U.S. Department of Homeland Security
Washington, D.C. 20472

FEMA

January 24, 2005

Region I RAC Members

SUBJECT: Millstone Exercise Report September 14-17, 2004

Find enclosed your copy of the Millstone Plume/Post Plume Phase Exercise Report.

Sincerely,

Robert J. Swartz
Millstone Site Specialist

DISTRIBUTION:

Mr. David J. Petta, Department of Transportation, Capt. J.F. Williams Coast Guard Building, 408 Atlantic Ave., Boston, MA 02110-3350
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Mr. Glen Field, Department of Commerce, National Weather Service, 445 Myles Standish Blvd. Taunton, MA 02780
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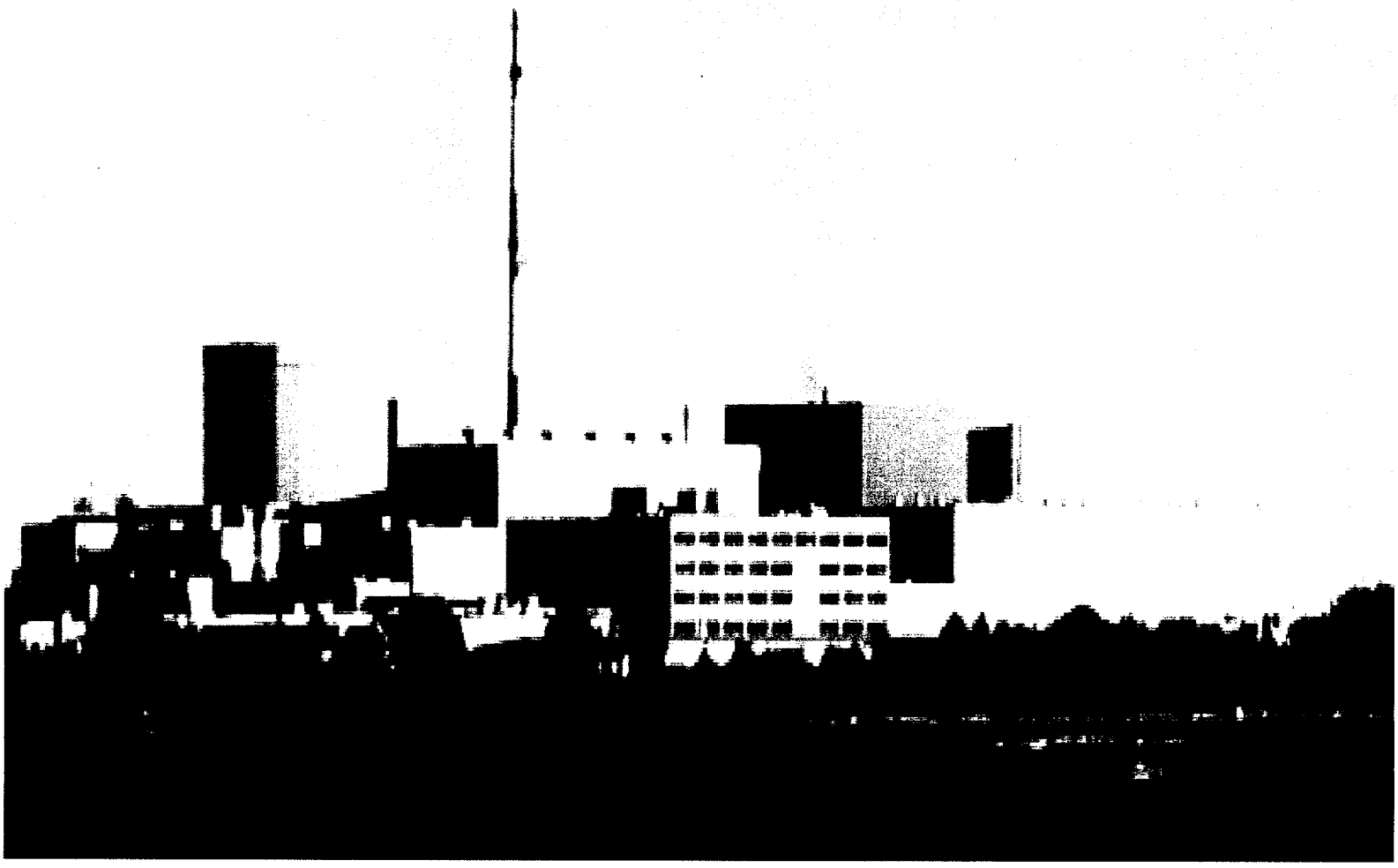
Mr. Tony Honnellio, EPA- New England Region I, 1 Congress St., Suite 1100 (HBR), Boston, MA 02114-2023



