



FINAL REPORT

INDIAN POINT ENERGY CENTER FULL SCALE EXERCISE

Licensee: Entergy

Exercise Date: November 14, 2006

Report Date: February 9, 2007

**U.S. DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION II
26 Federal Plaza
New York, New York 10278**

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I. EXECUTIVE SUMMARY

The U. S. Department of Homeland Security, New York Field Office evaluated an exercise on November 14, 2006 and related out of sequence activities ending on November 29, 2006 in the plume exposure pathway emergency planning zone (EPZ) around the Indian Point Energy Center (IPEC). The purpose of the exercise and out of sequence activities was to assess the level of State and local preparedness in responding to a radiological emergency. The exercise and out of sequence activities were held in accordance with FEMA's policies and guidance concerning the exercise of State and local radiological emergency response plans (RERP) and procedures.

DHS 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 draft evaluation of the biennial exercise and 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 and Medical Drills.

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. There were no Deficiencies and 12 Areas Requiring Corrective Actions (ARCAs) identified; four of the ARCAs were resolved at the time of demonstration. One outstanding ARCA was resolved. Therefore there are 8 ARCAs remaining.

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.

DHS'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 DHS New York Field Office Regional Assistance Committee (RAC), which is chaired by DHS.

Formal submission of the RERPs for the IPEC to the New York Field Office of DHS 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 November 14, 2006 to assess the capabilities of State and local emergency preparedness organizations in implementing their RERPs and procedures to protect the public health and safety during a radiological emergency at the IPEC. 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 DHS New York Field Office Branch Chief and RAC Chairperson, and approved by the Acting Director of the Chemical and Nuclear Planning and Protection Division, Office of Infrastructure Protection, DHS.

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 information on the demonstration of applicable exercise evaluation areas at each jurisdiction or functional entity evaluated in a jurisdiction-based, issues-only format. This section also contains: (1) descriptions of all Deficiencies and Areas Requiring Corrective Action (ARCAs) assessed during this exercise, recommendations for 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 Off Site Response Organizations (OROs)' efforts to resolve them.

III. EXERCISE OVERVIEW

Contained in this section are data and basic information relevant to the November 14, 2006 exercise held to test the offsite emergency response capabilities in the area surrounding the IPEC. 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 IPEC's 10-mile plume pathway EPZ contains portions of four New York State counties: Orange, Putnam, Rockland, and Westchester.

The IPEC 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 IPEC 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 IPEC 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 IPEC 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. Indian Point Unit 1 was decommissioned and defueled in 1974.

IPEC's 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 3 exercise on June 8, 2004.

Federal Agencies

US Military Academy at West Point

State of New York

Board of Cooperative Education Services (BOCES)

Civil Air Patrol

New York State Department of Environmental Conservation

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 Office of Fire Prevention and Control

New York State Park Police

New York State Police

New York State Public Service Commission

New York State Police

New York Thruway Authority

New York Office of Emergency Transportation

Radio Amateur Civil Emergency Services (RACES)

State Emergency Management Office (SEMO)

State University of New York

Risk Jurisdictions

Orange County

Orange County Commission on Aging

Orange County Commissioner on Emergency Services
Orange County Commissioner on Finance
Orange County Commissioner on Fire Services
Orange County Commissioner on Mental Health
Orange County Commissioners on Health
Orange County Commissioners on Social Services
Orange County Department of Health
Orange County Department of Public Works, Buildings and Grounds
Orange County Department of Social Services
Orange County Deputy Commissioner for 911
Orange County District Attorney's Office
Orange County Division Budget
Orange County Division of Emergency Management
Orange County Division of Environmental Health
Orange County Division of Fire Services
Orange County Executive Office
Orange County Health Department
Orange County Maintenance
Orange County Radio Amateur Civil Emergency Services
Orange County Sheriff's Office

Putnam County

Putnam County Bureau of Emergency Services
Putnam County Department of Highways and Facilities
Putnam County Department of Social Services
Putnam County Deputy County Executive
Putnam County Division of Mental Health
Putnam County Office for Aging
Putnam County Patient Services
Putnam County Schools
Putnam County Sheriff's Department
Putnam Emergency Amateur Radio League (RACES)

Rockland County

Rockland Board of Cooperative Education Services
Rockland County Sheriff's Department
Rockland County Community College
Rockland County Clerk's Office
Rockland County Department of Finance and Administration
Rockland County Department of Health
Rockland County Department of Highways
Rockland County Department of Hospitals
Rockland County Department of Planning
Rockland County Department of Public Transportation
Rockland County Department of Social Services
Rockland County Division Environmental Resources

Rockland County Emergency Medical Services
Rockland County Executive's Office
Rockland County Facilities Management
Rockland County Fire and Emergency
Rockland County Fire Training Center
Rockland County Legislature
Rockland County Liaison Officer
Rockland County Management Information Systems
Rockland County Mental Health Department
Rockland County Office of Consumer Protection, Weights, and Measures
Rockland County Planning Board
Rockland County Sewer District, Sparkill
Rockland County Sheriff

Westchester County

Westchester County Bureau of Labor
Westchester County Commissioner
Westchester County Department of Consumer Protection
Westchester County Department of Emergency Services
Westchester County Department of Health
Westchester County Department of Information Technology
Westchester County Department of Parks
Westchester County Department of Planning
Westchester County Department of Public Services
Westchester County Department of Public Works
Westchester County Department of Social Services
Westchester County Department of Transportation
Westchester County Executive Office
Westchester County Geographical Information Services
Westchester County Office of Hispanic Affairs
Westchester County Police Department
Westchester County Senior Services

Support Jurisdictions

Clarkstown Police Department
Connecticut Department of Emergency Management and Homeland Security
Grassland Fire Brigade
New Castle Police Department
New Jersey Department of Environmental Protection, Bureau of Nuclear Energy
New Jersey Office of Emergency Management
New Jersey State Police
South Orangetown Volunteer Ambulance
Stoney Point Police Department
Yorktown Police Department

Bergen County

Bergen County Hazardous Materials Personnel
Bergen County Office of Emergency Management

Private/Volunteer Organizations

American Red Cross
Consolidated Edison
Cornell Cooperative Extension
Entergy Nuclear Northeast
Gilbert H. Cosnett & Associates
Local Cable Companies
Peter Brega Bus Company
Student Bus Company, Inc.
The Salvation Army
Transcare Ambulance Service
United Water Agency
Westchester Medical Center
WHUD Radio Station staff

C. Exercise Timeline

Table 1, on the following page, presents the time at which key events and activities occurred during the Indian Point Exercise on November 14, 2006. Also included are times notifications were made to the participating jurisdictions/functional entities.

TABLE 1. EXERCISE TIMELINE

November 14, 2006 – Indian Point Energy Center

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received or Action Was Taken					
		NY State EOC	NY State Call Center	EAS Station	JIC	EOF	Westchester Co. EOC
Alert	0749	0758	0758		0812	0749	0814
Site Area Emergency	0904	0911	0911		0940	0906	0915
General Emergency	1122	1124	1122		1130	1122	1125
Simulated Rad. Release Started	1122	1124	1122		1130	1115	1125
Simulated Rad. Release Terminated	1403	1404	1403		1403	1403	1404
Facility Declared Operational		0927	0903		0907	0833	0914
Declaration of State of Emergency Local State		0940	0940		0957 1010	1045	0810 0940
Exercise Terminated		1440	1443		1443	1442	1439
Early Precautionary Actions		0909	0915	* ¹		0910	0852
“Heads Up” Siren Activation		0910	N/A		0910	0914	0914
“Heads Up” EAS Message		0910	N/A	0918	0910	0918	0918
<u>1st Protective Action Decision</u> Shelter: ERPA 29 Evacuate: ERPAs 01,02,03,04,07,08,47,38,39,40,26,39,40,16,17,18 Siren Activation		1151	N/A		1152		1151
EAS Message		1153	N/A		1152	1153	1153
<u>2nd Protective Action Decision</u> Shelter: Evacuate: ERPAs 24, 25, 29 Siren Activation		1157	N/A	1158	1152	1157	1157
EAS Message		1245	N/A		1244	1243	1245
Shelter: Evacuate: ERPAs 24, 25, 29 Siren Activation		1247	N/A		1244	1247	1247
EAS Message		1251	N/A		1244	1251	1251
KI Administration Decision: EWs and ERPAs 26, 39, 40		1151	N/A		1152	1150	1151 1245

¹ 0852 River Ball Park closed; 0932 Schools transferred; 0950 Farm animals – stored feed; 1110 State/Local parks closed

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received or Action Was Taken					
		Westchester Warning Point	Westchester Public Call Center	Rockland County EOC	Bergen County EOC	Orange County EOC	Putnam County EOC
Alert	0749	0785	0845	0806	0840	0800	0758
Site Area Emergency	0904		0918	0910	1000	0912	0912
General Emergency	1122		1128	1134	1135	1125	1130
Simulated Rad. Release Started	1122		1154	1134	1200	1125	1130
Simulated Rad. Release Terminated	1403		1442	1347	1405	1405	1405
Facility Declared Operational			0916	0855	0855	0905	0930
Declaration of State of Emergency					1010		
Local			0922	0910		0920	0916
State				0940		0951	0940
Exercise Terminated			1442	1440	1440	1440	1445
Early Precautionary Actions:			0922			0920	* ²
“Heads Up” Siren Activation			0928	0914		0914	0914
“Heads Up” EAS Message			0928	0918		0918	0918
<u>1st Protective Action Decision</u>			1156	1151		1151	1151
Shelter: ERPAs 01,02,03,04,07,08,47,38,39,40,26,39,40,16,17,18							
Evacuate: ERPA 29							
Siren Activation			1156	1153		1153	1153
EAS Message			1156	1157		1157	1157
<u>2nd Protective Action Decision</u>			1252	1215		1245	1245
Shelter:				1245			
Evacuate: ERPAs 24, 25, 29							
Siren Activation			1252	1247		1247	1247
EAS Message			1252	1251		1251	1251
KI Administration Decision: EWs and ERPAs 26, 39, 40			1156	1151		1146	1151* ³

² 0904 Evacuate parks and evacuation areas; 0916 Cancel road construction work, Relocate schools in EPZ, Early dismissal for all other schools in County; 1000 Relocate Putnam Valley Senior Center to Carmel Senior Center; 1110 Transfer school students; Closed rivers and parks; Special populations evacuated – non-institutional/handicap

³ For evacuated populations all EW in EPZ

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 November 14, 2006 exercise to test the offsite emergency response capabilities of State and local governments in the 10-mile EPZ surrounding the IPEC.

