actions:

The State has not submitted a Schedule of Corrective Actions.

1.4 Emergency Alert System - Station WABC

- a. MET: Evaluation Area Criteria** 5.a.1, 5.b.1
- b. DEFICIENCY: NONE**
- c. AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. NOT DEMONSTRATED: NONE**
- e. PRIOR ARCAs - RESOLVED: NONE**
- f. PRIOR ARCAs - UNRESOLVED: NONE**

2. RISK JURISDICTIONS

2.1 ORANGE COUNTY

2.1.1 Orange County - Emergency Operations Center

- a. **MET:** Evaluation Area Criteria 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1
2.a.1, 2.b.1, 2.b.2, 2.c.1
3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2
4.a.2
5.a.1, 5.a.3
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** ONE

Issue No.: 32-02-5.b.1-A-10

Criterion: 5.b.1

Condition: Orange County press releases did not provide telephone numbers for the Public Inquiry Line, JNC-Media Response Desk, and the Orange County PIO.

Possible Cause: The public information function at the county emergency operations center was disrupted by failure of the video conference link with the Joint News Center.

Reference: NUREG-0654, E.5, 7; G.3.a, G.4.c

Effect: The news media and general public did not have complete information on who to contact for information on actions in Orange County.

Recommendation: Provide all public information staff with additional training to ensure that they understand which emergency information numbers should be provided to the media and the public. Develop or revise Standard Operating Procedures for preparing news releases.

Schedule of Corrective Actions :

The State has not submitted a Schedule of Corrective Actions.

- d. **NOT DEMONSTRATED:** NONE

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

2.1.2 Orange County - Field Monitoring Teams

- a. **MET:** Evaluation Area Criteria 1.a.1, 1.d.1, 1.e.1
3.a.1, 3.b.1
4.a.1, 4.a.2, 4.a.3
- 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 - Reception Center (Out-of-sequence at Heritage Middle School on August 1, 2002)

- a. MET: Evaluation Area Criteria 3.a.1; 6.a.1**
- 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 - Congregate Care Center (Out-of-sequence at Twin Towers Middle School on August 20, 2002)

- a. **MET:** Evaluation Area Criteria 6.c.1
- 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 - Emergency Worker Personnel Monitoring Center (Out-of-sequence at BOCES on September 19, 2002)

- a. **MET:** Evaluation Area Criteria 3.a.1
6.a.1; 6.b.1

- b. **DEFICIENCY:** NONE

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

- d. **NOT DEMONSTRATED:** NONE

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

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

2.1.6 Orange County - Special Population Bus Company Interviews (Out-of-sequence with West Point Tours on August 15, 2002)

- a. **MET:** Evaluation Area Criteria 1.d.1; 3.a.1; 3.b.1; 3.c.1
- 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 Orange County - School Bus Company Interviews (Out-of-sequence with West Point Tours on August 15, 2002)

- a. **MET:** Evaluation Area Criteria 1.d.1; 3.a.1; 3.b.1; 3.c.2
- 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 - School Interviews (Out-of-sequence at James O'Neill High School on September 23, 2002)

- a. **MET:** Evaluation Area Criteria 3.c.2
- 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 - Medical Drill (Out-of-sequence at Cornwall Hospital on October 24, 2002)

- a. **MET:** Evaluation Area Criteria 3.a.1; 6.d.1
- 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 - Traffic Control Points

- a. MET: Evaluation Area Criteria** 3.a.1, 3.b.1, 3.d.1, 3.d.2
- 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:** Evaluation Area Criteria 1.b.1, 1.c.1, 1.d.1, 1.e.1
2.a.1, 2.b.1, 2.b.2, 2.c.1
3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1
4.a.2
5.a.1, 5.a.3, 5.b.1

- b. **DEFICIENCY:** NONE

- c. **AREAS REQUIRING CORRECTIVE ACTION:** ONE

Issue No.: 32-02-1.a.1-A-11

Criterion: 1.a.1

Condition: The initial notification to several county emergency management leaders indicated that a Site Area Emergency (SAE) had been declared; however, this was not correct: at that time an Alert had been declared.

Possible Cause: The initial notification to these personnel came from the Warning Point (WP) located in the County Supervisor Dispatch Office. The information provided to them incorrectly called the situation an SAE. This is not consistent with the initial call from the plant's Emergency Operations Facility (EOF) over the Radiological Emergency Communications System line.

Reference: NUREG-0654; E.1, E.2

Effect: Emergency workers were given incorrect information and could have made inappropriate decisions.

Recommendation: County Dispatcher/Communications personnel should participate in additional training with emphasis on accuracy.

Schedule of Corrective Actions:

The State has not submitted a Schedule of Corrective Actions.

- d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED: ONE**

Issue No.: 75-00-11-A-07 (5.a.1)

Description: Emergency Alert System (EAS) message Number Four discusses how traffic control has been established to restrict access to the portion of Putnam County located within 10 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 (TCPs) had been identified through Controller inject. Access to Putnam County within the EPZ 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 Joint News Center. (NUREG-0654, E.5; *Putnam RERP*, Section III, *Response, e. Public Information.*)

Demonstrated Corrective Actions: The capability to provide accurate emergency information and instructions, including any recommended protective actions to the public and the media in a timely manner, was adequately demonstrated. After the initial EAS message, Putnam County prepared 10 press releases and supplied information to the EAS Follow-on News Releases and for the Public Information Officer (PIO) at the JNC. The first press release informed the public that the County EOC had been activated and that staff was also at the Joint News Center. Other press releases discussed the evacuation and sheltering of Emergency Response Planning Areas (ERPAs) in Putnam County, the evacuation routes, location of relocation centers, the closing of senior nutrition sites, the movement of school children out of the EPZ, the shift change of the County Executive by the Deputy County Executive, and the monitoring of the County for possible contamination.

The media releases were prepared at the JNC and faxed to the County EOC where they were given to the Executive Team for review and approval. Each member of the team reviewed each message for consistency and accuracy. Edits were made and revisions were then prepared for final approval. The releases were not signed off on until the corrections had been verified. This ARCA was successfully addressed and is closed.

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

2.2.2 Putnam County - Field Monitoring Teams

- a. **MET:** Evaluation Area Criteria 1.a.1, 1.d.1, 1.e.1
3.a.1, 3.b.1
4.a.1, 4.a.2, 4.a.3
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** THREE

Issue No.: 75-00-06-A-08 (4.a.1)

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 cesium-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 cesium-137 check source. Neither of the prescribed source checks was performed by Field Monitoring Team A. (NUREG-0654, H.10; *Putnam County RERP*, Procedure 4, *Radiological Officer*, Attachment 4, *Field Monitoring*.)

Demonstrated Corrective Actions: Field Team A did a thorough check of both the RO-2A instrument and the Eberline RM-14 meter and their back-ups using a cesium-137 check source.

The Putnam County Radiological Monitoring Team B performed source checks on their instruments to ensure correct instrument response. On both the RO-2A and RM-14 instruments, a cesium-137 source (5 uCi-1998) was used and both instruments operated correctly.

Issue No.: 75-00-08-A-09 (4.a.1)

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.)

Demonstrated Corrective Actions: Field Team A did a thorough check of both the RO-2A instrument and the Eberline RM-14 meter and their back-ups using a cesium-137 check source. All four instruments were in proper working order. The back-up detectors were taken to the field in case of malfunction.

The Putnam County Radiological Monitoring Field Team B employed an RM-14 instrument that was correct in its response and functioned properly with its audio and visual alarms.

Issue No.: 75-00-08-A-10 (4.a.1)

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.)