Exercise Report
Millstone Power Station

Licensee: Dominion Nuclear Connecticut Inc.
Exercise Date: September 14, 2004 (Plume)
September 15-16, 2004 (Post Plume)
Report Date: January 17, 2005

FEMA

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I. EXECUTIVE SUMMARY

On September 14-16, 2004, an exercise was conducted in the Plume/Ingestion Exposure Pathway emergency planning zone (EPZ) around the Millstone Power Station by the Federal Emergency Management Agency (FEMA), Region I. The purpose of the exercise was to assess the level of State and local preparedness in responding to a radiological emergency. The exercise was held in accordance with FEMA's policies and guidance concerning the exercise of State and local radiological emergency response plans (RERP) and procedures.

The most recent exercises at this site were conducted on May 1, 2002, (plume exposure pathway) and October 8-10, 1997 (ingestion exposure pathway). The qualifying emergency preparedness exercise was conducted in 1982.

FEMA wishes to acknowledge the efforts of the many individuals who participated in this exercise. The various agencies, organizations, and units of government from the State and local jurisdictions within the State of Connecticut and the State of Rhode Island who participated in this exercise are listed in Section III.C of this report.

Protecting the public health and safety is the full-time job of some of the exercise participants and an additional assigned responsibility for others. Still others have willingly sought this responsibility by volunteering to provide vital emergency services to their communities. Cooperation and teamwork of all the participants were evident during this exercise.

The State and local organizations, except where noted in this report, demonstrated knowledge of their emergency response plans and procedures and adequately implemented them. Connecticut received one Deficiency, which has been corrected through plan changes and staff retraining, and seven Areas Requiring Corrective Action (ARCA). Three of the seven ARCA's were corrected on the spot. Rhode Island received no Deficiencies and one ARCA identified as a result of this exercise.

II. INTRODUCTION

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

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

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

- Taking the lead in offsite emergency planning and in the review and evaluation of RERPs and procedures developed by State and local governments;

- Determining whether such plans and procedures can be implemented on the basis of observation and evaluation of exercises of the plans and procedures conducted by State and local governments;

- Responding to requests by the U.S. Nuclear Regulatory Commission (NRC) pursuant to the Memorandum of Understanding between the NRC and FEMA dated June 17, 1993 (Federal Register, Vol. 58, No. 176, September 14, 1993); and

- Coordinating the activities of Federal agencies with responsibilities in the radiological emergency planning process:

    U.S. Department of Commerce,
    U.S. Nuclear Regulatory Commission,
    U.S. Environmental Protection Agency,
    U.S. Department of Energy,
    U.S. Department of Health and Human Services,
    U.S. Center for Disease Control,
    U.S. Department of Transportation,
    U.S. Department of Agriculture,
    U.S. Department of the Interior, and
    U.S. Food and Drug Administration.

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

Formal submission of the RERPs for the Millstone Power Station to FEMA Region I by the State of Connecticut and involved local jurisdictions occurred in 1982. Formal approval of the RERP was granted by FEMA in October 1984, under 44 CFR 350.