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

The matrix presented in Table 2, on the following pages, presents the status of the exercise evaluation area criteria from the FEMA REP Exercise Evaluation Methodology that were scheduled for demonstration during this exercise by all participating jurisdictions and functional entities. Exercise evaluation area criteria are listed by number and the demonstration status of the 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

TABLE 2. Summary of Exercise Evaluation

SITE Indian Point DATE 14-Nov-06	Mobilization					Facilities					Direction & Control					Communications Equipment					Equipment & Supplies to Support Operations					Emergency Worker Exposure Control					Rad Assmt PARs Based on Avail Information					Rad Assmt PADs for General Public					Prot Action Decisions for Special Population's					Rad Assmt & Decision Making for Ingest Exposure					Rad Assmt & Dec Making for Relo/Re-entry/& Return					Implementation of Emergency Wrkr Exposure Control					Implementation of KI Decision					Implementation of PADs for Special Population's					Implementation of PADs for Schools					Implementation of Traffic Access & Control					Impediments to Evac & Traf are Identified & Resolved					Implementation of Ingestion Pathway Decisions					Impl of IP Decisions Show Strat & Instr Material					Impl of Relocation/Re-entry/Return Decisions					Plume Phase Measurement & Analysis Equip					Plume Phase Field Measurement & Analysis Mgmt					Plume Phase Fld Measurements & Analysis Proced					Post Plume Phase Field Measurements & Sampling					Laboratory Operations					Activation of Prompt Alert & Notification					Activation Prompt Alert & Notif 15 Min (Fast Breaker)					Activation Prompt Alert & Notif in Exception Areas					Emerg Info & Instructions for the Public & Media					Monitoring/Decon/Registration of Evacuees & EWs					Monitoring & Decon of Emerg Worker Equipment					Temporary Care of Evacuees					Trans & Treatment of Contam Injured Individuals				
	EMERGENCY OPNS MANAGEMENT					PROTECTIVE ACTION DECISION-MAKING					PROTECTIVE ACTION IMPLEMENTATION					MEASUREMENT & ANALYSIS					EMERG NOTIF & PUBLIC INFO					SUPPORT OPN/FACILITIES																																																																																																																																											
	1a1	1b1	1c1	1d1	1e1	2a1	2b1	2b2	2c1	2d1	2e1	3a1	3b1	3c1	3c2	3d1	3d2	3e1	3e2	3f1	4a1	4a2	4a3	4b1	4c1	5a1	5a2	5a3	5b1	6a1	6b1	6c1	6d1																																																																																																																																				
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EOC	M			M	M					M				M													M				M																																																																																																																																						
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M - Met (No Deficiency or ARCA(s) Assessed and no Unresolved ARCAs from Prior Exercises
N - Not Demonstrated as Scheduled (Reason Explained in Section IV.B)
Blank - Not Scheduled for Demonstration or Not Assigned to Facility/Function

A - ARCA(s) Assessed or Unresolved ARCA(s) from Prior Exercises
A1- ARCA Assessed and Corrected
D - Deficiency

SITE
Indian Point

DATE
14-Nov-06

LOCATION - Westchester County

SITE Indian Point	DATE 14-Nov-06	LOCATION - Westchester County																																																																																																																																																																				
		Mobilization					Facilities					Direction & Control					Communications Equipment					Equipment & Supplies to Support Operations					Emergency Worker Exposure Control					Rad Assmt PARs Based on Avail Information					Rad Assmt PADs for General Public					Prot Action Decisions for Special Population's					Rad Assmt & Decision Making for Ingest Expc					Rad Assmt & Dec Making for Relo/Re-entry/&					Implementation of Emergency Wrkr Exposure					Implementation of KI Decision					Implementation of PADs for Special Populatio					Implementation of PADs for Schools					Implementation of Traffic Access & Control					Impediments to Evac & Traf are Identified & R					Implementation of Ingestion Pathway Decisor					Impl of IP Decisions Show Strat & Instr Materi					Impl of Relocation/Re-entry/Return Decisions					Plume Phase Measurement & Analysis Equip					Plume Phase Field Measurement & Analysis I					Plume Phase Fld Measurements & Analysis P					Post Plume Phase Field Measurements & Sar					Laboratory Operations					Activation of Prompt Alert & Notification					Activation Prompt Alert & Notif 15 Min (Fast B					Activation Prompt Alert & Notif in Exception A					Emerg Info & Instructions for the Public & Mec					Monitoring/Decon/Registration of Evacuees &					Monitoring & Decon of Emerg Worker Equipm					Temporary Care of Evacuees					Trans & Treatment of Contam Injured Individu				
		EMERGENCY OPNS MANAGEMENT					PROTECTIVE ACTION DECISION-MAKING					PROTECTIVE ACTION IMPLEMENTATION															FIELD MEASUREMENT & ANALYSIS					EMERG NOTIF & PUBLIC INFO					SUPPORT OPN/FACILITIES																																																																																																																																	
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EOC	M	M	M	M	M			M	M				M	M	M	M												M	M																																																																																																																																									
Accident Assesment						M	M					M	M									M																																																																																																																																																
Field Monitoring Team	M											M	M								M		M																																																																																																																																															
Westchester PMC												M	M																	M	A1																																																																																																																																							
MS-1 Drill												A	M																			M																																																																																																																																						
Traffic Control Points												A1	M			M																																																																																																																																																						
Westchester Public Call Center	M																												M																																																																																																																																									
White Plains Control Cell																													M																																																																																																																																									
Warning Point	M	M	M	M	M																				M																																																																																																																																													
School Interviews														M																																																																																																																																																								

M - Met (No Deficiency or ARCA(s) Assessed and no Unresolved ARCAs from Prior Exercises
N - Not Demonstrated as Scheduled (Reason Explained in Section IV.B)
D - Deficiency

A - ARCA(s) Assessed or Unresolved ARCA(s) from Prior Exercises
A1 - ARCA Assessed and Corrected
Blank - Not Scheduled for Demonstration

SITE Indian Point DATE 14-Nov-06 LOCATION - Rockland County	Mobilization										Facilities										Direction & Control										Communications Equipment										Equipment & Supplies to Support Operations										Emergency Worker Exposure Control										Rad Assmt PARs Based on Avail Information										Rad Assmt PADs for General Public										Prot Action Decisions for Special Population's										Rad Assmt & Decision Making for Ingest Exposure										Rad Assmt & Dec Making for Relo/Re-entry/& Return										Implementation of Emergency Wrkr Exposure Control										Implementation of KI Decision										Implementation of PADs for Special Population's										Implementation of PADs for Schools										Implementation of Traffic Access & Control										Impediments to Evac & Traf are Identified & Resolved										Implementation of Ingestion Pathway Decisions										Impl of IP Decisions Show Strat & Instr Material										Impl of Relocation/Re-entry/Return Decisions										Plume Phase Measurement & Analysis Equip										Plume Phase Field Measurement & Analysis Mgmt										Plume Phase Fld Measurements & Analysis Proced										Post Plume Phase Field Measurements & Sampling										Laboratory Operations										Activation of Prompt Alert & Notification										Activation Prompt Alert & Notif 15 Min (Fast Breaker)										Activation Prompt Alert & Notif in Exception Areas										Emerg Info & Instructions for the Public & Media										Monitoring/Decon/Registration of Evacuees & EWs										Monitoring & Decon of Emerg Worker Equipment										Temporary Care of Evacuees										Trans & Treatment of Contam Injured Individuals									
	EMERGENCY OPNS MANAGEMENT					PROTECTIVE ACTION DECISION-MAKING					PROTECTIVE ACTION IMPLEMENTATION										FIELD MEASUREMENT & ANALYSIS					EMERG NOTIF & PUBLIC INFO					SUPPORT OPN/FACILITIES																																																																																																																																																																																																																																																																																																											
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A - ARCA(s) Assessed or Unresolved ARCA(s) from Prior Exercises
Blank - Not Scheduled for Demonstration

SITE Indian Point DATE 14-Nov-06	LOCATION - Orange County																																																																																																																																																																				
	Mobilization					Facilities					Direction & Control					Communications Equipment					Equipment & Supplies to Support Operations					Emergency Worker Exposure Control					Rad Assmt PARs Based on Avail Information					Rad Assmt PADs for General Public					Prot Action Decisions for Special Population's					Rad Assmt & Decision Making for Ingest Exposure					Rad Assmt & Dec Making for Relo/Re-entry/& Return					Implementation of Emergency Wrkr Exposure Control					Implementation of KI Decision					Implementation of PADs for Special Population's					Implementation of PADs for Schools					Implementation of Traffic Access & Control					Impediments to Evac & Traf are Identified & Resolved					Implementation of Ingestion Pathway Decisions					Impl of IP Decisions Show Strat & Instr Material					Impl of Relocation/Re-entry/Return Decisions					Plume Phase Measurement & Analysis Equip					Plume Phase Field Measurement & Analysis Mgmt					Plume Phase Fld Measurements & Analysis Proced					Post Plume Phase Field Measurements & Sampling					Laboratory Operations					Activation of Prompt Alert & Notification					Activation Prompt Alert & Notif 15 Min (Fast Breaker)					Activation Prompt Alert & Notif in Exception Areas					Emerg Info & Instructions for the Public & Media					Monitoring/Decon/Registration of Evacuees & EWs					Monitoring & Decon of Emerg Worker Equipment					Temporary Care of Evacuees					Trans & Treatment of Contam Injured Individuals				
	EMERGENCY OPNS MANAGEMENT					PROTECTIVE ACTION DECISION-MAKING					PROTECTIVE ACTION IMPLEMENTATION															FIELD MEASUREMENT & ANALYSIS					EMERG NOTIF & PUBLIC INFO					SUPPORT OPN/FACILITIES																																																																																																																																	
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M - Met (No Deficiency or ARCA(s) Assessed and no Unresolved ARCAs from Prior Exercises

N - Not Demonstrated as Scheduled (Reason Explained in Section IV.B)

D - Deficiency

A - ARCA(s) Assessed or Unresolved ARCA(s) from Prior Exercises

Blank - Not Scheduled for Demonstration

[illegible]

LOCATION - Putnam County

M - Met (No Deficiency or ARCA(s) Assessed and no Unresolved ARCAs from Prior Exercises)
N - Not Demonstrated as Scheduled (Reason Explained in Section IV.B)
D - Deficiency

B. Status of Jurisdictions Evaluated

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

- **Met** - Listing of the demonstrated exercise evaluation criteria 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 evaluation criteria 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 evaluation criteria 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 evaluation criteria 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 have adverse 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.

1. NEW YORK STATE

1.1 Emergency Operations Center

- a. MET:** 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.1, 2.b.2, 2.c.1, 3.c.1, 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

1.2 Emergency Operations Facility

- a. MET:** 1.a.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.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

1.3 Joint Information Center

- a. MET:** 1.a.1, 1.b.1, 1.c.1, 1.e.1, 5.a.1, 5.b.1
- b. DEFICIENCY:** NONE
- c. AREAS REQUIRING CORRECTIVE ACTION:** ONE

ISSUE: 32-06-1.d.1-A-01

ISSUE FOR CRITERION: 1.d.1

CONDITION: During the media briefings held at 0934 and 1201, spokespersons from the State, Westchester County, the Moderator and Representatives from Putnam, Orange and Rockland experienced audio transmission drop out and static which interfered with the transmission of spoken information from the Media Briefing Room at the Joint Information Center and the Media Briefing areas in Putnam, Orange and

Rockland Counties. A back-up communication bridge was available but not used.

POSSIBLE CAUSE: Failure of the audio transmission equipment was responsible for the drop out of the audio signal which could not be corrected during the two media briefings.

REFERENCE: NUREG-064, F.1.a

EFFECT: Because of the problems experienced with the transmission of the audio signal during the 0934 and 1201 media briefings, the County Spokespersons were unable to hear and respond to questions from the Media, nor were they able to understand the statements to the Media from the State, Moderator and Westchester County Spokespersons. While information presented to the Media from the State, Moderator and Westchester County Spokespersons was discussed with the Putnam, Orange and Rockland Counties during the pre-briefing conferences held prior to each of the Media Briefings, the Counties were not able to confirm that the information presented was that which was discussed at the pre-briefings. This could lead to inaccurate or inadequate information being transmitted to the media and ultimately the public. It also did not allow Putnam, Orange and Rockland counties the opportunity to respond to questions from the media.

RECOMMENDATION: Use available back-up equipment during the failure of communications equipment or have actual representatives from each respective area present at the Media Briefings.

SCHEDULE OF CORRECTIVE ACTIONS: To be demonstrated at the next federally-evaluated biennial exercise.

- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAS – RESOLVED:** ONE

PRIOR ISSUE: 32-04-5.b.1-A-01

DESCRIPTION: Neither EAS messages nor the Follow-On-Bulletin were provided to the public in Spanish. It is noted that the Bureau of the Census has listed the county of Westchester as a county where there is greater than 5% of the adult voting age population that are non-English speaking population. Because of this all public information materials, EAS messages, and Follow-On-Bulletins must be in Spanish. It is noted that there is a write-in card in the back of the booklets to submit in order to get a non-English booklet.