Demonstrated Corrective Actions: Field Team A covered the probes for the two RO-2A radiation detectors with a thin layer of plastic to protect the instruments from contamination causing erroneous readings.

The Putnam County Radiological Monitoring Field Team B, in its three air sample collections and subsequent measurements, always employed a thin plastic probe cover during particulate filter measurements.

f. PRIOR ARCAs - UNRESOLVED: NONE

2.2.3 Putnam County - Reception Center (Out-of-sequence at Carmel High School on July 30, 2002)

- a. **MET:** Evaluation Area Criteria 3.a.1; 6.a.1
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.2.4 Putnam County - Congregate Care Center (Out-of-sequence at George Fischer Middle School on July 30, 2002)

- a. **MET:** Evaluation Area Criteria 6.c.1
- 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 - Emergency Worker Personnel Monitoring Center (Out-of-sequence at the Carmel Fire Department on April 30, 2002)

- a. **MET:** Evaluation Area Criteria 3.a.1; 6.a.1, 6.b.1
- 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 - Special Population Bus Company Interviews (Out-of-sequence at the Haldane School District, the Mahopac School District, and the Garrison District on April 18 and June 19, 2002)

- a. **MET:** Evaluation Area Criteria 1.d.1; 3.a.1, 3.c.2
- 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 - School Bus Company Interviews (Out-of-sequence at the Putnam Valley School District and the Hudson Valley buses on May 2 and June 12, 2002)

- a. **MET:** Evaluation Area Criteria 1.d.1; 3.a.1; 3.b.1; 3.c.2
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.2.8 Putnam County - School Interviews (Out-of-sequence at Garrison U.F.E.S., Putnam Valley Middle School/High School, and Bonous Montessori on May 2, May 23 and June 12, 2002)

- a. **MET:** Evaluation Area Criteria 3.c.2
- 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 - Medical MS-1 Drill (Out-of-sequence at Putnam Hospital on May 15, 2002)

- a. **MET:** Evaluation Area Criteria 3.a.1; 6.d.1
- 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 – Traffic Control Points

- a. **MET:** Evaluation Area Criteria 3.a.1, 3.b.1, 3.d.1, 3.d.2
- 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:** Evaluation Area Criteria 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1
2.a.1, 2.b.1, 2.b.2, 2.c.1
3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2
4.a.2
5.a.1, 5.a.3, 5.b.1
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** ONE

Issue No.: 75-00-03-A-11 (1.c.1)

Description: Rockland County did not keep Bergen County abreast of important information and developments. For example, Rockland County did not notify Bergen County that an SAE had been declared until after notifying Bergen that a GE had been declared. Bergen County learned of the SAE only after calling back to Rockland to confirm the GE. 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*.)

Reason ARCA Unresolved: Rockland County did not provide information to Bergen County in a timely manner. Information to Bergen County from Rockland County was obtained only in response to direct requests to Rockland County from the Bergen County EOC. The Liaison from the Rockland County Sheriff's Office arrived and immediately stated that he had only been directed to perform this duty 48 hours previously. He further stated that he had received no training for the task he was about to undertake and that he had been told to report to the Bergen County EOC Director who would tell him what to do. Ultimately, the Bergen County EOC Director asked the Rockland County Liaison to call the Rockland County EOC for updates every 15 minutes.

In addition, the Bergen County liaisons within the Rockland County EOC also indicated that they were new to this assignment and unfamiliar with their responsibilities and the plan. For example, the Rockland County Operations Chief had to speak directly to the liaison in Bergen County to pass information to Bergen County, because the liaisons within the Rockland EOC did not know what information to pass on: the decision to activate school reception centers, and congregate care centers (which are in Bergen County) was not communicated to Bergen County.

Recommendation: Review and revise the Rockland County Plan and Procedures for communication with Bergen County. Review and revise the plan and procedures for Bergen County. Train all personnel who will have duties providing communications between Rockland and Bergen Counties.

Schedule of Corrective Actions:

The State has not submitted a Schedule of Corrective Actions.

2.3.2 Rockland County - Field Monitoring Teams

- a. **MET:** Evaluation Area Criteria 1.a.1, 1.d.1, 1.e.1
3.a.1, 3.b.1
4.a.1
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** TWO

Issue No: 32-02-4.a.2-A-12

Criterion: 4.a.2

Condition: Field Monitoring Team #1 was not informed of key information in accordance with Radiological Emergency Response Agency Procedure, DOH-7, "Field Monitoring Team Coordinator," Section 5.4.9.

Possible Cause: Periodic contacts with Field Monitoring Team #1 did not request acknowledgement from the team that appropriate information designated in the procedure was received.

Reference: NUREG-0654, I.8., 11.

Effect: Information related to protective actions taken is essential for field teams supporting plume tracking, contamination control, and management of radiological exposures.

Recommendation: EOC staff involved in transmission of information to field teams should carefully follow the designated procedure and request acknowledgements from field teams that they are aware of prescribed information affecting field activities.

Schedule of Corrective Actions :

The State has not submitted a Schedule of Corrective Actions.

Issue No: 32-02-4.a.3-A-13

Criterion: 4.a.3

Condition: After completing the air sample with the Air Sampler H-809C, a field team member placed the uncovered filter and cartridge on the radiator grill area

adjacent to the battery, causing cross contamination from the vehicle surface to the filter and cartridge.

Through interview, the team simulated moving to a low background area to survey the filter and cartridge. A team member placed the Ludlum 14C survey instrument (pancake probe) directly on the contaminated filter and cartridge while surveying the samples.

The Air Sampler H-809C and the Eberline RO-2A were placed in the same plastic bag as was used for personal protective clothing and equipment.

Though the filter and cartridge samples were properly bagged and labeled, they were placed in the field team kit without being monitored.

Possible Cause: The Rockland County Emergency Preparedness Radiological Response Plan and support procedures did not adequately address contamination control of samples during collection and transfer. The instrumentation operation procedures within the plan did not adequately detail contamination control procedures with regards to instrument usage and storage during field operations.

Reference: NUREG-0654, I.9

Effect: The lack of contamination control in the control and transfer of field samples could result in the Field Monitoring Team relaying incorrect exposure information to Dose Assessment at the EOC, thus altering the Rockland County Protective Action Decisions.

Recommendation: Additional training of the Field Monitoring Team and further clarification of the sampling and contamination reduction procedures should be considered. The Field Team Procedures and other portions of the field kit should not be placed on the ground or under the hood during sampling. To reduce general cross contamination during field operations, the team should place the air sampler and the Eberline RO-2A in separate individual plastic bags.

The Air Sampler H-809C, Ludlum 14C, and Eberline RO-2A survey techniques contained in the Rockland County Emergency Preparedness Radiological Response Plan Standard Operating Procedures (DOH 11, Attachment 4, pp. 11-13) should be updated to include detailed information on general field team and instrument specific cross-contamination techniques.

Schedule of Corrective Actions:

The State has not submitted a Schedule of Corrective Actions.

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

2.3.3 Rockland County - Reception Center (Out-of-sequence at Suffern High School on August 1, 2002)

- a. **MET:** Evaluation Area Criteria 3.a.1; 6.a.1, 6.b.1
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** ONE

Issue No.: 75-00-18-A-12 (6.2.1)

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.

Demonstrated Corrective Action: At the Reception Center demonstration at Suffern High School on August 19, 2002, there were two male and two female workers to provide decontamination to male and female individuals.

- f. **PRIOR ARCAs - UNRESOLVED:** ONE

Issue No.: 75-00-18-A-13 (6.2.1)

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.