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

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

- NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980;

- FEMA-REP-14, "Radiological Emergency Preparedness Exercise Manual," September 1991; and

- 66 FR 47546, "FEMA Radiological Emergency Preparedness: Alert and Notification," September 12, 2001; and

- 67 FR 20580, "FEMA Radiological Emergency Preparedness: Exercise Evaluation Methodology," September 12, 2001 and amended April 25, 2002.

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

III. EXERCISE OVERVIEW

Contained in this section are data and basic information relevant to the September 14-16, 2004, Plume/Ingestion Exposure Pathway exercise to test the offsite emergency response capabilities in the area surrounding the Millstone Power Station. This section of the exercise report includes a description of the plume pathway EPZ in Connecticut and New York; the Connecticut and Rhode Island 50 mile IPZ; a listing of all participating jurisdictions and functional entities which were evaluated; and, a tabular presentation of the time of actual occurrence of key exercise events and activities.

A. Plume Emergency Planning Zone Description

The area within ten miles of the Millstone Power Station is located in the States of Connecticut and New York. The eight Connecticut communities within the Millstone EPZ are entirely located in New London County. The one New York community and the Plum Island Animal Disease Center (PIADC), a USDA research facility, are located in Suffolk County, New York. Millstone Station is located on the coast of Connecticut, in the Town of Waterford, and is adjacent to Long Island Sound.

Based on the 2000 census, the total population of the EPZ is 259,088, with the permanent population of those New York portions of the EPZ being approximately 300.

Two parallel Amtrak freight and passenger lines run east-west along the coast through the Connecticut portion of the EPZ, passing across the utility owner controlled property. Major highways within the EPZ include Interstate 95, running east-west approximately four miles north of the site, and Interstate 395 running approximately north beginning about four miles north of the site.

Public institutions, aside from schools and churches, within the EPZ include the PIADC, the Niantic Correctional Facility, Lawrence and Memorial Hospital, the United States Coast Guard Academy, the United States Naval Submarine Base at New London (Groton), the Naval Undersea Warfare Center, and the Rocky Neck State Park.

The EPZ is divided into six zones for the purpose of emergency response planning and implementation of protective actions.

B. Ingestion Emergency Planning Zone Description

The Millstone ingestion pathway zone (IPZ), is a 50-mile radius around the site that includes the States of New York and Rhode Island. Certain meteorological circumstances may cause contamination of parts of Rhode Island. Rhode Island is not in the 10-mile radius plume exposure pathway for any sites, though it is in the 50-mile radius ingestion exposure pathway of two sites. Nuclear power stations within 50 miles of Rhode Island are: Millstone Power Station, Units 2, and 3; Waterford, CT, Pilgrim Power Station, Unit 1, Plymouth, MA

C. Exercise Participants

The following agencies, organizations, and units of government participated in the Millstone Power Station Plume/Ingestion Exposure Pathway exercise on September 14-16, 2004.

STATE OF CONNECTICUT

STATE EMERGENCY OPERATIONS CENTER (EOC)

Governor's Office
Connecticut National Guard
Connecticut Office of Emergency Management
Connecticut Department of Public Safety Division of Homeland Security
Connecticut State Police
Connecticut Department of Public Health
Connecticut Department of Mental Retardation
Connecticut Department of Mental Health and Addiction Services
Connecticut Department of Agriculture
Connecticut Department of Consumer Protection
Connecticut Department of Transportation
Connecticut Commission on Deaf and Hearing Impaired
Connecticut Department of Corrections
New York State – Emergency Management Office
Rhode Island Department of Health (Public Affairs Liaison)
Rhode Island Department of Environmental Management (Liaison)
U.S. Nuclear Regulatory Commission
U.S. Coast Guard
Dominion Nuclear Connecticut, Inc.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Connecticut Department of Environmental Protection
Connecticut Office of Emergency Management
Connecticut Department of Environmental Protection,
    Division of Radiation
    Division of Oil and Chemical
Dominion Nuclear Connecticut, Inc.