REFERENCE: Based on the 2000 Census, a Federal Register notice in 2002 indicated that Westchester County must provide information in Spanish. This is based on the Voting Rights Act and the requirement to provide information if there is 5% of the adult voting population who does not use English. See also REP Program Guidance Memorandum 20, “Foreign Language Translation of Public Education Brochures and Safety Messages.”

CORRECTIVE ACTIONS DEMONSTRATED: Westchester County submitted a letter to DHS dated June 6, 2006 outlining the proposed plan of action to remediate this ARCA. DHS approved the proposed plan of action, which is to provide the Spanish stations with the messages in English and have them translate it for their audiences (per the usual procedure for other types of emergencies). The Public Information Brochure is available in Spanish. This issue is closed.

- f. **PRIOR ARCAS – UNRESOLVED:** NONE

1.4 Emergency Alert Station - Station WHUD-FM

- a. **MET:** 1.d.1,5.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

1.5 State of New York Call Center

- a. **MET:** 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 5.b1
- 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:** 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.1, 2.c.1, 2.b.2, 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

2.1.2 Orange County – Warning Point

- a. MET:** 1.a.1, 1.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

2.1.3 Orange County – Field Monitoring Teams

- a. MET:** 1.a.1, 1.d.1, 3.a.1, 3.b.1, 4.a.1, 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

2.1.4 Orange County – School Reception Centers (South Junior High School - October 23, 2006; Warwick Valley High School – June 30, 2006)

- a. **MET:** 3.a.1, 3.b.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

2.15 Orange County – Transit Dependent Bus Company Interview (Monroe Woodbury Bus Company – June 1, 2006)

- a. **MET:** 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

2.1.6 Orange County - School Interview (Highland Falls Elementary School – June 8, 2006)

- a. **MET:** 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

2.1.7 Orange County Medical Drill (Cornwall Hospital – November 17, 2005)

- a. MET: 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**

2.1.8 Orange County Traffic and Access Control (County Sheriff's Dept. – November 14, 2006)

- a. MET: 3.a.1, 3.b.1, 3.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 PUTNAM COUNTY

2.2.1 Putnam County - Emergency Operations Center

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

ISSUE No: 32-06-5.a.3-A-02

ISSUE FOR CRITERION: 5.a.3

CONDITION: The Putnam County Sheriff's Department EOC representative did not follow up on the time it took to complete backup route alerting that was performed (simulated) following a report of siren failures when the Emergency Classification Level was at Alert. The requirement for backup route alerting is that it be completed within 45 minutes (per NUREG-0654, E.6, Appendix 3.B.2.c), and the estimate by the NYSP of how long the simulated demonstration took was about an hour.

POSSIBLE CAUSES: The Putnam County Radiological Emergency Response Plan, Section III.2.d, *Public Alert and Notification* and Appendix F, *Public Notification Plan*, both dated May 2006, do not specifically state that backup route alerting must be completed within 45 minutes of the time of notification of a siren failure within the county. Appendix F also does not require the Sheriff's Department EOC representative to verify that the backup route alerting task is completed in a timely manner. Also, the Putnam County EOC does not appear to have a mechanism in place to alert its Operations and Command and Control staff of the pending status of time-sensitive tasks, such as route alerting, before they are due.

REFERENCE: NUREG-0654, E. 6, Appendix 3.B.2c. Putnam County Radiological Emergency Response Plan, Section III.2.d, *Public Alert and Notification*; and Appendix F, *Public Notification Plan*, May 2006.

EFFECT: If backup route alerting had been required as part of the implementation of a protective action decision to evacuate population within Putnam County, failure to complete the backup route alerting task in a timely manner (45 minutes from siren failure notification) could potentially result in the affected population not being aware of the emergency and possible protective action recommendations. Since the route was run during the Alert, there were no protective action recommendations; the message was just a "heads up" notification.

RECOMMENDATION: The Putnam County Radiological Emergency Response Plan (Section III.2.d, *Public Alert and Notification* and Appendix F, *Public Notification Plan*) should be revised to explicitly indicate that backup route alerting must be completed within 45 minutes of the time when Putnam County receives information of a siren failure. Since the New York State Police is a backup resource for the county for conducting backup route alerting (per Section III, 3.b of the plan), Section III.2.d and Appendix F of the Putnam County RER Plan should be revised accordingly. Following these updates to its plan and procedures, training should be provided to all key staff that would be responsible for implementation of backup route alerting, particularly regarding the time-sensitive nature of the task and the revised sections of the REP Plan and procedures. It is also recommended that Putnam County establish a mechanism to alert its operations and command and control staff of the pending status of time-sensitive tasks before they are due. Possibly Putnam County could explore the feasibility of incorporating such a mechanism into its electronic EOC information management system.

SCHEDULE OF CORRECTIVE ACTIONS: Plans and procedures will be revised accordingly and submitted to DHS for review. Training of the route alert teams and key staff will be done. To be demonstrated at the next federally-evaluated, biennial exercise.

ISSUE No: 32-06-5.b.1-A-03

CONDITION: The Putnam County Public Information Officer (PIO)/Joint Information Center (JIC) Workroom did not receive operations information of significant public relevance in a timely manner. As a result, in some cases, inaccurate information was presented during media briefings and, in other cases, there were delays in making up-to-date information available to the media and the public. Because the lead PIO for the county was also the EOC Operations Officer, some public and media inquiries that were successfully handled by the EOC Operations Officer did not get relayed to the EOC Emergency Information Coordinator and the PIO/JIC Workroom was not made aware of these inquiries.

POSSIBLE CAUSES: During the exercise, the Putnam County PIO had as his primary responsibility the function of Emergency Operations Center (EOC) Operations Officer. As a result, he was unable to effectively lead the public information efforts. The lead PIO function was not delegated to any member of the PIO/JIC Workroom staff. The Putnam County Spokesperson and the Emergency Management Director did not coordinate prior to media briefings. The EOC Emergency Information Coordinator did not effectively convey to the PIO/JIC Workroom staff key information and updates discussed during EOC briefings. The PIO/JIC Workroom staff is not sufficiently familiar with the EOC information management system, and needs additional training regarding proper handling of public inquiries.

REFERENCES: NUREG-0654, E. 5, 7; G.3.a., G.4.c; Putnam County Radiological Emergency Response Plan, Procedure 16, *Public Information / Education*, May 2006; and the *Joint Information Center Procedures*, October 26, 2006.

EFFECT: Failure to promptly provide information to the media and the public about, for example, a traffic accident that has affected an evacuation route, as well as information about the alternate route to be used, could result in delays in the evacuation process, potentially having a negative impact on public health and safety.

RECOMMENDATION: Procedure 16, *Public Information / Education* of the Putnam County Radiological Emergency Response Plan should be revised to clarify roles and responsibilities regarding the public information function to ensure effective and timely flow of critical information between the EOC operations staff and the PIO/JIC Workroom. The revisions should be consistent with the *Joint Information Center Procedures*.

Putnam County should consider the formal delegation of the PIO responsibility to a member of the PIO/JIC Workroom. All staff involved in public information activities, including all staff members who may receive public or media inquiries in person or via telephone, should receive training on the revised procedures. Additionally, all members of the EOC operations staff should be made aware of their role in public information activities to ensure that the Emergency Information Coordinator and the PIO/JIC Workroom are made aware of critical information. As appropriate, standard operating procedures for individual EOC functions should be revised to identify any events or activities that should be brought to the immediate attention of the PIO staff.

SCHEDULE OF CORRECTIVE ACTIONS: Putnam's plans and procedures will be revised accordingly. Training will be given on the new procedures. To be demonstrated at the next federally-evaluated, biennial exercise.

2.2.2 Putnam County Warning Point

- a. MET:** 1.a.1, 1.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

2.2.3 Putnam County - Field Monitoring Teams

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

ISSUE: 32-06-3.a.1-A-04

ISSUE FOR CRITERION: 3.a.1

CONDITION: The Putnam County Field Monitoring Teams (FMTs) were directed, at 11:35 a.m., to take KI in response to the declaration of a General Emergency at Indian Point. The FMTs were never informed that a radioactive release had occurred and were not directed to don protective clothing (to be simulated). This is in direct contradiction to the requirements in the Putnam County Radiological Emergency Response Plan, Section 3.4 (p. 4-41), which states, “team members will be directed to don protective clothing when the following three conditions are met: (1) A General Emergency has been declared, (2) there has been a release of radioactive material from the site, and (3) the wind is blowing from the site toward Putnam County.” Since these conditions were met in the scenario, the direction to the FMTs to dress in Anti-Contamination clothing should have been given concurrent with the notice to ingest KI, but was omitted from the radio communicated notice.

POSSIBLE CAUSE: Communications with the FMTs was provided by Radio Amateur Civil Emergency Service (RACES) volunteers from a radio room in the Putnam County Emergency Operations Center. Direction and control of the FMTs was provided by the Radiological Officer (RO) located in the Dose Assessment section of the county EOC. Communications between these locations, which are separated by the Administration Room, was primarily by radio communications. FMT actions desired by the Radiological Officer were transmitted to the RACES radio control operator who relayed them to the FMTs

via the two meter radio band.

The RACES radio control operator recorded on the RACES communication log (Putnam County Radiological Emergency Response Plan, Procedure 4, *Radiological Officer*, Page 4-59) at 11:29 a.m., information from the RO that a General Emergency had been declared and that a radiological release had occurred at 11:24. The information that a release was in progress was not relayed to the FMT's by the radio operator. However, the important information to relay to the FMTs would have been to don protective clothing. There is no designated place to record this command on the communication log, so it is unclear if the command was ever given by the RO or if the radio operator failed to record and communicate it to the FMTs.

REFERENCE: NUREG-0654, K.5.b; Putnam County Radiological Emergency Response Plan, Procedure 4, *Radiological Officer*, Section 3.4 (p. 4-41), and RACES Log Form, page 4-59.

EFFECT: Since the FMTs were in the plume for a period of time, the omission of a command to don protective clothing could have resulted in unnecessary exposure to and contamination of field team members.

SCHEDULE OF CORRECTIVE ACTIONS: The relevant portions of the Putnam plan and procedures will be revised, and training will be given on the revised procedure. To be demonstrated at the next federally-evaluated biennial exercise.

ISSUE: 32-06-4.a.3-A-05

ISSUE FOR CRITERION: 4.a.3

CONDITION: Putnam County Field Team Alpha did not take radiation exposure rate readings at the 5 minute mark and at the completion of the air sampling. These additional exposure rate surveys are called for in Step 1.6 of the Airborne Survey Techniques method (Putnam County Radiological Emergency Response Plan, Procedure 4, *Radiological Officer*, p. 4-68).

POSSIBLE CAUSE: The team was not working with a copy of the procedure in hand and thus missed the requirement for the additional surveys during the air sampling process.

REFERENCE: NUREG-0654, I.9; Putnam County Radiological Emergency Response Plan, Procedure 4, *Radiological Officer*, p. 4-68.

EFFECT: The omission had no effect during this exercise because all the air samples taken by Field Team Alpha were done outside the plume areas and in conditions of constant, background air concentrations of radionuclides. Had Field Team Alpha been inside a region where a plume shift occurred during the

air sampling process, the air samples could have been incorrect and/or misleading because the sample analysis would have erroneously assumed a constant air concentration of radionuclides during the time of the sample collection when in fact the sample was taken during a condition of variable concentration.

RECOMMENDATION: Field teams should be trained to have one member referring to the procedure when performing measurement and analysis activities.