Demonstrated Corrective Action: FEMA has not yet received an updated diagram of the Tappan Zee Reception Center Reception Center.

2.3.4 Rockland County - Congregate Care Center (Out-of-sequence at Bergen Community College, Fairleigh Dickinson University, and Ramapo College on September 4 and September 9, 2002)

- a. **MET:** Evaluation Area Criteria 6.c.1
- 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 - Emergency Worker Personnel Monitoring Center (Out-of-sequence at the County Sewer District offices on June 25, 2002)

- a. **MET:** Evaluation Area Criteria 3.a.1; 6.a.1, 6.b.1
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.3.6 Rockland County - Special Population Bus Company Interviews (Out-of-sequence at Chestnut Ridge, Clarkstown Central School District, Haverstraw, and Peter Brega on June 11 – 14, 2002)

- a. **MET:** Evaluation Area Criteria 1.d.1; 3.a.1, 3.b.1, 3.c.1
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.3.7 Rockland County - School Bus Company Interviews (Out-of-sequence at Chestnut Ridge, Clarkstown Central School District, Haverstraw, and Peter Brega on June 11 - 14, 2002)

- a. **MET:** Evaluation Area Criteria 1.d.1; 3.a.1, 3.b.1, 3.c.2
- 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 - School Interviews (Out-of-sequence at St Paul's School, Clarkstown Senior High School, James A. Farley Middle School, Lime Kiln Elementary School, and Robin Hill School on May 28, June 10, and September 18, 2002)

- a. **MET:** Evaluation Area Criteria 3.c.2
- 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 - Medical Drill (Out-of-Sequence at Good Samaritan Hospital on May 4, 2001)

- a. **MET:** Evaluation Area Criteria 3.a.1; 6.d.1
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.3.10 Rockland County -Traffic Control Points

- a. MET:** Evaluation Area Criteria 3.a.1, 3.b.1, 3.d.1, 3.d.2
- 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: Evaluation Area Criteria**
 - 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1
 - 2.a.1, 2.b.1, 2.b.2, 2.c.1
 - 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2
 - 4.a.2
 - 5.a.1, 5.a.3, 5.b.1

- 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 - Field Monitoring Teams

- a. **MET:** Evaluation Area Criteria 1.a.1, 1.d.1, 1.e.1
3.a.1, 3.b.1
4.a.1, 4.a.2, 4.a.3
- 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 - Reception Center (Out-of-sequence at Westchester Community College on August 14, 2002)

- a. **MET:** Evaluation Area Criteria 3.a.1; 6.a.1, 6.b.1
- 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 - Congregate Care Center (Out-of-sequence at Westchester Community College on August 14, 2002)

- a. **MET:** Evaluation Area Criteria 6.c.1
- 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 -Emergency Worker Personnel Monitoring Center (Out-of-sequence at the Fire Training Center on July 19, 2002)

- a. **MET:** Evaluation Area Criteria 3.a.1; 6.a.1, 6.b.1
- 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 - Special Population Bus Company Interviews (Out-of-sequence with Liberty Lines and Royal Coach on September 10, 2002)

- a. **MET:** Evaluation Area Criteria 1.d.1; 3.a.1, 3.b.1, 3.c.1
- 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 - School Bus Company Interviews (Out-of-sequence at the Hendrick Hudson School District, Liberty Lines, and the Lakeland Central School District on September 10, September 16, and September 19, 2002)

- a. **MET:** Evaluation Area Criteria 1.d.1; 3.a.1, 3.b.1, 3.c.2
- 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 - School Interviews (Out-of-sequence at Hillcrest Elementary School, Buchanan-Verplanck Elementary School, Pinesbridge School, Briarcliff High School, Croton-Harmon High School, Benjamin Franklin Elementary School, St. Ann's School, West Orchard Elementary School, and St. Patrick's School on June 10, June 12-14, and June 17, 2002)

- a. **MET:** Evaluation Area Criteria 3.c.2
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCA_s - RESOLVED:** NONE
- f. **PRIOR ARCA_s - UNRESOLVED:** NONE

2.4.9 Westchester County - Medical MS-1 Drill (Out-of-sequence at Westchester Medical Center on June 11, 2002)

- a. **MET:** Evaluation Area Criteria 3.a.1; 6.d.1
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** ONE

Issue No.: 75-00-21-A-26 (6.d.1)

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 (RETA) 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 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; Rockland County REPP, p. III-38, Section 12, Hospitals and Medical Facilities, Procedure EMS-2, *Handling and Transport of Contaminated and/or Injured Individuals to Medical Facilities.*)

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

Demonstrated Corrective Actions: The attending Physician and his medical team clearly and repeatedly demonstrated an awareness of the importance of contamination control. The radiological monitor closely checked for contamination on all surfaces, starting with the ambulance and continuing into the radiological treatment area within the hospital. The Physician repeatedly asked to have his

hands scanned for contamination and frequently changed his gloves and, as necessary, his gown. Procedures and checklists for treatment and contamination control were prominently posted within the radiological treatment area. The Physician and the medical support team repeatedly referred to these displays and highlighted (marked) completed steps. The patient was successfully transferred from the ambulance gurney to a treatment table without any cross contamination.

f. PRIOR ARCAs - UNRESOLVED: NONE

2.4.10 Westchester County - Traffic Control Points

- a. MET: Evaluation Area Criteria** 3.a.1, 3.b.1, 3.d.1, 3.d.2
- 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 – Equipment Inventory (Out-of-sequence at the County Fire Training Center, Westchester Community College, and the County Health Department on July 19, 2002, August 14, 2002, and September 24, 2002)

- a. **MET:** Evaluation Area Criteria 1.e.1
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs – RESOLVED:** NONE
- f. **PRIOR ARCAs – UNRESOLVED:** NONE

3. SUPPORT COUNTY

3.1 Bergen County - Emergency Operations Center

- a. MET: Evaluation Area Criteria** 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1
3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2
5.b.1
- 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 that were used in this report.

ACP	Access Control Point
ANL	Argonne National Laboratory
ARC	American Red Cross
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
CPM	Counts Per Minute
DOE	U.S. Department of Energy
DOH	Department of Health
DOT	U.S. Department of Transportation
EAL	Emergency Action Level
EAS	Emergency Alert System
ECL	Emergency Classification Level
EMS	Emergency Medical Service
EMO	Emergency Management Organization
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EPA	U.S. Environmental Protection Agency
EPZ	Emergency Planning Zone
ERF	Emergency Response Facility
ERPA	Emergency Response Planning Area
EV-2	REP School Interview Questionnaire
EWPMC	Emergency Worker Personnel Monitoring Center
FAA	Federal Aviation Administration
FDA	U.S. Food and Drug Administration
FEMA	Federal Emergency Management Agency

GE	General Emergency
HELP	Helicopter Emergency Lift Program
ICF	ICF Consulting, Inc.
INEEL	Idaho National Environmental and Engineering Laboratory
IP2	Indian Point 2
IPNPS	Indian Point Nuclear Power Station
JNC	Joint News Center
KI	Potassium Iodide
MIDAS	Meteorology Information and Dose Assessment System
mR	MilliRoentgen
MRP-DAS	Meteorological Radiological Plant Data 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
NYSEMO	New York State Emergency Management Office
OCEOC	Orange County Emergency Operations Center
OCFA	Orange County Field Activities
ORO	Offsite Response Organization
PAR	Protective Action Recommendation
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
RETA	Radiological Emergency Treatment Area
SAE	Site Area Emergency
SEMO	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
TLD	Thermoluminescent Dosimeter
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 September 24, 2002. Evaluator Team Leaders are indicated by the letters "(TL)" after their names. The organization which each evaluator represents is indicated by the following abbreviations:

DOT	- Department of Transportation
EPA	- Environmental Protection Agency
FEMA	- Federal Emergency Management Agency
ICF	- ICF Consulting
INEEL	- Idaho National Environmental and Engineering Laboratory
NRC	- Nuclear Regulatory Commission
USDA	- US Department of Agriculture

	<u>NAME</u>	<u>ORGANIZATION</u>
RAC Chairperson	R. Reynolds	FEMA
Project Officer	P. Malool	FEMA

<u>EVALUATION SITE</u>	<u>EVALUATOR</u>	<u>ORGANIZATION</u>
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NEW YORK STATE

Emergency Operations Center (EOC)	R. Poole	FEMA (TL)
	L. Record	FEMA
	K. McCarroll	FEMA
	B. Edmonson	ICF
	N. Gaeta	ICF

Emergency Operations Facility (EOF)	R. Black	ICF
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Joint News Center (JNC)	R. Echavarria	FEMA (TL)
	N. Goldstein	FEMA
	D. Jacks	FEMA
	P. Tenorio	FEMA
	P. Nied	ICF

EAS Station WABC	B. Vocke	ICF
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EVALUATION SITE	EVALUATOR	ORGANIZATION
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RISK JURISDICTIONS

Orange County

Orange County EOC	P. Malool	FEMA (TL)
	N. Tang	FEMA
	S. O'Neill	FEMA
	H. Berry	ICF
	A. Thompson	FEMA
Field Monitoring Team	T. Mignone	HHS
	Eric Simpson	EPA
Traffic Control Point	S. O'Neill	FEMA

Putnam County

Putnam County EOC	J. Young	FEMA (TL)
	N. Brignoni	FEMA
	M. Matia	FEMA
	Daryl Thome	ICF
Field Monitoring Team	S. Nelson	ICF
	J. Staroba	ICF
Traffic Control Point	M. Matia	FEMA

Rockland County

Rockland County EOC	K. Reed	FEMA (TL)
	A. Canida	FEMA
	R. Ohlsen	FEMA
	A. Davis	FEMA
Field Monitoring Team	H. Harrison	ICF
	C. Gordon	USNRC
Field Monitoring Team	T. Brown	ICF
	A. Davis	FEMA
Traffic Control Point	A. Davis	FEMA

EVALUATION SITE	EVALUATOR	ORGANIZATION
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Westchester County

Westchester County EOC	B. Hasemann	FEMA (TL)
	L. Visniesky	ICF
	D. Petta	USDOT
	K. Barrett	USDA
	J. Keller	ICF
Field Monitoring Team	J. Eng	EPA
	R. Bernacki	FDA
Traffic Control Points	L. Visniesky	ICF

Bergen County

Bergen County EOC	W. Dobinson	FEMA (TL)
Emergency Operations Center	J. Flynn	ICF

OUT-OF-SEQUENCE ACTIVITIES

EVALUATION SITE	EVALUATOR	ORGANIZATION
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Orange County

Reception Center (August 1, 2002)	S. O'Neill	FEMA
Congregate Care Center (August 20, 2002)	P. Malool &	FEMA
	S. O'Neill	FEMA
Emergency Worker PMC (September 19, 2002)	S. O'Neill	FEMA
Special Pop. Bus Company Interviews (August 15, 2002)	S. O'Neill	FEMA
School Bus Company Interviews (August 15, 2002)	S. O'Neill	FEMA

EVALUATION SITE	EVALUATOR	ORGANIZATION
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School Interview (September 23, 2002)	S. O'Neill	FEMA
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Medical Drill (MS-1) (June 11, 2002)	B. Hasemann P. Malool	FEMA FEMA
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Putnam County

Reception Center (July 30, 2002)	S. O'Neill K. Reed	FEMA FEMA
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Congregate Care Center (July 30, 2002)	S. O'Neill	FEMA
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Emergency Worker PMC (April 30, 2002)	Jaye Sutton	FEMA
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Special Pop. Bus Company Interviews (April 18 and June 19, 2002)	Susan O'Neill Jaye Sutton	FEMA FEMA
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School Bus Company Interviews (May 2 and June 12, 2002)	Jaye Sutton	FEMA
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School Interviews (May 2, 23, and June 12, 2002)	Jaye Sutton	FEMA
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Medical Drill (MS-1) (May 15, 2002)	Paul Malool Kevin Reed Jaye Sutton	FEMA FEMA FEMA
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EVALUATION SITE	EVALUATOR	ORGANIZATION
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Rockland County

Reception Center (August 19, 2002)	R.Black	ICF
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Congregate Care Centers (September 4 and 9, 2002)	R. Reynolds P. Malool K. Reed	FEMA FEMA
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Emergency Worker PMC (June 25, 200)	R. Black K. Reed	ICF FEMA
Special Pop. Bus Company Interviews (June 11-14, 2002)	R. Black	ICF
School Bus Company Interviews (June 11 – 14, 2002)	R. Black	ICF
School Interviews (May 28, June 10, and September 18, 2002)	K. Reed P. Malool	FEMA FEMA
Medical Drill (MS-1)	Paul Malool	FEMA

Westchester County

Reception Center (August 14, 2002)	B. Hasemann	FEMA
Congregate Care Center (August 14, 2002)	B. Hasemann	FEMA
Emergency Worker PMC (July 19, 2002)	B. Hasemann	FEMA

<u>EVALUATION SITE</u>	<u>EVALUATOR</u>	<u>ORGANIZATION</u>
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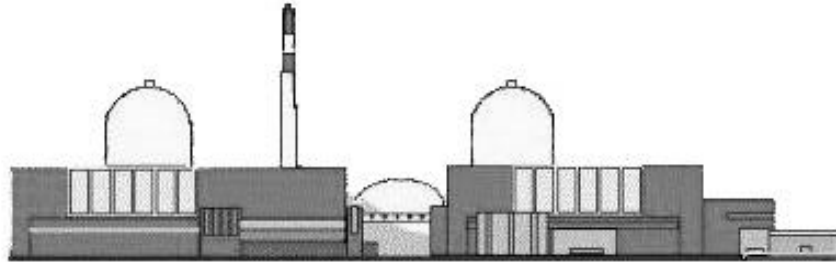
Special Pop. Bus Company Interviews (September 10, 2002)	B. Hasemann	FEMA
School Bus Company Interviews (September 10, 16, and 19, 2002)	B. Hasemann	FEMA
School Interviews (June 10, 12, 13, 14, and 17, 2002)	B. Hasemann	FEMA
Medical Drill (MS-1) (June 11, 2002)	B. Hasemann P. Malool	FEMA FEMA

APPENDIX 3

EXERCISE OBJECTIVES AND EXTENT-OF-PLAY AGREEMENT

INDIAN POINT 2 NUCLEAR POWER STATION

SEPTEMBER 24, 2002



FINAL

OFFSITE EXTENT-OF-PLAY

FOR THE

SEPTEMBER 24, 2002

INDIAN POINT 2 FULL-PARTICIPATION

EXERCISE

EXTENT-OF-PLAY GROUND RULES

- **REAL LIFE EMERGENCIES TAKE PRIORITY OVER EXERCISE PLAY.**
- The Scenario Development Team will develop the free play messages. The State Controller will inject the message to the County Emergency Management Director or his designee for action.
- Free play messages for Public Inquiry at the Joint News Center (JNC) will be developed by the Scenario Development Team. Rumor control messages will be injected at the JNC by a control cell.
- The State Controller will inject radiological data for any radiological field activities (Field Teams, Emergency Worker Personnel Monitoring Centers, Reception Centers).
- According to REP Program Strategic Review Initiative 1.5, “During tabletop exercises, drills and other demonstrations conducted out-of-sequence from an integrated exercise, if FEMA and the offsite response organizations (ORO) agree, the FEMA Evaluator may have the participants re-demonstrate an activity that is determined to be not satisfactorily demonstrated. Immediate correction of issues in an integrated exercise is authorized only if it would not be disruptive and interrupt the flow of the exercise and affect other Evaluation Areas.” This initiative is not applicable to Emergency Operations Center/Joint News Center/Emergency Operations Facility demonstrations during the September 24, 2002 exercise.