EMERGENCY OPERATIONS FACILITY (EOF)

Millstone Power Station Staff
Connecticut Department of Environmental Protection
    Division of Radiation

STATE FIELD MONITORING & RELOCATION TEAMS

Connecticut Department of Environmental Protection
Division of Radiation
Division of Oil and Chemicals

STATE FIELD SAMPLING TEAMS

Connecticut Department of Agriculture
Connecticut Department of Public Health
Connecticut Department of Consumer Protection

JOINT MEDIA CENTER

Connecticut Department of Agriculture
Connecticut Department of Public Health
Connecticut Governor's Press Secretary
Connecticut Office of Emergency Management
Connecticut Department of Public Safety Division of Homeland Security
Connecticut State Police
Connecticut Department of Environmental Management
Connecticut Department of Transportation
Dominion Nuclear Connecticut, Inc.

STATE DEPARTMENT OF PUBLIC HEALTH (DPH) COMMAND CENTER

Department of Public Health

OEM AREA IV, COLCHESTER

Connecticut Office of Emergency Management
Connecticut State Police
Regional Dispatch Center (KX) 911 Dispatchers

STATE POLICE ACCESS CONTROL POINTS/TRAFFIC CONTROL POINTS

Connecticut State Police, Troop E
State Department of Transportation

STATE TRANSPORTATION STAGING AREA (TSA)

Connecticut Office of Emergency Management Area 3 Office
Connecticut Department of Veteran's Affairs (Protective Services Unit)
Connecticut Department of Corrections (Southfield Transportation Unit)
Volunteer Residents Rocky Hill Veterans Home and Hospital

CONNECTICUT DEPARTMENT OF TRANSPORTATION – NORWICH

State DOT Staff of Norwich

CONNECTICUT STATE LABORATORY

State laboratory staff

RISK JURISDICTIONS

EAST LYME EOC

East Lyme Emergency Management
Connecticut State Police (Resident Trooper)
East Lyme Police Department
East Lyme Fire Marshal
East Lyme Public School Board of Education
East Lyme Public Works
East Lyme Water Department
Radio Amateur Civil Emergency Services (RACES)

HAMLET OF FISHERS ISLAND, NY, EOC

Fishers Island Emergency Management
Fishers Island Fire Department
New York State Emergency Management Office
New York State Police
Town of Southold, Suffolk County, New York

CITY OF GROTON EOC

City of Groton – Mayor's Office
City of Groton – Civil Preparedness Director
City of Groton Fire Department
City of Groton Police Department
Groton City Utilities
Groton City Highway Department
Radio Amateur Civil Emergency Services (RACES)
Zoning and Building

TOWN OF GROTON EOC

Town of Groton – Town Manager
Town of Groton – Civil Preparedness Director
Town of Groton - Fire Department

Town of Groton – Police Department
Town of Groton – 911 Dispatch
Groton Public Schools

LEDYARD EOC

Town of Ledyard Mayor
Town of Ledyard Emergency Management Director
Town of Ledyard Police Department
Town of Ledyard Fire Department
Town of Ledyard Public Works Department
Town of Ledyard Public Nursing
Town of Ledyard Health Department
Town of Ledyard Public Schools

LYME EOC

Lyme Emergency Management
Lyme Fire Department
Lyme Ambulance Association
Superintendent of Lyme Consolidated School System District 18

MONTVILLE EOC

Town of Montville Mayor
Town of Montville Civil Preparedness Director
Town of Montville Fire Marshall
Town of Montville Fore Dispatcher
Connecticut State Police (Resident Trooper)
Town of Montville Police Department
Town of Montville Emergency Management Agency Volunteers

CITY OF NEW LONDON EOC

New London City Manager
New London Civil Preparedness Director
New London Assistant Civil Preparedness Director
New London Health and Social Services
New London Fire Chief
New London Police Chief
New London Public School district