SCHEDULE OF CORRECTIVE ACTIONS: Training will be done to have one field team member referring to the procedure when performing measurement and analysis activities. To be demonstrated at the next federally-evaluated, biennial exercise.

2.2.4 Putnam County - Reception Center (Brewster High School – November 7, 2006)

- a. **MET:** 3.a.1, 3.b.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

2.2.5 Putnam County – School Reception Center (Kent Primary School – June 28, 2006)

- a. **MET:** 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

2.2.6 Putnam County – Transit Dependent Buses (Mahopac Central School District – August 23, 2006)

- a. **MET:** 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

2.2.7 Putnam County – School Bus Interviews (Mahopac Central School District – August 23, 2006)

- a. **MET:** 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 (The Nest Nursery School – September 21, 2006; St. Luke's Nursery School - July 14, 2006; Community Nursery School of First Presbyterian Church – July 14, 2006; Bounous Montessori Nursery School – September 21, 2006)

- a. **MET:** 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 (Putnam Hospital Center/Carmel Ambulance – June 22, 2006)

- a. MET: 3.b.1**
- b. DEFICIENCY: NONE**
- c. AREAS REQUIRING CORRECTIVE ACTION: TWO**

ISSUE: 32-06-3.a.1-A-06

ISSUE FOR CRITERION: 3.a.1

CONDITION: The Putnam Hospital Center staff member from the radiological department did not use appropriate techniques when attempting to zero the DRDs prior to distributing them to the staff in the Radiological Emergency Area (REA). He failed to recognize that the battery in the dosimeter charger was not operable because he failed to look into the DRDs when attempting to charge the DRDs.

POSSIBLE CAUSE: Lack of familiarity with the DRD charger and lack of proper training.

REFERENCE: NUREG-0654 K.3.a and 3.b; Putnam County Radiological Emergency Response Plan, Procedure 4, *Radiological Officer*, Attachment 2, Section 2.

EFFECT: Dosimetry was not zeroed. Purely by chance, there were a sufficient number of DRDs that were partially charged so that all the staff in the REA were issued DRD with readings less than half scale.

RECOMMENDATION: Review hospital procedures to assure that there are appropriate instructions on exactly how the dosimeter charger should be operated and provide training to the hospital staff responsible for issuing dosimetry to the REA staff.

CORRECTIVE ACTIONS TAKEN: The controller from the Indian Point Energy Center obtained a new battery, installed it in the dosimeter charger, and instructed a hospital radiological department staff member on the proper operation of the dosimeter charger. The hospital staff member re-demonstrated zeroing the DRDs appropriately. This issue is considered closed.

ISSUE: 32-06-3.a.1-A-07

ISSUE FOR CRITERION: 6.d.1

CONDITION: The Putnam Hospital Center staff member from the radiological department did not use appropriate techniques when monitoring for contamination on the arriving victim and/or the ambulance crew and its equipment. The detector was passed over the surface at a speed that was unacceptably rapid.

POSSIBLE CAUSE: Unfamiliarity with external contamination monitoring requirements.

REFERENCE: NUREG-0654, K.5.a and b, L.1.

EFFECT: At the speed that the detector was being passed over the surface being monitored, the normal response time of the instrument would not allow the instrument to give a positive response for spot contamination, therefore the objective of monitoring would not be accomplished.

RECOMMENDATION: Review hospital procedures to assure that there are appropriate instructions on what speed should be maintained when moving the detector over a surface and provide training to the hospital staff responsible for monitoring for external contamination.

CORRECTIVE ACTIONS TAKEN: The lead medical controller stopped the technician who was monitoring too rapidly and provided guidance on instrument movement rate. During successive monitoring tasks whenever the technician began to increase his probe movement rate, a hospital staff member reminded the technician to slow his monitoring rate. This issue is considered closed.

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

2.2.10 Putnam County – Traffic and Access Control (County Sheriff’s Dept. – November 14, 2006)

- a. **MET:** 3.a.1, 3.b.1
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** ONE

ISSUE: 32-06-3.d.1-A-08

ISSUE FOR CRITERION: 3.d.1

CONDITION: During the Indian Point Energy Center (IPEC) radiological emergency response exercise on November 14, 2006, the Putnam County Emergency Management Agency provided two Putnam County Sheriff's Department management personnel for interviews to demonstrate the extent of play with regard to the ability to provide staffing at traffic and access control points (TCP/ACP). The intent of the extent of play interviews was to determine if personnel who normally would staff TCP/ACPs had adequate knowledge and training to fulfill these functions. The management personnel provided, who were both sergeants and playing as the Sheriff's Department representatives at the EOC, did not meet the intent of the extent of play.

POSSIBLE CAUSE: Apparently the Sheriff's Department was reluctant to pull any additional personnel from the field for the exercise. Although the NY State Police were willing to provide TCP/ACP personnel to be interviewed, and actually brought staff to the EOC for that purpose, the Putnam County officials did not want the state police interviewed, and indicated that a provision on page 46 of the extent of play clearly indicated that the interviews only applied to the county Sheriff's Department personnel.

REFERENCE: NUREG 0654, J.10.g. and j.

EFFECT: It was not possible to determine if personnel likely to be assigned to TCP/ACPs had adequate knowledge of the procedures and emergency worker protection measures.

RECOMMENDATION: Putnam County should redemonstrate this portion of the extent of play using personnel likely to be assigned to TCP/ACP duties.

SCHEDULE OF CORRECTIVE ACTIONS: To be demonstrated at the next federally-evaluated, biennial exercise.

- 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:** 1.a.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

2.3.2 Rockland County – Warning Point

- a. **MET:** 1.a.1, 1.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

2.3.3 Rockland County - Field Monitoring Teams

- a. **MET:** 1.a.1, 3.a.1, 3.b.1, 4.a.1, 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

2.3.4 Rockland County - Reception Center (Suffern High School - Social Services - October 24, 2006; Spring Valley – Monitoring & Decontamination September 25, 2006)

- a. MET: 3.a.1, 3.b.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

2.3.5 Rockland County – Transit Dependent Bus Company Interviews (East Ramapo Central School District – May 25, 2006; TRIPS July 19, 2006)

- a. MET: 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

2.3.6 Rockland County – Special Population Bus Run (Student Bus Co. – November 14, 2006) (Peter Brega Bus Co. – November 14, 2006)

- a. MET: 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 (East Ramapo Central School District – May 25, 2006; TRIPS – July 19, 2006)

- a. MET: 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 (Albertus Magnus High School, Jawonio Inc Special Needs School, Ramapo High School, Cornerstone Christian School, Street School Community Center Preschool, Pomona Middle School, Ages and Stages Preschool, Head Start of Rockland County, Immaculate Conception Preschool, Talmud Torah Adas Khal Yereim Preschool, Sonshine Community Preschool, Rockland County Worksite Day Care, Prime Time For Kids Preschool, Colton Elementary - November 21, 2006)

- a. MET: 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 (Good Samaritan Hospital - May 4, 2006)

- a. MET: 3.a.1, 3.b.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 and Access Control (County Sheriff's Dept., Stony Point Police Dept. – November 14, 2006)

a. **MET: 3.a.1, 3.b.1, 3.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**

2.3.11 Rockland County - Emergency Worker Personnel Monitoring Center (County Sewer District, Sparkill – November 14, 2006)

a. **MET: 3.b.1, 6.a.1; 6.b.1**

b. **DEFICIENCY: NONE**

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

ISSUE: 32-06-3.a.1-A-09

ISSUE FOR CRITERION: 3.a.1

CONDITION: The South Orangetown Ambulance Emergency Medical Technicians (EMT) were issued a high range 0 to 200 R direct reading dosimeter but were not issued a low range dosimeter.

POSSIBLE CAUSE: There may not have been an adequate supply of the lower range dosimeters or, this could be a mistake.

REFERENCE: NUREG-0654 K.3.a and 3.b; Rockland County Radiological Emergency Response Plan, Procedure DOH-4, *Dept of Health*, Exposure Control Coordinator.

EFFECT: The ambulance EMT would not be able to properly monitor their exposure and determine if they had exceeded their exposure reporting limits of 1 R and 3 R.

RECOMMENDATION: The ambulance EMT should be issued a direct reading dosimeter with a range that is lower than 0 to 200 R so that they can

more accurately determine if they had exceeded the 1 R and 3 R exposure reporting limit.

SCHEDULE OF CORRECTIVE ACTIONS: This will be demonstrated at the next federally- evaluated biennial exercise.

- 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:** 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 – Warning Point

- a. MET:** 1.a.1, 1.d.1; 5.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

2.4.3 Westchester County - Field Monitoring Teams

- a. MET:** 1.a.1, 3.a.1, 3.b.1, 4.a.1, 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

2.4.4 Westchester County - Traffic Control Points (New Castle Police Dept; Yorktown Police Department – November 14, 2006)

- a. **MET:** 3.b.1, 3.d.1; 3.d.2; 6.a.1, 6.b.1
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** ONE

ISSUE: 32-06-3.a.1-A-10

ISSUE FOR CRITERION: 3.a.1

CONDITION: The high range Direct Reading Dosimeters (DRD) (0-200R) stored at the Yorktown Police Department and included in the dosimetry kits for emergency workers were out of calibration. Every high range DRD had a calibration sticker stating that the calibration due date was 6/26/06.

POSSIBLE CAUSE: The DRDs are part of the dosimetry equipment that is distributed county-wide by Westchester County. The New Castle Police Department did have DRDs within calibration, apparently because some older dosimeters that are used just for training were mixed in with the current ones.

REFERENCE: NUREG-0654, K.3.a, b; Westchester County Radiological Emergency Plan, Implementing Procedure 2.0, *Department of Public Safety*, Checklist 2, Radiological Emergency Reference Guide for Traffic Control Personnel, Personnel Protection, September 2006.

EFFECT: If emergency workers manning traffic control points or otherwise deployed in the field use high range DRDs that are out of calibration it is possible that faulty readings could occur and provide bad information to workers who might be exposed to a plume.

RECOMMENDATION: Ensure that all dosimetry equipment to be used in the field is within appropriate calibration dates.

CORRECTIVE ACTIONS DEMONSTRATED: Westchester Emergency Management personnel revisited the Yorktown Police Dept. shortly after the exercise to remove the old dosimeters so that they are not used by mistake, and ensured that all the dosimeters in the department were properly calibrated. This issue is considered closed.

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

**2.4.5 Westchester County – Emergency Worker Personnel Monitoring Center
(Westchester County Fire Training Center – November 14, 2006)**

a. MET: 3.b.1, 6.a.1

b. DEFICIENCY: NONE

c. AREAS REQUIRING CORRECTIVE ACTION: ONE

ISSUE: 32-06-3.a.1-A-11

ISSUE FOR CRITERION: 6.b.1

CONDITION: A few of the Ludlum 2401-P G-M meters had the range-multiplier switch set at “x10” rather than “x1” at the beginning of a survey. In addition, interviewing identified there was not a clear understanding of how to get an exposure rate reading using the range-multiplier switch and the needle position on a meter face displaying two scales (mR/hr and cpm).

POSSIBLE CAUSE: Lack of sufficient training to assure that all emergency workers were familiar with the instruments used to determine the need for decontamination.

REFERENCE: NUREG-0654, K.5.a

EFFECT: Without certainty on what the instrument reading represents, vehicles and equipment could be released for unrestricted use that were contaminated above the accepted limits for unconditional release.

RECOMMENDATION: Review and revise training procedures to assure that workers are familiar with all aspects of instrument options and what these options represent so that vehicles and equipment are not released for use that are above the Accepted limits of contamination..