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.a – Mobilization

Criterion 1.a.1: OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner. (NUREG-0654, A.4; D.3, 4; E.1, 2; H.4)

WARNING POINTS

Extent-of-Play Agreement:

- The latest quarterly revised call lists will be provided at the Federal/State evaluators briefing session the day before the exercise, if requested by FEMA. The lists will contain the business telephone numbers only.
- There will be no free play messages introduced at the Warning Points.

EOCs

Extent-of-Play Agreement:

- State liaisons will be pre-positioned in the area and will arrive at County Emergency Operations Centers (EOCs) 30 minutes after the ALERT or greater Emergency Classification Level (ECL) notification is received by the State. Utility Technical Liaisons assigned to the State EOC will be pre-positioned and arrive at the State EOC 30 minutes after the ALERT or greater ECL notification.

EOF

Extent-of-Play Agreement:

- State liaisons will be pre-positioned in the area and will arrive at the EOF 30 minutes after the ALERT or greater ECL notification is received by the State.

JNC

Extent-of-Play Agreement:

- State Joint News Center (JNC) Staff will be pre-positioned and arrive at the JNC 30 minutes after the ALERT or greater ECL notification is received by the State.
- Orange County will utilize a videoconferencing link from the County EOC to the JNC. The

Orange County Public Information Officer (PIO) will be present at the County EOC.

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.b – Facilities

Criterion 1.b.1: Facilities are sufficient to support the emergency response. (NUREG-0654, H.3)

Extent-of-Play Agreement:

- Back-up power is available, but will not be activated, for the State, four Risk County EOCs, and Bergen County. EOC.
- Maps and displays will vary with each facility and may include printouts and listings.
- Additional baseline facility evaluations, outside of those detailed in the Offsite Extent-of-Play Activities Schedule, will be conducted after the exercise as agreed to by FEMA, New York State Emergency Management Office (NYSEMO) and each County Emergency Management Office (EMO).

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.c - Direction and Control

Criterion 1.c.1: Key personnel with leadership roles for the ORO provide direction and control to that part of the overall response effort for which they are responsible. (NUREG-0654, A.1.d; A.2.a., b)

Extent-of-Play Agreement:

- The State Controller will inject free play messages to the County Emergency Management Director or designee for action.
- Public Inquiry messages will be injected at the JNC by a “control cell.”

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.d – Communications Equipment

Criterion 1.d.1: At least two communication systems are available, at least one operates properly, and communication links are established and maintained with appropriate locations. Communications capabilities are managed in support of emergency operations. (NUREG-0654, F.1, 2)

Extent-of-Play Agreement:

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

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.e – Equipment and Supplies to Support Operations

Criterion 1.e.1: Equipment, maps, displays, dosimetry, potassium iodide (KI), and other supplies are sufficient to support emergency operations. (NUREG-0654, H.7, 10; J.10.a, b, e, J.11; K.3.a)

Extent-of-Play Agreement:

- Maps and displays will vary with each facility and may include printouts and listings.
- The instruments that are used for field monitoring are the RO-2A (Gamma and Beta-milliRoentgen per hour [mR/hr] or Roentgen per hour [R/hr]) or equivalent and RM-14 (Gamma and Beta – Counts Per Minute [CPM]) or equivalent.
- Field team equipment is calibrated by Indian Point 2's (IP2) Radiation Protection Department. An internal IP2 requirement provides for calibration of this equipment every six months. Therefore, the calibration sticker for this equipment shows a "calibration due date" which reflects the six month calibration schedule. The instruments are considered calibrated as long as the current date is within one year of the calibration date.
- No equipment (Barriers, Traffic cones, Signs, etc.) will be deployed to the field.

EVALUATION AREA 2: PROTECTIVE ACTION DECISION MAKING

Sub-element 2.a – Emergency Worker Exposure Control

Criterion 2.a.1: OROs use a decision-making process, considering relevant factors and appropriate coordination, to ensure that an exposure control system, including the use of KI, is in place for emergency workers including provisions to authorize radiation exposure in excess of administrative limits or protective action guides. (NUREG-0654, J.10.e, f; K.4)

Extent-of-Play Agreement:

- All activities will be based on the ORO's plans and procedures as they would in an actual emergency.

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

Sub-element 2.b – Radiological Assessment and Protective Action Recommendations and Decisions for the Plume Phase of the Emergency

Criterion 2.b.1: Appropriate protective action recommendations are based on available information on plant conditions, field monitoring data, and licensee and ORO dose projections, as well as knowledge of onsite and offsite environmental conditions. (NUREG-0654, I.8, 10; Supplement 3).

Extent-of-Play Agreement:

- Plume centerline data will be provided by the licensee field teams.

EVALUATION AREA 2: PROTECTIVE ACTION DECISION MAKING

Sub-element 2.b – Radiological Assessment and Protective Action Recommendations and Decisions for the Plume Phase of the Emergency

Criterion 2.b.2: A decision-making process involving consideration of appropriate factors and necessary coordination is used to make protective action decisions (PADs) for the general public (including the recommendation for the use of KI, if ORO policy). (NUREG-0654, J.9, 10.f, m)

Extent-of-Play Agreement:

- An alternate to the Executive Hotline may be used to coordinate protective action decisions (PADs) among the Risk Counties and State.
- The New York State (NYS) policy regarding the use of KI for the general public is under revision.

EVALUATION AREA 2: PROTECTIVE ACTION DECISION MAKING

Sub-element 2.c - Protective Action Decisions Consideration for the Protection of Special Populations

Criterion 2.c.1: Protective action decisions are made, as appropriate, for special population groups. (NUREG-0654, J.9, J.10.d, e)

TRANSPORTATION DEPENDENT POPULATION

Extent-of-Play Agreement:

- During the September 24, 2002 exercise, there will be initial contact with the transportation providers (telephone call) by the Transportation Coordinator. Initial contacts will be actual and some follow-up contacts may be simulated. All calls will be logged at each EOC.
- There will be no actual dispatch of vehicles during the exercise.

NOTIFICATION OF HEARING-IMPAIRED

Extent-of-Play Agreement:

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

NON-INSTITUTIONALIZED MOBILITY-IMPAIRED INDIVIDUALS

Extent-of-Play Agreement:

- 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.
- 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 non-institutionalized mobility-impaired individuals identified on the list.

SCHOOLS

Extent-of-Play Agreement:

- During the September 24, 2002, exercise, there will be initial contact with the schools and transportation providers (telephone call) by the School and Transportation Coordinators. Initial contacts will be actual and some follow-up contacts may be simulated. All calls will be logged at each EOC.

SPECIAL FACILITIES

Extent-of-Play Agreement:

- During the exercise, there will be initial contact with the special facilities (telephone call). Initial contacts will be actual and some follow-up contacts may be simulated. All calls will be logged at each EOC.
- There will be no actual dispatch of vehicles to the special facilities.