OLD LYME EOC

Old Lyme Selectman Member
Old Lyme Emergency Management Director
Connecticut State Police (Resident Trooper)
Old Lyme Police Department
Old Lyme Fire Department
Old Lyme School District Superintendent
Old Lyme School Principal – Mile Creek School
Two Woman Volunteers

WATERFORD EOC

Waterford First Selectman
Waterford Emergency Management
Waterford Fire Marshal Office
Waterford Police Department
Waterford Dispatchers
Waterford Superintendent of Schools
Waterford Building Department
Waterford Department of Public Works
Waterford Sanitation Department
Waterford Outreach Assistant
Waterford Planning Building and Health Dept.
Waterford Recreation and Parks
Waterford Tax Assessor Office
Waterford Water Pollution Control Authority
Waterford Director of Senior Services
Radio Amateur Civil Emergency Services (RACES)

SCHOOLS/BUS EVACUATION

OLD LYME

East Lyme - High School
Old Lyme – Mile Creek School

SPECIAL POPULATIONS - NURSING HOMES

Bayview Health Care Center (Waterford)
Haven Health Care Center (Waterford)
Fountainview Care Center (Waterford)
Greentree Manor Nursing & Rehabilitation Center (Waterford)

SUPPORT JURISDICTIONS

STONINGTON EOC

Stonington First Selectman
Stonington Emergency Management Agency
Stonington 911 Police Dispatcher
Stonington Police Department
Stonington Department of Public Works

PRIVATE/VOLUNTEER ORGANIZATIONS

American Red Cross
Local Volunteers from Area IV towns
Radio Amateur Civil Emergency System (RACES)

STATE OF RHODE ISLAND

STATE EMERGENCY OPERATIONS CENTER

Rhode Island Governor's Office
Rhode Island Emergency Management Agency
Rhode Island Department of Health
Rhode Island Department of Environmental Management
Rhode Island State Police
Rhode Island National Guard
  13th Civil Support Team, (CST)
  Air National Guard
Rhode Island Department of Transportation
U.S. Nuclear Regulatory Commission
U.S. Center for Disease Control

RHODE ISLAND MEDIA CENTER

Rhode Island Governor's Office
Rhode Island Department of Health

RHODE ISLAND CONTRACT LABORATORY (FRAMATONE)

13TH CIVIL SUPPORT TEAM RI ARMY NATIONAL GUARD

RHODE ISLAND STATE FIELD SAMPLING TEAMS

Rhode Island State Police
Rhode Island Department of Health

Rhode Island Department of Environmental Management

FIELD SAMPLING TEAM #1
FIELD SAMPLING TEAM #2
FIELD SAMPLING TEAM #3

D. Exercise Timeline

Table 1, on the following page, presents the time at which key events and activities occurred during the Millstone Power Station Plume/Ingestion Exposure Pathway exercise on September 14-16, 2004. Also included are times notifications were made to the participating jurisdictions/functional entities.