CORRECTIVE ACTIONS DEMONSTRATED: The monitoring staff were provided refresher training by a State controller on the use of the 2401-P instruments that included the a review of the two scales shown on the meter face and the use of the range multiplier switch including the appropriate range to be used in determining when items are contaminated above the accepted limits. After the refresher training, the staff re-demonstrated appropriate monitoring techniques and were able to explain the appropriate use of the 2401-P instruments. This issue is considered closed.

b. NOT DEMONSTRATED: NONE

c. PRIOR ARCAS - RESOLVED: NONE

f. PRIOR ARCAS - UNRESOLVED: NONE

2.4.6 Westchester County - Medical Drill – MS-1 (Transcare Ambulance Service – Westchester Medical Center – November 14, 2006)

- a. MET:** 3.b.1, 6.a.1
- b. DEFICIENCY:** NONE
- c. AREAS REQUIRING CORRECTIVE ACTION:** NONE

ISSUE: 32-06-3.a.1-A-12

ISSUE FOR CRITERION: 3.a.1

CONDITION: The ambulance crew (Transcare Ambulance Service) who responded to the Emergency Worker Personnel Monitoring Center (PMC) to transport the injured emergency worker did not have any dosimetry. While the PMC was located outside the emergency planning zone, handling and transporting a contaminated emergency worker requires the use of dosimetry by the ambulance crew in accordance with Westchester County Procedure IP-3.3, Section 3.5.

POSSIBLE CAUSE: Failure to recognize the need to have and wear appropriate dosimetry when working with contaminated or potentially contaminated injured personnel.

REFERENCE: NUREG 0654, K.3.a; Westchester County Radiological Emergency Plan, Procedure IP-3.3, *Radiological Safety Officer*, Section 3.5.

EFFECT: Without dosimetry, there is no mechanism to determine the exposure to the ambulance crew that would be received while handling the injured contaminated emergency worker.

RECOMMENDATION: Assure through appropriate procedural requirements and training that all ambulance personnel who respond to PMCs understand that they should have dosimetry and are issued dosimetry before they come in contact with contaminated or potentially contaminated injured emergency workers.

SCHEDULE OF CORRECTIVE ACTIONS: Updated procedures to be provided with next plan submission, and demonstrated at the next federally-evaluated biennial exercise, or associated out-of-sequence demonstration.

- d. NOT DEMONSTRATED:** NONE
- e. PRIOR ARCAS - RESOLVED:** NONE

f. PRIOR ARCAS - UNRESOLVED: NONE

2.4.7 Westchester County - School Interviews (Lakeland School District (Lincoln-Titus Elementary School, George Washington Elementary School, Van Cortlandtville Elementary School, Walter Panas High School, Benjamin Franklin Elementary School, Lakeland High School, Lakeland Alternative High School, Thomas Jefferson Elementary School, Lakeland Copper Beach Middle School) – September 19, 2006; Putnam/Northern Westchester BOCES (Pines Bridge, Fox Meadow Campus), Hendrick Hudson School District (Buchanan-Verplanck Elementary School, Furnace Woods Elementary School, Blue Mountain Middle School, Hendrick Hudson High School), and Briarcliff Manor School District (Briarcliff High School and Middle School, Todd Elementary School) – September 27, 2006; Ossining Chappaqua School District (Brookside School in Yorktown Heights, Park School, Roosevelt School, Claremont Elementary, Ossining High School) - October 17, 2006; Yorktown & Somers School District (Brookside School in Ossining, Mildred S. Strang Middle School, Yorktown High School, French Hill, Mohansic School) - October 26, 2006; ; Croton-Harmon School District (Croton-Harmon Elementary School, Carrie E. Tompkins Elementary School, Croton-Harmon Middle School, Croton-Harmon High School) – December 7, 2006; Peekskill School District – December 12, 2006).

- a. MET: 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 – Public Call Center (White Plains, November 14, 2006)

- a. MET: 1.a.1, 1.b.1, 1.d.1, 1.e.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**

3. SUPPORT JURISDICTION

3.1 Bergen County - Emergency Operations Center

- a. MET:** 1.a.1, 1.c.1, 1.d.1, 1.e.1, 3.c.2, 3.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

APPENDIX 1. ACRONYMS AND ABBREVIATIONS

ACP	Access Control Point
ARC	American Red Cross
ARCA	Area Requiring Corrective Action
ARES	Amateur Radio Emergency Service
BOCES	Board of Cooperative Educational Services
CFR	Code of Federal Regulations
CPM	Counts Per Minute
DHS	Department of Homeland Security
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
ERPA	Emergency Response Planning Area
EWPMC	Emergency Worker Personnel Monitoring Center
FDA	U.S. Food and Drug Administration
FEMA	Federal Emergency Management Agency
GE	General Emergency
ICF	ICF Consulting, Inc.
IPEC	Indian Point Energy Center
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	
NYS	New York State
NYSEMO	New York State Emergency Management Office
OCEOC	Orange County Emergency Operations Center
ORO	Offsite Response Organization
PAR	Protective Action Recommendation
PCEOC	Putnam County Emergency Operations Center
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
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

APPENDIX 2. EXERCISE EVALUATORS AND TEAM LEADERS

The following is a list of the personnel who evaluated the Indian Point 3 exercise on November 14, 2006. 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
DHS	- Department of Homeland Security
EPA	- Environmental Protection Agency
FEMA	- Federal Emergency Management Agency
NRC	- Nuclear Regulatory Commission
USDA	- US Department of Agriculture
ICF	- ICF Consulting

POSITION	NAME	ORGANIZATION
RAC Chairperson & Project Officer	Rebecca Thomson	DHS

EVALUATION SITE	EVALUATOR	ORGANIZATION
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New York State

Emergency Operations Center (EOC)	Bob Poole (TL)	DHS
	Marcy Campbell (AA)	ICF
	Walter Gawlak	ICF
	Bob Duggleby	ICF

New York State Call Center	Glenn Kinnear	ICF
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Emergency Operations Facility (EOF)	Rich Barkley	NRC
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Joint News Center (JNC)	Henry Christiansen (TL)	ICF
	Deborah Bell	ICF
	Kim Wood	ICF
	Douglas Stutz	ICF

EAS Station	David Goldbloom - Helzner	ICF
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White Plains Control Cell	P.J. Nied	ICF
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EVALUATION SITE	EVALUATOR	ORGANIZATION
Orange County		
Orange County EOC	Roy Smith (TL)	ICF
	Harry Harrison (AA)	ICF
	Bud Ianazzo	ICF
	Wayne Shych	DHS
Warning Point	Marynette Herndon	ICF
Field Monitoring Teams	Eric Simpson	USEPA
	William McRee	ICF
Traffic Control Point Interview	Bud Ianazzo	ICF
Putnam County		
Putnam County EOC	Mabel Santiago (TL)	DHS
	Melody Geer (AA)	ICF
	Wendy Swygert	ICF
	Alejandro Fernandez	ICF
	Jim Hickey	ICF
Warning Point	Nick Lowe	ICF
Field Monitoring Teams	Charles Phillips	ICF
	Ray Woods	ICF
Rockland County		
Rockland County EOC	Bill Cullen (TL)	DHS
	Daryl Thome (AA)	ICF
	Jeff Tappen	ICF
	Jane Young	DHS
	Sam Nelson	ICF
Warning Point	Nancy Johnson	ICF
Field Monitoring Teams	Jim Reese	ICF
	Mike Leal	FDA

EVALUATION SITE	EVALUATOR	ORGANIZATION
Emergency Worker Personnel Monitoring Center	Reggie Rogers	ICF
Medical Drill (Transportation, South Orangetown Ambulance)	Reggie Rogers	ICF
Traffic Control Points	David Kayne	ICF
General Population Bus Routes	Mark Dalton Richard Smith	ICF ICF
School Evacuation Bus Route	David Henry Doug Himle	ICF ICF
Westchester County		
Westchester County EOC	Brian Hasemann (TL)	DHS
	Joe Keller (AA-TL)	ICF
	Terry Sheehan	DOT
	Mike Takacs	DHS
	Dave Petta	ICF
Warning Point	Larry Visniesky	ICF
Field Monitoring Teams	Ron Biernacki Mike Hammond	ICF DHS
Westchester County Public Call Center	Rosemary Samsel Miriam Weston	ICF DHS
Emergency Worker Personnel Monitoring Center	Jeanette Eng Lori Thomas	USEPA USDA
Medical Drill (Westchester Medical Center, Transcare Ambulance Service)	Frank Bold Richard Holtzman	ICF ICF
Traffic Control Points	Gary Goldberg Sarah Everidge	ICF ICF

EVALUATION SITE	EVALUATOR	ORGANIZATION
Bergen County		
Bergen County EOC	Bob Swartz Bob Black	DHS ICF
Orange County – Out-of-Sequence		
School Reception Center – South Junior High School (October 24, 2006)	Paul Malool	DHS
Special Population Transit Dependent Bus Company (Monroe-Woodbury Bus Company – June 1, 2006)	James Willison Gary Goldberg	ICF ICF
School Interview – Highland Falls Elementary School (June 8, 2006)	Paul Malool	DHS
Medical Drill - Cornwall Hospital (November 17, 2005)	Joe Keller Ron Biernacki	ICF ICF
Putnam County – Out-of-Sequence		
Reception Center - Brewster High School (November 7, 2006)	Joe Keller Ron Biernacki Sam Nelson	ICF ICF ICF
Medical Drill - Carmel Ambulance and Putnam Hospital (June 22, 2006)	Ron Biernacki Paul Malool Mabel Santiago	ICF DHS DHS
School Reception Center - Kent Elementary School Reception (June 28, 2006)	Mabel Santiago Alejandro Fernandez	DHS ICF
General Population and School Buses - Mahopac Central School District (August 23, 2006)	Mabel Santiago	DHS
Community Nursery School of First Presbyterian Church – Putnam Valley School District – St. Luke’s Nursery School (July 14, 2006)	Mabel Santiago	DHS
Garrison Elementary School Interview - The Nest Nursery School (September 21, 2006)	Mabel Santiago	DHS

EVALUATION SITE	EVALUATOR	ORGANIZATION
Putnam Valley School District – St. Luke’s Nursery School	Mabel Santiago	DHS
Rockland County - Out-of-Sequence		
Reception Center - Spring Valley High School (September 25, 2006)	Bill Cullen Ron Biernacki	DHS ICF
Reception Center - Suffern High School (October 24, 2006)	Bill Cullen	DHS
Special Population Transportation Dependent and School Buses – East Ramapo Central School District (May 25, 2006) Mobility Impaired; TRIPS (July 19, 2006)	Bill Cullen Brian Hasemann	DHS DHS
Bus Company Runs – Student Bus Company and Peter Brega Bus Co. (November 14, 2006)	Mark Dalton Richard Smith	ICF ICF
School Interviews: Albertus Magnus High School, Jawonio Inc Special Needs School, Ramapo High School, Cornerstone Christian School, Street School Community Center Preschool, Pomona Middle School, Ages and Stages Preschool, Head Start of Rockland County, Immaculate Conception Preschool, Talmud Torah Adas Khal Yereim Preschool, Sonshine Community Preschool, Rockland County Worksite Day Care, Prime Time For Kids Preschool, Colton Elementary (November 21, 2006)	Bill Cullen	DHS
Medical Drill - Good Samaritan Hospital and Rockland Paramedics (May 4, 2005)	Paul Malool Mabel Santiago Bill Cullen	DHS
Westchester County		
<u>School Interviews:</u>		
Lakeland School District (September 19, 2006)	Brian Hasemann, Mabel Santiago	DHS
Peekskill School District (December 12, 2006)	Mabel Santiago	DHS
Hendrick Hudson (September 27, 2006)	Brian Hasemann, Mabel Santiago	DHS