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

Sub-element 2.d –Radiological Assessment and Decision Making for the Ingestion Exposure Pathway

Criterion 2.d.1: Radiological consequences for the ingestion pathway are assessed and appropriate protective action decisions are made based on the ORO planning criteria. (NUREG-0654, J.9, J.11)

Not to be demonstrated during this exercise.

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

Sub-element 2.e – Radiological Assessment and Decision-Making Concerning Relocation, Re-entry, and Return

Criterion 2.e.1: Timely relocation, re-entry, and return decisions are made and coordinated as appropriate, based on assessments of the radiological conditions and criteria in the ORO's plan and/or procedures. (NUREG-0654, I.10; J.9; M.1)

Not to be demonstrated during this exercise.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.a – Implementation of Emergency Worker Exposure Control

Criterion 3.a.1: The OROs issue appropriate dosimetry and procedures, and manage radiological exposure to emergency workers in accordance with the plans and procedures. Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. (NUREG-0654, K.3.a, b)

Extent-of-Play Agreement:

- All activities will be based on the ORO's plans and procedures as they would in an actual emergency.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.b – Implementation of KI Decision

Criterion 3.b.1: KI and appropriate instructions are made available should a decision to recommend use of KI be made. Appropriate record keeping of the administration of KI for emergency workers and institutionalized (not the general public) individuals is maintained. (NUREG-0654, J.10.e)

Extent-of-Play Agreement:

- The NYS policy regarding the use of KI for the general public is under revision.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.c – Implementation of Protective Actions for Special Populations

Criterion 3.c.1: Protective action decisions are implemented for special populations other than schools within areas subject to protective actions. (NUREG-0654, J.10.c, d, g)

EVACUATION OF TRANSPORTATION DEPENDENT POPULATION

Extent-of-Play Agreement:

- Bus companies will be interviewed prior to the September 24, 2002, exercise as per the Offsite Extent-of-Play Activities Schedule. Additional bus company interviews will be conducted after the exercise as agreed to by FEMA, NYSEMO, and each County EMO.
- Each company will provide a dispatcher and at least five to 10 percent of that company's drivers for interview.
- A State Controller will provide the bus routes to be discussed to the bus dispatcher for the briefing of drivers.

NOTIFICATION OF HEARING-IMPAIRED

Extent-of-Play Agreement:

- 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 procedures for notification will also be discussed at the EOC.
- There will be no actual notification of hearing-impaired individuals during the exercise.

EVACUATION OF NON-INSTITUTIONALIZED MOBILITY-IMPAIRED INDIVIDUALS

Extent-of-Play Agreement:

- 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.
- 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 non-institutionalized mobility-impaired individuals identified on the list.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.c – Implementation of Protective Actions for Special Populations

Criterion 3.c.2: OROs/School officials decide upon and implement protective actions for schools. (NUREG-0654, J.10.c, d, g)

EVACUATION OF SCHOOL POPULATIONS

Extent-of-Play Agreement:

- Bus companies will be interviewed prior to the September 24, 2002, exercise as per the Offsite Extent-of-Play Activities Schedule. Additional bus company interviews will be conducted after the exercise as agreed to by FEMA, NYSEMO, and each County EMO.
- Each company will provide a dispatcher and at least five to 10 percent of that company's drivers for interview.
- A State Controller will provide the bus routes to be discussed to the bus dispatcher for the briefing of drivers.

SCHOOL INTERVIEWS

Extent-of-Play Agreement:

- The minimum number of schools (one school per district) to be interviewed prior to the September 24, 2002, exercise is as follows:
 - Westchester County – 9 schools
 - Rockland County – 5 schools
 - Orange County – 1 school
 - Putnam County – 3 schools

Additional school interviews will be conducted after the exercise as agreed to by FEMA, NYSEMO, and each County EMO.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.d – Implementation of Traffic and Access Control

Criterion 3.d.1: Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel. (NUREG-0654, J.10.g, j)

TRAFFIC AND ACCESS CONTROL POINTS (TCPs and ACPs)

Extent-of-Play Agreement:

- During the September 24, 2002, 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 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.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.d – Implementation of Traffic and Access Control

Criterion 3.d.2: Impediments to evacuation are identified and resolved. (NUREG-0654, J.10.k)

IMPEDIMENTS TO EVACUATION

Extent-of-Play Agreement:

- Each of the four 10-mile plume exposure pathway EPZ counties is to demonstrate the organizational ability to deal with at least two 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.
- No equipment (Barriers, Traffic cones, Signs, etc.) will be deployed to the field.
- This demonstration will not involve the dispatch of a police or other emergency vehicle to the scene of a simulated impediment. Initial contact of resource providers will be actual and some follow-up contacts may be simulated. All calls will be logged at each EOC.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.e – Implementation of Ingestion Pathway Decisions

Criterion 3.e.1: The ORO demonstrates the availability and appropriate use of adequate information regarding water, food supplies, milk and agricultural production within the ingestion exposure pathway emergency planning zone for implementation of protective actions. (NUREG-0654, J.9, 11)

Not to be demonstrated during this exercise.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.e – Implementation of Ingestion Pathway Decisions

Criterion 3.e.2: Appropriate measures, strategies and pre-printed instructional material are developed for implementing protective action decisions for contaminated water, food products, milk and agricultural production. (NUREG-0654, J.9, 11)

Not to be demonstrated during this exercise.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.f – Implementation of Relocation, Re-entry, and Return Decisions

Criterion 3.f.1: Decisions regarding controlled re-entry of emergency workers and relocation and return of the public are coordinated with appropriate organizations and implemented. (NUREG-0654, M.1, 3.)

Not to be demonstrated during this exercise.

EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSIS

Sub-element 4.a – Plume Phase Field Measurement and Analyses

Criterion 4.a.1: The field teams are equipped to perform field measurements of direct radiation exposure (cloud and ground shine) and to sample airborne radioiodine and particulates. (NUREG-0654, H.10; I.7, 8, 9)

FIELD MONITORING TEAMS

Extent-of-Play Agreement:

- The monitoring teams will not be suited up in anti-contamination clothing. However, the clothing will be available for inspection.
- Field team equipment is calibrated by IP2's RP Department. An internal IP2 requirement provides for calibration of this equipment every six months. Therefore, the calibration sticker for this equipment shows a "calibration due date" which reflects the six month calibration schedule. The instruments are considered calibrated as long as the current date is within one year of the calibration date.
- The instruments that are used for field monitoring are the RO-2A (Gamma and Beta-mR/hr or R/hr) or equivalent and RM-14 (Gamma and Beta – CPM) or equivalent.

EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSIS

Sub-element 4.a – Plume Phase Field Measurement and Analyses

Criterion 4.a.2: Field teams are managed to obtain sufficient information to help characterize the release and to control radiation exposure. (NUREG-0654, H.12; I.8, 11; J.10.a)

Extent-of-Play Agreement:

- Plume centerline data will be provided by the licensee field teams.

EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSIS

Sub-element 4.a – Plume Phase Field Measurement and Analyses

Criterion 4.a.3: Ambient radiation measurements are made and recorded at appropriate locations, and radioiodine and particulate samples are collected. Teams will move to an appropriate low background location to determine whether any significant (as specified in the plan and/or procedures) amount of radioactivity has been collected on the sampling media. (NUREG-0654, I.9)

FIELD MONITORING TEAMS

Extent-of-Play Agreement:

- Each EPZ County will dispatch two radiological monitoring teams. Each team will be supplied with a State Controller and FEMA 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 ambient radiation measurements and at least two air samples. All teams must take the air samples as though they were in the presence of the plume (even County teams that may not be impacted by the plume).
- The use of silver zeolite cartridges will be simulated and charcoal cartridges will be used. However, the silver zeolite cartridges will 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.

EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSIS

Sub-element 4.b – Post Plume Phase Field Measurements and Sampling

Criterion 4.b.1: The field teams demonstrate the capability to make appropriate measurements and to collect appropriate samples (e.g., food crops, milk, water, vegetation, and soil) to support adequate assessments and protective action decision-making. (NUREG-0654, I.8; J.11)

Not to be demonstrated at this exercise.

EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSIS

Sub-element 4.c - Laboratory Operations

Criterion 4.c.1: The laboratory is capable of performing required radiological analyses to support protective action decisions. (NUREG-0654, C.3; J.11)

Not to be demonstrated during this exercise.

EVALUATION AREA 5: EMERGENCY NOTIFICATION AND PUBLIC INFORMATION

Sub-element 5.a – Activation of the Prompt Alert and Notification System

Criterion 5.a.1: Activities associated with primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. The initial instructional message to the public must include as a minimum the elements required by current FEMA REP guidance. (10 CFR Part 50, Appendix E.IV.D; NUREG-0654, E.5, 6, 7)

Extent-of-Play Agreement:

- There will be no actual siren sounding and no broadcasting of Emergency Alert System (EAS) messages. The Indian Point siren system was last tested on March 6, 2002.
- Airing of the initial EAS message will be simulated.
- Contact with the radio station for subsequent EAS messages will be simulated.
- Regular programming responsibilities of the radio station may preclude participation at the time of the issuance of the simulated EAS message.

EVALUATION AREA 5: EMERGENCY NOTIFICATION AND PUBLIC INFORMATION

Sub-element 5.a – Activation of the Prompt Alert and Notification System

Criterion 5.a.2: RESERVED

EVALUATION AREA 5: EMERGENCY NOTIFICATION AND PUBLIC INFORMATION

Sub-element 5.a – Activation of the Prompt Alert and Notification System

Criterion 5.a.3: Activities associated with FEMA approved exception areas (where applicable) are completed within 45 minutes following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. Backup alert and notification of the public is completed within 45 minutes following the detection by the ORO of a failure of the primary alert and notification system. (NUREG-0654, E. 6; Appendix 3.B.2.c)

Extent-of-Play Agreement:

- There are no exception areas that require supplementary route alerting.

EVALUATION AREA 5: EMERGENCY NOTIFICATION AND PUBLIC INFORMATION

Sub-element 5.b – Emergency Information and Instructions for the Public and the Media

Criterion 5.b.1: OROs provide accurate emergency information and instructions to the public and the news media in a timely manner. (NUREG-0654, E. 5, 7; G.3.a, G.4.c).

PUBLIC INSTRUCTION AND EMERGENCY INFORMATION

Extent-of-Play Agreement:

- “EAS Follow-on News Releases” are provided to WABC Radio only and the media at the JNC.

EMERGENCY INFORMATION

Extent-of-Play Agreement:

- Orange County will utilize a videoconference link from the County EOC to the JNC.

PUBLIC INQUIRY

Extent-of-Play Agreement:

- The public inquiry function will be staffed by at least six operators with one supervisor.
- Inject messages will indicate false or misleading information to enable the public inquiry function to identify trends and false rumors.

EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES

Sub-element 6.a – Monitoring and Decontamination of Evacuees and Emergency Workers and Registration of Evacuees

Criterion 6.a.1: The reception center/emergency worker facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees and/or emergency workers. (NUREG-0654, J.10.h; J.12; K.5.a)

Extent-of-Play Agreement:

- Reception centers will be demonstrated prior to the September 24, 2002, exercise as per the Offsite Extent of Play Activities Schedule. Additional reception centers will be evaluated (baseline evaluations) after the exercise as agreed to by FEMA, NYSEMO, and each County EMO.
- At least 1/3 of the required monitors will be present and at least six simulated evacuees will be monitored.
- Initial personnel monitoring staff will be demonstrated as tabulated below. Staff will be provided to simulate evacuees.

Number of Persons for Initial Personnel Monitoring				
Category	Orange County	Rockland County	Westchester County	Putnam County
Radiological monitors for initial monitoring	2 <i>(See Note 1)</i>	3 <i>(See Note 4)</i>	3 <i>(See Note 4)</i>	2 <i>(See Note 1)</i>
Recorders	1 <i>(See Note 2)</i>	<i>(See Note 2)</i>	2	<i>(See Note 3)</i>
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

- Each vehicle monitor will process at least two vehicles.

- There will be only a representative (small) sample of supplies available at each facility.

- Decontamination techniques will be simulated. At the Personnel Monitoring Center (PMC), activities that may damage property (such as parking vehicle on grass) are to be simulated.

- The monitoring and decontamination teams will not be suited up in anti-contamination clothing. The Federal evaluator may request one monitor to suit-up in anti-contamination clothing for demonstration purposes.

- Reception center floors will be covered with a representative sample of paper/plastic during this demonstration. However, all required materials will be available for inspection.

- Both male and female decon technique will be demonstrated, though only one decon area will be set up.

- Portal monitors will be operated in accordance with manufacturer specifications. Portal monitors are checked with a check source to verify operability.

EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES

Sub-element 6.b – Monitoring and Decontamination of Emergency Worker Equipment

Criterion 6.b.1: The facility/ORO has adequate procedures and resources for the accomplishment of monitoring and decontamination of emergency worker equipment including vehicles. (NUREG-0654, K.5.b).

Extent-of-Play Agreement:

- Emergency Worker Personnel Monitoring Centers (EWPMC) will be demonstrated prior to the September 24, 2002, exercise as per the Offsite Extent-of-Play Activities agreement Schedule.
- Each facility will demonstrate the following:
 - 1 monitor for personnel monitoring
 - 2 monitors for personnel decontamination (1 male and 1 female)
 - 1 monitor for vehicle monitoring
 - 1 monitor for vehicle decontamination
- The monitoring and decontamination teams will not be suited up in anti-contamination clothing. However, the Federal evaluator may request one 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.
- EWPMC floors will be covered with a representative sample of paper/plastic during this demonstration. However, all required materials will be available for inspection.
- One portal monitor for personnel monitoring will be demonstrated by Rockland County and Orange County.
- Both male and female decon technique will be demonstrated, though only one decon area will be set up.
- The portal monitor will be operated in accordance with manufacturer specifications. Portal monitors are checked with a check source to verify operability.

EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES

Sub-element 6.c - Temporary Care of Evacuees

Criterion 6.c.1: Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with American Red Cross planning guidelines. (Found in MASS CARE-Preparedness Operations, ARC 3031.) Managers demonstrate the procedures to assure that evacuees have been monitored for contamination and have been decontaminated as appropriate prior to entering congregate care facilities. (NUREG-0654, J.10.h, J.12)

Extent-of-Play Agreement:

- Congregate care centers will be demonstrated prior to the September 24, 2002, exercise as per the Offsite Extent-of-Play Activities Schedule. Additional congregate care centers will be evaluated (baseline evaluations) after the exercise as agreed to by FEMA, NYSEMO, and each County EMO.
- Capabilities will be demonstrated through an interview process. Personnel, at a minimum, will consist of one Manager and Assistant for each congregate care center opened.
- Availability of additional personnel will be determined by interview discussion.
- One individual may perform two functions (e.g. Shelter Manager could also serve as communicator).
- Supplies required for long-term mass care (cots, blankets, food, etc.) are not to be acquired or brought to the congregate care centers.

EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES

Sub-element 6.d - Transportation and Treatment of Contaminated Injured Individuals

Criterion 6.d.1: The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals. (NUREG-0654, F.2; H.10; K.5.a, b; L.1, 4)

Extent-of-Play Agreement:

- The use of flashing lights and sirens for exercise play is not required.

APPENDIX 4

2002 EXERCISE SCENARIO INDIAN POINT ENERGY CENTER, UNIT 2

Initial Condition

The Indian Point Energy Center Unit 2 has been operating at full power for 120 Effective Full Power Days. The #23 Charging Pump is out of service for a scheduled 5-year overhaul. The 13.8 KV feed to Unit 2 has been out of service for 24 hours for bushing replacement on the auto transformer. A 72 hour Limiting Condition of Operation (LCO) is in effect per Technical Specifications 3.7.B.2. The following breakers are open and racked out for the transformer work: 52GT25; 52GT26; 52GT2; 52GT/BT.

Narrative Summary

A fault occurs on Bus 3A. Emergency Diesel Generator #23 trips on over crank. An investigation will determine that there is a blockage in the fuel line at the duplex fuel filter. Emergency Diesel Generator #23 will not be returned to service before 12:45.

Reactor Coolant Pump #23 trips, causing Turbine/Reactor Trip. A loss of 138 KV power occurs when the Generator Output breakers open. Emergency Diesel Generator #22 breaker to 480V Bus 2A fails to close. Investigation will determine that the cell switch is bad. Repair is not expected until 12:45. An **ALERT** will be declared based on **EAL 6.1.3**.

Weld Channel Zone 2 will develop a high flow condition.

Containment Radiation Monitors R-25 and R-26 will increase to greater than 68 R/hr. A **General Emergency** will be declared based on **EAL 2.2.3**. Initial protective action recommendations will be developed and transmitted to the offsite authorities.

Weld Channel Zone 2 will lose pressurization and a radiological release through the plant vent will be identified. Based on the release, the protective action recommendations will be upgraded and transmitted to the offsite authorities. Investigation will determine that pressure regulator PCV-1195 has failed closed. Zone 2 will be repressurized.

The Exercise scenario will end when the radiological release is terminated and cold leg recirculation has been established.

The Exercise will end when all objectives have been given ample opportunity for demonstration by BOTH onsite and offsite responders.

Exercise Protective Action Recommendations

Initial Protective Action Recommendations will be based on Plant Conditions in accordance with Procedure IP-EP-410, Protective Action Recommendations and will occur at the declaration of a General Emergency at approximately 12:30 p.m. Those protective action recommendations will include the following ERPAs due to the wind direction of 205 degrees @ about 12 mph and Pasquill Category C.

1, 2, 3, 4, 7, 8, 9, 16, 18, 29, 30, 38, 39, 43, and 44

Upgraded Protective Action Recommendations will be based on the initiation of a radiological release and in accordance with Procedure IP-EP-410, Protective Action Recommendations. It will occur at approximately 13:50. Those protective action recommendations will include the following ERPAs due to the wind direction of 205 degrees @ about 12 mph and Pasquill Category C.

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 16, 17, 18, 19, 19, 20, 23, 24, 26, 29, 30, 31, 38, 39, 40, 43, 44, 45,
46, 47, 48, and 49

(The underlined ERPAs are the additional ERPAs recommended to evacuate due to the radiological release.)

2002 NRC/FEMA Exercise Scenario Timeline

Initial Conditions

Indian Point is at 100% Power for 120 Effective Full Power Days

#23 Charging Pump is out of service for pump schedule 5-year overhaul.

13.8 KV feed to Unit 2 has been out of service for 24 hours for bushing replacement on the auto transformer. A 72 Hr LCO is in effect per TS 3.7.B.2. The following 13.8 KV breakers are open and racked out for the transformer work:

52GT25, 52GT26, 52GT2, 52GT/BT

Meteorological Conditions

Wind direction is from 205 degrees at about 12 mph. The temperature is 70 F with clear skies.

Forecast – The long-term meteorological forecast will indicate that the wind direction will to the WNW that evening.

Scenario Timeline

08:00 Provide initial conditions to Control Room (Simulator Personnel)

08:20 A fault occurs on 480V Bus 3A. Emergency Diesel Generator #23 trips on over crank. Investigation will determine that there is a blockage in the fuel line at the duplex fuel filter. EDG #23 will not be returned to service before 12:45.

08:30 Reactor Coolant Pump #23 trips causing Turbine/Reactor Trip. A loss of 138 KV power occurs when the Generator Output breakers open. EDG #22 breaker to 480V Bus 2A fails to close. Investigation will determine that the cell switch is bad. Repair is not expected until 12:45. **An ALERT will be declared based on EAL 6.1.3 (~08:45).**

10:45 A Large Break LOCA occurs. Due to electrical failures, only #21 SI Pump will run. RVLIS level will decrease <41% and an Orange Path for Core Cooling will be identified. **A SITE AREA EMERGENCY will be declared based on EAL 1.2.1 (~11:00).**

11:15 Weld Channel Zone 2 will develop a high flow condition.

12:15 Containment radiation monitors R-25 and R-26 will increase > 68 R/hr. **A GENERAL EMERGENCY will be declared based on EAL 2.2.3 (~12:30). Protective Action Recommendations are provided.**

13:50 Weld Channel Zone 2 will lose pressurization and a release through the plant vent will be identified. **Protective Action Recommendations will be upgraded and provided.**

Investigation will determine that pressure regulator PCV-1195 has failed closed. Zone 2 will be repressurized at 15:15 terminating the release.

15:15 The scenario will end when the release is terminated and cold leg recirculation has been established.

~15:30 The Exercise will end when all objectives have been given ample opportunity for demonstration by BOTH onsite and offsite responders.

INDIAN POINT ENERGY CENTER UNIT 2

2002 EXERCISE SCENARIO

TIMELINE

~08:00 A.M.	Initial Conditions at the Plant
~08:45 A.M.	Alert
~11:00 A.M.	Site Area Emergency
~12:30 P.M.	General Emergency – Initial PARs issues
~1:50 P.M.	Radiological Release Begins – Updated PARs issued
~3:15 P.M.	Radiological Release Terminated
~3:30 P.M.	End of Exercise

INDIAN POINT ENERGY CENTER UNIT 2

2002 EXERCISE SCENARIO

METEOROLOGICAL CONDITIONS

Wind direction will be toward the NNE (Westchester and Putnam Counties) at about 12 mph. The winds will remain in that direction for the remainder of the exercise. The long-term meteorological forecast will indicate that the wind direction is expected to shift to the WNW that evening.

Time	Wind Direction	Wind Speed	Pasquill Category
0800	205	12 mph	C
0900	205	12 mph	C
1000	205	12 mph	C
1100	205	12 mph	C
1200	205	12 mph	C
1300	205	12 mph	C
1400	205	12 mph	C
1500	205	12 mph	C
1600	205	12 mph	C
1700	205	12 mph	C
1800	150	10 mph	C
1900	150	10 mph	C

APPENDIX 5

APPENDIX 5

PRIOR ISSUES NOT SCHEDULED TO BE DEMONSTRATED

This appendix contains the description and status of ARCAs that were assessed during prior exercises at Indian Point 2 Nuclear Power Station. They were assessed either at jurisdiction or functional entities exempt from demonstration at this exercise or for ingestion exposure pathway objectives not scheduled for demonstration during this exercise.

PRIOR ISSUES AT JURISDICTION OR FUNCTIONAL ENTITIES NOT SCHEDULED TO BE DEMONSTRATED

New York State Emergency Operations Center

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.