TABLE 1. EXERCISE TIMELINE

DATE AND SITE: September 14, 2004, Millstone Power Station

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received or Action was Taken									
		State EOC	EOF	Area IV	Media Center	East Lyme	Fishers Island	City of Groton	Town of Groton	Ledyard	Lyme
Unusual Event											
Alert	0746	0759	0746 0749	0800	0759	0800	0802	0800	0804	0803	0804
Site Area Emergency	0929	0942	0921 0931	0935	0942	0930	0934	0929	0943	0929	0937
General Emergency	1117	1123	1117 1117	1138	1123	1130	1128	1126	1129	1136	1125
Simulated Radiation Release Started	1117	1123	1116 1116	1138	1123	1122	1128	1126	1129	1126	1126
Simulated Radiation Release Terminated	-	-	-	-	-	-	-	-	-	-	-
Facility Declared Operational		0844	0830	0911	0853	0910	0838	0947	0830	0830	0818
Declaration of State of Emergency		1024	1206	1032	1024	1035	1034	1034	1035	1033	1033
Exercise Terminated		1330	1324	1326	1330	1329	1327	1327	1328	1330	1328
Early Precautionary Actions: **1. Close parks and beaches**		1032	-	-	1032	1035	-	1102	0940*	1032	1054
2. School Transfer		0942	-	0942	-	1008	-	1015	0910*	0934	0920*
3. Shelter Livestock		1032	-	1045	1032	1035	1045	1102	0940*	1054	0953*
1st Protective Action Decision **Shelter: C, D, F** **Evacuate: A, B, E**		1201	-	-	1201	1201	1201	1202	1155	1200	1202
1st Siren Activation		0943	-	-	-	0938	0940	0942	0942	0940	0943
1st EAS Message		0948	-	-	-	-	-	-	-	-	-
2nd Protective Action Decision		-	-	-	-	-	-	-	-	-	-
2nd Siren Activation		1205	-	-	-	1208	1204	1203	1203	1204	1204
2nd EAS Message		1208	-	-	-	-	-	-	-	-	-
3rd Siren Activation		1223	-	-	-	1220	1220	1220	1220	1221	1221
3rd EAS Message		1225	-	-	-	-	-	-	-	-	-
KI Administration Decision:		1201	-	-	1201	1201	1201	1204	1155	1200	1202

LEGEND: S – Support Jurisdiction D – Decision Making Jurisdiction A – Activating Jurisdiction * Town Action.

TABLE 1. EXERCISE TIMELINE

DATE AND SITE: September 14, 2004, Millstone Power Station

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received or Action was Taken									
		State EOC	Montville	New London	Old Lyme	Water-ford	C/SP Montville				
Unusual Event											
Alert	0746	0759	0802	0800	0806	0800	0800				
Site Area Emergency	0929	0942	0934	0935	0953	0930	0937				
General Emergency	1117	1123	1126	1124	1130	1119	1134				
Simulated Radiation Release Started	1117	1123	1126	1124	1125	1119	1134				
Simulated Radiation Release Terminated	-	-	-	-	-	-	-				
Facility Declared Operational		0844	0909	0830	0905	0900	-				
Declaration of State of Disaster Emergency		1024	1033	1034	1035	1035	-				
Exercise Terminated		1330	1327	1327	1333	1328	1327				
Early Precautionary Actions:											
1. Close Parks and beaches		1032	0940	1009	0953	1036	-				
2. School transfer	0932 cc	-	0940	0945	0953	0932	-				
3. Shelter livestock	1035 cc	1032	0940*	1009	0953*	0940*	-				
1st Protective Action Decision **Shelter: C, D, F** **Evacuate: A, B, E**		1201	1159	1155	1203	1155	1152				
1st Siren Activation		0943	0943	0943	0942	0942	-				
1st EAS Message		0948	-	1010*	-	-	-				
2nd Protective Action Decision		-	-	-	-	-	-				
2nd Siren Activation		1205	1206	1204	1203	1202	-				
2nd EAS Message		1208	-	1222	-	-	-				
3rd Siren Activation		1223	1220	1220	1221	1221	-				
3rd EAS Message (rev/correct #2)		1225	-	-	-	-	-				
KI Administration Decision:		1201	1159	1203	1200	1155	1152				

LEGEND:S – Support Jurisdiction D – Decision Making Jurisdiction A – Activating Jurisdiction * Town Action

IV. EXERCISE EVALUATION AND RESULTS

Contained in this section are the results and findings of the evaluation of all jurisdictions and functional entities which participated in the September 14-16, 2004, plume/ingestion exposure pathway exercise to test the offsite emergency response capabilities of State and local governments in the 10-mile EPZ surrounding the Millstone Power Station.