EVALUATION SITE	EVALUATOR	ORGANIZATION
BOCES (September 27, 2006)	Brian Hasemann, Mabel Santiago	DHS
Briarcliff Manor (September 27, 2006)	Brian Hasemann, Mabel Santiago	DHS
Croton Harmon (December 7, 2006)	Brian Hasemann, Mabel Santiago	DHS
Ossining (October 17, 2006)	Mabel Santiago	DHS
Yorktown School District (October 26, 2006)	Mabel Santiago	DHS

APPENDIX 3. EXERCISE OBJECTIVES AND EXTENT OF PLAY

FINAL

OFFSITE EXTENT-OF-PLAY

FOR THE

NOVEMBER 14, 2006

INDIAN POINT ENERGY CENTER – UNIT 2

FULL-PARTICIPATION EXERCISE

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EXTENT-OF-PLAY GROUND RULES

EXTENT-OF-PLAY GROUND RULES

- **REAL LIFE EMERGENCIES TAKE PRIORITY OVER EXERCISE PLAY.**
- The Scenario Development Team will develop the “Exercise” free play messages. The State Controller will inject these messages for action as agreed upon.
- “Optional” messages may be developed and inserted by the counties to facilitate EOC participation.
- The Scenario Development Team will develop “Exercise” free play messages for Public Inquiry conducted at the New York State Tax and Finance Call Center in Albany, NY and at the Westchester County Alternate Emergency Operations Center/MOB in White Plains, NY. Public Inquiry messages will be injected to the two call centers by a control cell(s).
- The Scenario Development Team will develop “Exercise” free play messages for Media Inquiry. Media Inquiry messages will be injected to the State and county EOCs by a control cell(s).
- The State Controller will provide radiological data for any radiological field activities (e.g., Field Teams, Emergency Worker Personnel Monitoring Centers, Reception Centers, etc.).
- 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 DHS and the offsite response organizations (ORO) agree, the DHS 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 EOC/JIC/EOF demonstrations during the November 14, 2006 exercise.
- The following criteria, which deal with ingestion pathway, relocation, re-entry and return, post-plume phase and lab operations, will not be demonstrated:
 - 2.d.1
 - 2.e.1
 - 3.e.1
 - 3.e.2
 - 3.f.1
 - 4.b.1
 - 4.c.1
- Additionally, criterion 5.a.2 for the activation of the prompt alert and notification system will not be demonstrated.

EXTENT OF PLAY

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 DHS. The lists will contain the business telephone numbers only.

EOCs

Extent-of-Play Agreement:

- State liaisons will be pre-positioned in the area and will arrive at County EOCs 30 minutes after receiving notification to activate via pager or other means.
- Licensee Technical Liaisons will be pre-positioned in the area and will arrive at the State and county EOCs 30 minutes after receiving notification to activate via pager or other means.

EOF

Extent-of-Play Agreement:

- State liaisons will be pre-positioned in the area and will arrive at the EOF 30 minutes after receiving notification to activate via pager or other means.

JIC

Extent-of-Play Agreement:

- State JIC Staff will be pre-positioned in the area and will arrive at the JIC no sooner than 30 minutes after receiving notification to activate via pager or other means.

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:

- This criterion will be evaluated for the following facilities only: Westchester County EOC (Hawthorne), Putnam County EOC, Joint Information Center (Hawthorne), the New York State Tax and Finance Public Inquiry Call Center (Albany) and the Westchester County Public Inquiry Call Center (White Plains).

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 “Exercise” messages for action as agreed upon.
- “Optional” messages may be inserted by the counties to facilitate EOC participation.

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.
- An alternate to the Executive Hotline may be used to coordinate protective action decisions (PADs) among the Risk Counties and State.

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 hard copy printouts and listings and electronic displays.
- The instruments that are used for field monitoring are the RO-20 or RO-2A (Gamma and Beta-mR/hr or R/hr) or equivalent and RM-14 (Gamma and Beta – CPM) or equivalent.
- Field team equipment is calibrated by IPEC's RP Department. An internal IPEC 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 (e.g., barriers, traffic cones, signs, etc.) will be deployed to the field *with the exception of Reception Centers and EWPMCs*.

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 insure 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 OROs' 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 on-site and off-site environmental conditions. (NUREG-0654, I.8, 10 and Supplement 3).

Extent-of-Play Agreement:

- In the event of a simulated radiological release, the licensee field teams will provide plume centerline data.

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:

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

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)

Extent-of-Play Agreement:

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

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 OROs' 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 available should a decision to recommend use of KI be made. Appropriate record keeping of the administration of KI for emergency workers and institutionalized individuals is maintained. (NUREG-0654, J.10. e)

Extent-of-Play Agreement:

- All activities will be based on the OROs' plans and procedures as they would in an actual emergency.
- The post distribution of KI to the public will also be discussed at reception centers when demonstrated as per the Offsite Extent-of-Play Activities Schedule.

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).

EOC ACTIVITIES:

TRANSPORTATION DEPENDENT POPULATION

Extent-of-Play Agreement:

- During the November 14, 2006 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.

NOTIFICATION OF HEARING IMPAIRED

Extent-of-Play Agreement:

Jurisdiction	Extent-of-Play	In Sequence With Exercise	Out of Sequence; Day of Exercise	Out of Sequence; NOT Day of Exercise	Comments
Westchester County	<p>The hearing-impaired list will be available for review at the county EOC. This list will be reviewed but not copied or retained by the Federal evaluator.</p> <p>The procedure to contact hearing-impaired individuals will be discussed with the federal evaluator at the EOC.</p>	(X)			

Jurisdiction	Extent-of-Play	In Sequence With Exercise	Out of Sequence; Day of Exercise	Out of Sequence; NOT Day of Exercise	Comments
Rockland County	<p>The hearing-impaired list will be available for review at the county EOC. This list will be reviewed but not copied or retained by the Federal evaluator.</p> <p>The procedure to contact hearing-impaired individuals will be discussed with the federal evaluator at the EOC.</p>	(X)			
Orange County	<p>The hearing-impaired list will be available for review at the county EOC. This list will be reviewed but not copied or retained by the Federal evaluator.</p> <p>The procedure to contact hearing-impaired individuals will be discussed with the federal evaluator at the EOC.</p>		(X)		
Putnam County	<p>The hearing-impaired list will be available for review at the county EOC. This list will be reviewed but not copied or retained by the Federal evaluator.</p> <p>The procedure to contact hearing-impaired individuals will be discussed with the federal evaluator at the EOC.</p>	(X)			

NON-INSTITUTIONALIZED MOBILITY IMPAIRED INDIVIDUALS

Extent-of-Play Agreement:

Jurisdiction	Extent-of-Play	In Sequence With Exercise	Out of Sequence; Day of Exercise	Out of Sequence; NOT Day of Exercise	Comments
Westchester County	<p>The list of non-institutionalized mobility-impaired will be available for review at the county EOC. This list will be reviewed but not copied or retained by the Federal evaluator.</p> <p>The procedure to contact non-institutionalized mobility-impaired individuals will be discussed with the federal evaluator at the EOC.</p>	(X)			
Rockland County	<p>The list of non-institutionalized mobility-impaired will be available for review at the county EOC. This list will be reviewed but not copied or retained by the Federal evaluator.</p> <p>The procedure to contact non-institutionalized mobility-impaired individuals will be discussed with the federal evaluator at the EOC.</p>	(X)			

Jurisdiction	Extent-of-Play	In Sequence With Exercise	Out of Sequence; Day of Exercise	Out of Sequence; NOT Day of Exercise	Comments
Orange County	<p>The list of non-institutionalized mobility-impaired will be available for review at the county EOC. This list will be reviewed but not copied or retained by the Federal evaluator.</p> <p>The procedure to contact non-institutionalized mobility-impaired individuals will be discussed with the federal evaluator at the EOC.</p>		(X)		
Putnam County	<p>The list of non-institutionalized mobility-impaired will be available for review at the county EOC. This list will be reviewed but not copied or retained by the Federal evaluator.</p> <p>The procedure to contact non-institutionalized mobility-impaired individuals will be discussed with the federal evaluator at the EOC.</p>	(X)			

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.

FIELD ACTIVITIES:

EVACUATION OF TRANSPORTATION DEPENDENT POPULATION

Extent-of-Play Agreement:

Jurisdiction	Extent-of-Play	In Sequence With Exercise	Out of Sequence; Day of Exercise	Out of Sequence; NOT Day of Exercise	Comments
Westchester County	N/A - All evaluated in 2004				
Rockland County	Bus companies will be interviewed prior to the November 14, 2006 exercise as per the Offsite Extent-of-Play Activities Schedule. Each company will provide a dispatcher and 5 - 10% (dependent on company's size) of that company's drivers for interviews. A State Controller will provide the bus routes to be discussed to the dispatcher for the briefing of drivers.			(X)	Group interviews requested
	Two (2) bus routes will be driven. The bus company and route to be driven will be determined prior to the demonstration. A vehicle with appropriate communications capability may be utilized in lieu of a bus.		(X)		Routes will be run between 10 am and 1 pm with Student Bus Co. and Peter Brega Bus Co.
Orange	Bus companies will			(X)	Group interviews

Jurisdiction	Extent-of-Play	In Sequence With Exercise	Out of Sequence; Day of Exercise	Out of Sequence; NOT Day of Exercise	Comments
County	be interviewed, procedures will be reviewed and equipment will be inspected. Each company will provide a dispatcher and at least 5-10% (dependent on company's size) of that company's drivers for interview. A State Controller will provide the bus routes to be discussed to the dispatcher for the briefing of drivers.				requested.
Putnam County	Bus companies will be interviewed, procedures will be reviewed and equipment will be inspected. Each company will provide a dispatcher and 5-10% (dependent on company's size) of that company's drivers for interview. A State Controller will provide the bus routes to be discussed to the dispatcher for the briefing of drivers.			(X)	Putnam County proposes to demonstrate with school administrator, dispatcher and driver(s). Also proposes interviews of General Population and School Bus concurrently.

NOTIFICATION OF HEARING IMPAIRED

Extent-of-Play Agreement:

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

EVACUATION OF NON-INSTITUTIONALIZED MOBILITY IMPAIRED INDIVIDUALS

Extent-of-Play Agreement:

- There will be no actual dispatch of vehicles for transport of non-institutionalized mobility-impaired individuals.
- 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 implement protective actions for schools. (NUREG-0654, J.10.c, d, g).

EOC ACTIVITIES:

Extent-of-Play Agreement:

- During the November 14, 2006 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.

FIELD ACTIVITIES:

EVACUATION OF SCHOOL POPULATIONS

Extent-of-Play Agreement:

- Bus companies will be interviewed prior to the November 14, 2006 exercise as per the Offsite Extent-Of-Play Activities Schedule.
- Westchester County – All bus companies evaluated in 2004.
- Two (2) actual school bus runs will be driven in Rockland County on November 14, 2006 between 10 am and 1 pm by Student Bus Co. and Peter Brega Bus Co.
- Each company will provide a dispatcher and 5-10% (dependent on company's size) 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/licensed day care providers/private schools (one school per district) to be interviewed prior to the November 14, 2006 exercise is as follows:

- Westchester County – 10 schools
 - Rockland County – 5 schools
 - Orange County – 1 school
 - Putnam County – 3 schools
- Additional interviews of schools and school reception centers (baseline evaluations 2002-2008) will be conducted as agreed to by DHS, NYSEMO and each county EMO.
- Interviews for schools within the same district may be conducted with school administrators at a scheduled district meeting.

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:

Jurisdiction	Extent-of-Play	In Sequence With Exercise	Out of Sequence; Day of Exercise	Out of Sequence; NOT Day of Exercise	Comments
Westchester County	There will be two (2) interviews of law enforcement officials to discuss how to activate TCPs/ACPs. Each designated law enforcement agency will provide one (1) officer. The State Controller will provide a free play message to select the TCP/ACP assigned to that agency to be discussed. The interviews will take place at a location TBD.		(X)		
Rockland County	There will be two (2) interviews of law enforcement officials to discuss how to activate TCPs/ACPs. Each designated law enforcement agency will provide one (1) officer. The State Controller will provide a free play message to select the TCP/ACP assigned to that agency to be discussed. The interviews will take place at the EOC.		(X)		

Jurisdiction	Extent-of-Play	In Sequence With Exercise	Out of Sequence; Day of Exercise	Out of Sequence; NOT Day of Exercise	Comments
Orange County	There will be two (2) interviews of law enforcement officials to discuss how to activate TCPs/ACPs. Each designated law enforcement agency will provide one (1) officer. The State Controller will provide a free play message to select the TCP/ACP assigned to that agency to be discussed. The interviews will take place at the EOC.		(X)		
Putnam County	There will be two (2) interviews of law enforcement officials to discuss how to activate TCPs/ACPs. Each designated law enforcement agency will provide one (1) officer. The State Controller will provide a free play message to select the TCP/ACP assigned to that agency to be discussed. The interviews will take place at the EOC.	(X)			

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 (2) impediments to evacuation.
- The State Controller will inject “Exercise” messages for action as agreed upon.
- 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 4: FIELD MEASUREMENT AND ANALYSIS

Sub-element 4.a – Plume Phase Field Measurements 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. The initial use of gloves will be demonstrated.
- Field team equipment is calibrated by IPEC's RP Department. An internal IPEC 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.

EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSIS

Sub-element 4.a – Plume Phase Field Measurements 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:

- In the event of a simulated radiological release, the licensee field teams will provide plume centerline data.

EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSIS

Sub-element 4.a – Plume Phase Field Measurements 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 (2) radiological monitoring teams. Each team will be supplied with a State Controller and DHS evaluator.
- The monitoring teams will not be suited up in anti-contamination clothing. However, the clothing will be available for inspection. The initial use of gloves will be demonstrated.
- Each team will take at least six (6) ambient radiation measurements (including background measurements) and at least two (2) air samples. All teams must take the air samples as though they were in the presence of the plume including County teams that may not be impacted by the plume. If necessary, an inject message from the State Controller may be used to complete the taking of all six measurements prior to the end of the exercise.
- 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 and chain of custody.
- Eating, drinking, and smoking will be allowed after concurrence of the DHS evaluator.

EVALUATION AREA 5: EMERGENCY NOTIFICATION & 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 sounding of sirens and no actual broadcasting of EAS messages. The Indian Point siren system will be tested during 2006. DHS will be invited to observe the tests at those times.
- To demonstrate the procedures for siren activation, all counties will conduct an actual “Silent” test (no siren sounding) in conjunction with an EAS message broadcast (simulated) during the exercise.
- One (1) complete alerting and notification sequence will be evaluated. This sequence will include simulation of siren activation, preparation and transmission of a simulated EAS message to the LP-1 radio station, and preparation and transmission of a simulated EAS Follow-On News Bulletin or Release to the LP-1 radio station, **both of which contain protective actions**. Therefore, there will be actual telephone contact with the radio station for one (1) simulated EAS message. Contact with the radio station for all other EAS messages will be simulated.
- Airing of the all 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.
- All simulated EAS messages will be available via the JIC website.

EVALUATION AREA 5: EMERGENCY NOTIFICATION & 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:

- To demonstrate the procedures for siren activation, all counties will conduct an actual “Silent” test (no siren sounding) in conjunction with an EAS message broadcast (simulated) during the exercise.
- The results of the initial “Silent” test will be used to discuss route alerting procedures or the telephone call-out system, if used, for sirens that have been simulated to fail. Subsequent silent tests if conducted by the counties will not be evaluated.
- An inject message(s) to simulate siren failures will be used if no sirens appear to have failed on the “Silent” test.
- Demonstration of this criterion will be limited to two (2) actual “Silent” test failures or two (2) simulated siren failures.

Jurisdiction	Extent-of-Play	In Sequence With Exercise	Out of Sequence; Day of Exercise	Out of Sequence; NOT Day of Exercise	Comments
Westchester County	EOC discussion only, after “Silent” test.	(X)			
	The county’s telephone call-out system will be demonstrated to notify an area impacted by a simulated siren failure.	(X)			

Jurisdiction	Extent-of-Play	In Sequence With Exercise	Out of Sequence; Day of Exercise	Out of Sequence; NOT Day of Exercise	Comments
Rockland County	EOC discussion only, after "Silent" test.	(X)			
	The county's telephone call-out system will be demonstrated to notify an area impacted by a simulated siren failure.	(X)			
Orange County	EOC discussion after "Silent" test.	(X)			
	Route alerting personnel will be interviewed, the procedure will be reviewed and the required equipment will be inspected at the EOC.		(X)		
Putnam County	EOC discussion after "Silent" test.	(X)			
	Route alerting personnel will be interviewed, the procedure will be reviewed and the required equipment will be inspected at EOC.	(X)			

EVALUATION AREA 5: EMERGENCY NOTIFICATION & 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:

- Four (4) simulated EAS Follow-On News Releases (one for each county) **following an EAS message containing protective actions** will be actually distributed to the LP-1 EAS radio station via the JIC website and Westchester County website (for Westchester release).
- West. Co. will also post News Releases (and EAS messages) to the county “Exercise” website.
- Distribution of all other EAS Follow-On News Releases to the LP-1 EAS radio station will be simulated.
- All simulated EAS Follow-On News Releases will be available to the media via the JIC website.

EMERGENCY INFORMATION

Extent-of-Play Agreement:

- At least two (2) media briefings will be conducted and evaluated. The briefings to be evaluated will be selected by a controller with concurrence from the lead JIC DHS evaluator. Preparation and scheduling activities for **all** media briefings will be conducted in accordance with the JIC procedures.
- Audio/Video conference links from the County EOCs to the JIC will be utilized for media briefings.

PUBLIC INQUIRY

Extent-of-Play Agreement:

- The public inquiry function will be staffed for evaluation at two (2) locations: the New York State Tax and Finance Call Center in Albany (~12 people including a supervisor) and the Westchester County Public Inquiry Call Center in White Plains (~10 people including a supervisor).
- Inject messages will indicate false or misleading information to enable the public inquiry function to identify trends and false rumors at both locations.
- Coordination of trends and false information will be conducted on the PIO Coordination line.
- Media Monitoring will be conducted at the JIC.

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 as per the offsite extent of play activities schedule. Additional reception centers will be evaluated (baseline evaluations 2002-2008) as agreed to by DHS, NYSEMO and each county EMO.
- At least 1/3 of the required monitors will be present and at least six (6) 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 (See Note 1)	3 (See Note 4)	3 (See Note 4)	2 (See Note 1)
Other Personnel	0 (See Note 5)	0 (See Note 2)	0 (See Note 5)	0 (See Note 3)
No. of Portal Monitors	1	2	2	1

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

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

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

Note 4: Two monitors for portal monitoring.

Note 5: Evacuees will be monitored, then directed to a "clean" area or to decontamination area.

- The number of decontamination personnel, vehicle monitoring/decon personnel and social services personnel demonstrating this criterion will be in accordance with each county's plans and procedures.
- Vehicle monitoring will be conducted in accordance with plans.
- There will be only a representative sample of supplies available at each facility.

- As necessary, decontamination techniques will be simulated. At the 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. However, all required materials will be available for inspection. The initial use of gloves will be demonstrated.
- 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.
- One decon area will be set up and used to demonstrate both male and female decontamination technique by appropriate personnel.
- Portal monitors will be operated in accordance with each county's procedures. Portal monitors are checked with a check source to verify operability and the capability to meet the FEMA portal monitor standard (1 μ Ci Cs-137 at midline).
- Monitoring and decontamination capabilities for a school reception center (Rockland County only) will be demonstrated as per the Offsite Extent-of-Play Activities Schedule.

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 as per the offsite extent-of-play agreement schedule.
- Each facility will demonstrate the following:
 - At least two (2) monitors for personnel decontamination (1 male and 1 female);
 - At least one (1) monitor for vehicle monitoring;
 - At least one (1) monitor for vehicle decontamination.
- The monitoring and decontamination teams will not to be suited up in anti-contamination clothing. However, all required materials will be available for inspection. The initial use of gloves will be demonstrated.
- 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 (1) portal monitor for personnel monitoring will be demonstrated by Westchester and Rockland Counties.
- One decon area will be set up and used to demonstrate both male and female decontamination technique by appropriate personnel.
- The Portal monitor will be operated in accordance with each county's procedures. Portal monitors are checked with a check source to verify operability and the capability to meet the FEMA Portal Monitor standard (1 uCi Cs-137 at midline).
- Rockland County will demonstrate the capability to deal with contamination beyond capability of EWPMC. This activity will terminate when the worker has been prepared for transport to another facility.

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:

- All facilities have been evaluated within the last 6 year cycle; therefore, this criterion will not be demonstrated.

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:

- MS-1 drills for the four EPZ counties will be conducted as per the Offsite Extent-Of-Play Activities Schedule.
- The use of flashing lights and sirens for exercise play is not required.
- The starting point for the Westchester County MS-1 drill on November 14, 2006 will be the Fire Training Center in Valhalla, NY.

AREAS REQUIRING CORRECTIVE ACTION

LIST OF AREAS REQUIRING CORRECTIVE ACTION (ARCA)

NEW YORK STATE

No ARCAs outstanding after the 2004 exercise.

EMERGENCY OPERATIONS FACILITY

No ARCAs outstanding after the 2004 exercise.

JOINT INFORMATION CENTER

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

Issue No.: 32-04-5.b.1-A-01

Description: Neither EAS messages nor the Follow-On-Bulletin were provided to the public in Spanish. It is noted that the Bureau of the Census has listed the county of Westchester, as a county where there is greater than 5% of the adult voting age population that are non-English speaking population. Because of this all public information materials, EAS messages, and Follow-On-Bulletins must be in Spanish. It is noted that there is a write in card in the back of the booklets to submit in order to get a non-English booklet.

Reference: Based on the 2000 Census, a Federal Register notice in 2002 indicated that Westchester County must provide information in Spanish. This is based on the Voting Rights Act and the requirement to provide information if there is 5% of the adult voting population who does not use English. See also Guidance Memorandum 20.

Response: Westchester County submitted a letter to DHS dated June 6, 2006 outlining the proposed plan of action to remediate this ARCA.

Corrective Action Demonstrated: DHS approved the proposed plan of action, which is to provide the Spanish stations with the message in English and have them translate it for their audiences (per the usual procedure for other types of emergencies). The Public Information Brochure is available in Spanish.

EMERGENCY ALERT STATION (WHUD)

No ARCAs outstanding after the 2004 exercise.

WESTCHESTER COUNTY

No ARCAs outstanding after the 2004 exercise.

ORANGE COUNTY

No ARCAs outstanding after the 2004 exercise.

PUTNAM COUNTY

No ARCAs outstanding after the 2004 exercise.

ROCKLAND COUNTY

No ARCAs outstanding after the 2004 exercise.

BERGEN COUNTY (NJ)

No ARCAs outstanding after the 2004 exercise.