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

A. Summary Results of Exercise Evaluation - Table 2

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

M - Met (No Deficiency or ARCAs assessed and no unresolved ARCAs from prior exercises)

D - Deficiency assessed

A - ARCA(s) assessed or unresolved ARCA(s) from prior exercise(s)

N - Not Demonstrated (Reason explained in Subsection B)

TABLE 2. 2004 EXERCISE EVALUATION GRID

DATE AND SITE: September 14-16, 2004 Millstone Power Station

JURISDICTIONS/LOCATION	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	2. d. 1	2. e. 1	3. a. 1	3. b. 1	3. c. 1	3. c. 2	3. d. 1	3. d. 2	3. e. 1	3. e. 2	3. f. 1	4. a. 1	4. a. 2	4. a. 3	4. b. 1	4. c. 1	5. a. 1	5. a. 2	5. a. 3	5. b. 1	6. a. 1	6. b. 1	6. c. 1	6. d. 1
STATE OF CONNECTICUT																																
State Emergency Operations Center	M		M	M	M	M	M	M	M	M	M	A				M		M	M							A			M			
Department of Environmental Protection	M		D	A	M	M	M	M	M	M						M										M			M			
Emergency Operations Facility	M		M	M	M		M																									
State Field Monitoring Teams																																
Field Monitoring Team #1				M	M							M	M								M	M	M									
Field Monitoring Team #2				M	M							M	M								M	M	M									
State Relocation Teams																																
Relocation #1																							M									
Relocation #2																							M									
State Field Sampling Teams																																
Field Sampling Team #1 AG				M	M							M	M										M									
Field Sampling Team #2 AG				M	M							M	M										M									
Field Sampling Team #3 DPH				M	M							M	M										M									
Field Sampling Team #4 DPH				M	M							M	M										M									
Field Sampling Team #5 CP				M	M							M	M										M									
Joint Media Center			M	M	M					M									M									M				
State Department of Public Health	M	M	M	M	M	M		M						M																		
OEM Area IV, Colchester	M		M	M	M							M	M		M	M										M						
State Police ACPs/TCPs	M		M	M	M							M	M			M	M															
State Department of Transportation	M		M	M	M							M			M																	
State Transportation Staging Area (STSA)	M		M	M	M							M	A		M	M																
Connecticut State Laboratory		M	M																					A								

LEGEND: M = Met (no Deficiency or ARCA(s) assessed)
D = Deficiency assessed
C = Prior issue to be coordinated
A = ARCA(s) assessed (not affecting health and safety of public)
U = Unresolved ARCA(s) from prior exercises
Blank = Not scheduled for demonstration
N = Not demonstrated as scheduled (reason explained in Section IV.B.)

TABLE 2. SUMMARY RESULTS OF 2004 EXERCISE EVALUATION

DATE AND SITE: September 14-16, 2004, Millstone Power Station

JURISDICTIONS/LOCATION	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	2. d. 1	2. e. 1	3. a. 1	3. b. 1	3. c. 1	3. c. 2	3. d. 1	3. d. 2	3. e. 1	3. e. 2	3. f. 1	4. a. 1	4. a. 2	4. a. 3	4. b. 1	4. c. 1	5. a. 1	5. a. 2	5. a. 3	5. b. 1	6. a. 1	6. b. 1	6. c. 1	6. d. 1
RISK JURISDICTIONS																																
East Lyme	M		M	M	M							M	M	M	M	M	M									M		M	M			
Hamlet of Fishers Island	M		M	M	M							A	M	M	M	M	M									M		M	M			
City of Groton	M		A	M	M							M	M	M	M	M	M									M		M	M			
Town of Groton	M		M	M	M							M	M	M	M	M	M									M		M	M			
Ledyard	M		M	M	M							M	M	M	M	M	M									M		M	M			
Lyme	M		M	M	M							M	M	M	M	M	M									M		M	M			
Montville	M	M	M	M	M							M	M	M	M	M	M									M		M	M			
City of New London	M		M	M	M							M	M	M	M	M	M									M		M	M			
Old Lyme	M		M	M	M							M	M	M	M	M	M									M		M	M			
Waterford	M		M	M	M							M	M	M	M	M	M									M		M	M			
Schools/Bus Evacuation																																
East Lyme School															M																	
Old Lyme School															M																	
Special Populations – Nursing Homes																																
Bayview Health Care Center – Waterford														M																		
Haven Health Care Center - Waterford														M																		
Fountainview Care Center – Waterford														M																		
Greentree Nursing and Rehabilitation Center - Waterford														M																		