OFFSITE
EXTENT-OF-PLAY
SCHEDULE OF
ACTIVITIES

INDIAN POINT 2 – NOVEMBER 14, 2006 EXERCISE
OFFSITE EXTENT-OF-PLAY ACTIVITIES SCHEDULE

		<u>DATE</u>	<u>TIME</u>
<u>RECEPTION CENTERS</u>			
Westchester	Westchester Community College	TBD	TBD
Rockland	Suffern S.H.S (Social Services)	10/24/06	2:30 pm
	Spring Valley S.H.S	9/25/06	6:00 pm
Orange	N/A – All evaluated in 2002/2004		
Putnam	Brewster H.S. (Social Services)	11/7/06	2:00 pm
	Brewster H.S. (Mon/decon)	11/7/06	6:00 pm

CONGREGATE CARE CENTERS

Westchester	N/A – All evaluated in 2002/2004	N/A	N/A
Rockland/Bergen	N/A - All evaluated in 2002/2004	N/A	N/A
Orange	N/A – All evaluated in 2002/2004	N/A	N/A
Putnam	N/A – All evaluated in 2002/2004	N/A	N/A

SCHOOL/CAMP RECEPTION CENTERS

Rockland	Rockland Community College	TBD	TBD
	St. Thomas Aquinas College	TBD	TBD
Orange	South Junior H.S (interview only)	10/24/06	8:30 am
	Warwick Valley H.S.	5/30/06	6:00 pm
Putnam	Kent Primary School	6/28/06	10:00 am

EMERGENCY WORKER PMC

Westchester	County Fire Training Center	11/14/06	In Sequence
Rockland	County Sewer District, Sparkill	11/14/06	In Sequence
Orange	N/A – All evaluated in 2002/2004	N/A	N/A
Putnam	N/A – All evaluated in 2002/2004	N/A	N/A
New York State	N/A - Evaluated in 2004	N/A	N/A

SPECIAL POPULATION (TRANSIT DEPENDENT) BUS COMPANY INTERVIEWS

Westchester	N/A – All evaluated in 2004	N/A	N/A
Rockland	1) E. Ramapo C.S.D. 2) TRIPS	5/25/06 7/19/06	10:00 am

Orange	1) Monroe-Woodbury Bus Company	<u>DATE</u> 6/1/06	<u>TIME</u> 9:45 am
Putnam	Mahopac CSD	8/23/06	10:00 am

SCHOOL BUS COMPANY INTERVIEWS

Westchester	N/A – All evaluated in 2004		
Rockland	1) E. Ramapo C.S.D. 2) TRIPS	5/25/06 7/19/06	10:00 am
Orange	1) N/A – All evaluated in 2004 2) N/A – All evaluated in 2004	N/A N/A	N/A N/A
Putnam	Mahopac CSD	8/23/06	10:00 am

ACTUAL BUS COMPANY RUNS

Rockland	1) Student Bus Co. (Gen. Pop.) 2) Peter Brega Bus Co. (Gen. Pop.)	11/14/06 11/14/06	10 -1 pm 10 -1 pm
	1) Student Bus Co. (School) 2) Peter Brega Bus Co. (School)	11/14/06 11/14/06	10 -1 pm 10 -1 pm

TRAFFIC CONTROL POINTS (See Page 25)

Westchester	1) New Castle Police Dept. 2) Yorktown Police Dept.	11/14/06 11/14/06	After Traffic Imp. Msg. After Traffic Imp. Msg.
Rockland	1) County Sheriff's Department 2) Stony Point Police Department	11/14/06 11/14/06	1:00 pm 1:00 pm
Orange	1) County Sheriff's Department 2) County Sheriff's Department	11/14/06 11/14/06	11:00 am 11:00 am
Putnam	1) County Sheriff's Department 2) County Sheriff's Department	11/14/06 11/14/06	In Sequence In Sequence

SCHOOL INTERVIEWS

<u>COUNTY/DISTRICT</u>	<u>SCHOOL</u>	<u>DATE</u>	<u>TIME</u>
Orange			
1) Highland Falls	Highland Falls E.S.	6/8/06	8:00 am
Putnam			
1) Garrison	The Nest N.S.	9/21/06	9:30 am
2) Putnam Valley	St. Luke's N.S.	7/14/06	9 am-2 pm
3) Haldane	Comm. N.S. of First Presb. Church	7/14/06	9 am-2 pm
Rockland			
	All interviewed at EOC		
1) Nyack	Multiple Schools	11/21/06	10:00 am
2) Clarkstown	Multiple Schools	11/21/06	10:00 am
3) North Rockland	Multiple Schools	11/21/06	10:00 am
4) East Ramapo	Multiple Schools	11/21/06	10:00 am
5) Ramapo	Multiple Schools	11/21/06	10:00 am
Westchester			
1) Peekskill			
2) Hendrick Hudson	Multiple Schools	9/27/06	1:00 pm
3) BOCES	Multiple Schools	9/27/06	11:00 am
4) Briarcliff Manor	Multiple Schools	9/27/06	3:00 pm
5) Croton Harmon	Multiple Schools	12/7/06	10:00 am
6) Lakeland	Multiple Schools	9/19/06	10:00 am
7) Ossining	Multiple Schools	10/17/06	1:00 pm
8) Chappaqua			
9) Yorktown	Multiple Schools	10/26/06	1:30 pm
10) Somers			

MEDICAL MS-1 DRILLS

Westchester	Westchester Medical Center	11/14/06	9:00 am
Putnam	Putnam Hospital Center/Carmel Ambulance	6/22/06	10:00 am
Rockland	Good Samaritan Hospital	5/4/05	
Orange	Cornwall Hospital	11/17/05	

FULL-SYSTEM SIREN TESTS

First Quarter 2006	3/8/06	
Second Quarter 2006	6/28/06	
Third Quarter 2006	9/13/06	7:30 pm
Fourth Quarter 2006	11/29/06	Am

APPENDIX 4. 2006 INDIAN POINT ENERGY CENTER EXERCISE SCENARIO

NARRATIVE SUMMARY

Initial Condition

The Indian Point Unit No. 2 Nuclear Generating Station has been operating at 100% power for 120 Effective Full Power Days. Auxiliary Boiler Feed Pump (ABFP) #21 has been out of service for two hours for motor replacement and is expected to be returned to service within 6 hours. Over the last 24 hours, repeated Digital Metal Impact Monitoring System (DMIMS) alarms were received from the lower reactor vessel head. DMIMS data has been sent to Westinghouse. Chemistry samples have indicated an increase in RCS activity, additional sampling is in progress.

Unit 3 is running at 100% power.

Meteorological data is WS = 4.2 m/s, WD = 169°, and Pasquill = C

Narrative Summary

Radiation monitors in containment and the Primary Auxiliary Building begin to increase. The operators will receive chemistry sample data for the coolant activity. Chemistry results will indicate that the I-131 activity in the Reactor Coolant System (RCS) is in excess of 300 $\mu\text{Ci/cc}$ and an **Alert** will be declared based on EAL 2.1.2 "Coolant activity > 300 $\mu\text{Ci/cc}$ I-131 equivalent". The operators will initiate a plant shutdown to zero power and cooldown to less than 500 degrees. Reactor Engineering and Westinghouse recommend a 4-hour shutdown to limit any additional degradation to the fuel.

During turbine load reduction, **the unit will trip**, causing the 21 Steam Generator (S/G) safety valve to lift. There is no indication of a release at this time. Attempts to close the valve will be unsuccessful. Operators will implement E-0 "Reactor Trip or Safety Injection". The 23 ABFP fails shortly after starting and 21 Emergency Diesel Generator (EDG) failed to start. Operators then transition into E-2 "Faulted Steam Generator Isolation", then E-1 "Loss of Reactor or Secondary Coolant", and then ES 1.1 "SI Termination".

Power Operated Relief Valve (PORV) 536 fails open and cannot be isolated. Pressurizer Relief Tank rupture disk ruptures, causing Radiation Monitors R2, R7, and R25/26 to increase. R25/26 increase to above 17 R/hr. A **Site Area Emergency** will then be declared based on EAL 2.2.2 "R25/26 > 17 R/hr".

A tube rupture will occur in the 21 Steam Generator. Operators will identify the 21 Steam Generator as the ruptured generator, based on 21 S/G pressure and water level, and the fact that R-28 increases to 8000 cpm, indicating an **airborne release in progress above federal**

limits.

A **General Emergency** will then be declared based on EAL 4.2.2 "Unisolable faulted (outside VC) ruptured steam generator AND any indication of fuel clad damage, Table 4.2".

It is possible for a GE to be declared from EAL 5.2.5, "Dose projections or field surveys resulting from actual or imminent release which indicate doses/dose rates > Table 5.2 column "GE" at the site boundary or beyond".

Meteorological data will change causing additional Protective Action Recommendations (PARs) to be generated. Meteorological data will change to WS = 4.8 m/s, WD = 212°, and Pasquill = C.

Operators will take action in accordance with E-1, E-3 & ECA 3.1 to isolate the intact steam generators from the faulted ruptured steam generator and initiate a cooldown of the reactor coolant system. Auxiliary Boiler Feedwater Pump 21 or 23 will be returned from maintenance and the pump may be placed in service to aid in the RCS cooldown.

The 21 Steam Generator safety valve re-closes and **terminates the release**. The exercise will end after the release is terminated and it has been determined that all objectives for the exercise had opportunity to be met.

TIMELINE

NOTE: Due to the use of the IP-2 simulator, all times are approximate.

0700 The Indian Point Unit No. 2 Nuclear Generating Station has been operating at 100% power for 120 Effective Full Power Days. Auxiliary Boiler Feed Pump (ABFP) 21 has been out of service for two hours for motor replacement and is expected to be returned to service within 6 hours. Over the last 24 hours, repeated Digital Metal Impact Monitoring System (DMIMS) alarms were received from the lower reactor vessel head. DMIMS data has been sent to Westinghouse. Chemistry samples have indicated an increase in RCS activity and additional sampling is in progress.

Unit 3 is running at 100% power.

Meteorological data is WS = 4.2 m/s, WD = 169°, and Pasquill = C

0745 The operators will receive chemistry sample data for the coolant activity. Chemistry results will indicate that the I-131 activity in the Reactor Coolant System (RCS) is in excess of 300 µCi/cc.

0800 An Alert will be declared based on EAL 2.1.2 "Coolant activity > 300 µCi/cc I-131 equivalent". The operators will initiate a plant shutdown to zero power and cooldown

to less than 500 degrees. Reactor Engineering and Westinghouse recommend a 4-hour shutdown to limit any additional degradation to the fuel.

- 0900 During turbine load reduction, the unit will trip, causing the 21 Steam Generator (S/G) safety valve to lift. There is no indication of a release at this time. Attempts to close the valve will be unsuccessful. The 23 ABFP fails shortly after starting and 21 Emergency Diesel Generator (EDG) failed to start.
- 0908 PORV 536 fails open and cannot be isolated. Pressurizer relief tank rupture disk ruptures.
- 0910 Radiation monitors, R2, R7 and R25/26 begin to increase.
- 0915 R25/26 increase to above 17 R/hr.
- 0930 A Site Area Emergency will be declared based on EAL 2.2.2 "Containment Radiation Monitor R-25 or R-26 > 17 R/hr".
- 1115 A tube rupture will occur in the 21 S/G. R-28 increases to 8000 cpm, indicating an airborne release in progress above federal limits.
- 1130 A General Emergency will be declared based on EAL 4.2.2, "Unisolable faulted (outside VC) ruptured steam generator AND any indication of fuel clad damage, Table 4.2" Other possible GE that may be declared EAL 5.2.5, "Dose projections or field surveys resulting from actual or imminent release which indicate doses/dose rates > Table 5.2 column "GE" at the site boundary or beyond."
- 1230 Meteorological data will change, causing additional Protective Action Recommendations (PARs) to be generated. Met data will change to WD = 212°, WS = 4.8 m/s, Pasquill = C
- 1300 The ABFP 21 or 23 will be returned to service.
- 1330 The 21 S/G safety valve will close and release will be terminated.
- 1400 After consultation with the Offsite Exercise Controller Organization, the Exercise will end after all objectives have been given ample opportunity for demonstration by BOTH onsite and offsite responders.