LEGEND: M = Met (no Deficiency or ARCA(s) assessed)
D = Deficiency assessed
C = Prior issue to be coordinated
A = ARCA(s) assessed (not affecting health and safety of public)
U = Unresolved ARCA(s) from prior exercises
Blank = Not scheduled for demonstration
N = Not demonstrated as scheduled (reason explained in Section IV.B.)

TABLE 2. SUMMARY RESULTS OF 2004 EXERCISE EVALUATION

DATE AND SITE: September 14-16, 2004, Millstone Power Station

JURISDICTIONS/LOCATION	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	2. d. 1	2. e. 1	3. a. 1	3. b. 1	3. c. 1	3. c. 2	3. d. 1	3. d. 2	3. e. 1	3. e. 2	3. f. 1	4. a. 1	4. a. 2	4. a. 3	4. b. 1	4. c. 1	5. a. 1	5. a. 2	5. a. 3	5. b. 1	6. a. 1	6. b. 1	6. c. 1	6. d. 1
SUPPORT JURISDICTIONS																																
Stonington EOC	M	M	M	M	M																							M				
RHODE ISLAND																																
State Emergency Operations Center	M	A	M	M	M	M				M			M			M		M	M									M				
Department of Environmental Management	M	M	M	M	M	M				M			M			M		M	M									M				
State Police	M	M	M	M	M	M				M			M			M		M	M									M				
Media Center																												M				
Public Health	M	M	M	M	M	M				M			M			M		M	M									M				
Rhode Island Laboratory (FRAMATONE)																								M								
State Field Sampling Teams																																
Field Sampling Team #1				M	M							M	M										M									
Field Sampling Team #2				M	M							M	M										M									
Field Sampling Team #3				M	M							M	M										M									
13th CST, RI Army National Guard												M	M										M						M	M		

LEGEND: M = Met (no Deficiency or ARCA(s) assessed)
D = Deficiency assessed
C = Prior issue to be coordinated
A = ARCA(s) assessed (not affecting health and safety of public)
U = Unresolved ARCA(s) from prior exercises
Blank = Not scheduled for demonstration
N = Not demonstrated as scheduled (reason explained in Section IV.B.)

B. Status of Jurisdictions Evaluation

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

- **Met** - Listing of the demonstrated exercise criterion 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 criterion under which one or more Deficiencies was assessed during this exercise. Included is a description of each Deficiency and recommended corrective actions.

- **Area Requiring Corrective Actions** - Listing of the demonstrated exercise criterion 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 criterion which were not demonstrated as scheduled during this exercise and the reason they were not demonstrated.

- **Prior ARCAs - Resolved** - Descriptions of ARCAs assessed during previous exercises which were resolved in this exercise and the corrective actions demonstrated.

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

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

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

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

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

- **Plant Site Identifier** - A two-digit number corresponding to the Utility Billable Plant Site Codes.

- **Exercise Year** - The last two digits of the year the exercise was conducted.

- **Evaluation Criterion Number -** An alpha-numeric number corresponding to the criterion numbers as contained in the Federal Register Notice dated September 12, 2001.

- **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. STATE OF CONNECTICUT

1.1 State Emergency Operations Center

The Connecticut State Office of Emergency Operations Center (EOC) staff worked well to ensure a coordinated emergency response effort. Staff utilized their plans and procedures throughout the exercise. The Emergency Management Director (EMD) demonstrated knowledge of his plans and allowed staff the opportunity to ask questions and made certain they were answered promptly. The Communications Officer expedited messages and ensured a timely delivery of messages to appropriate EOC Staff.

CT- OEM Senior Staff clearly demonstrated the ability to make sound and timely recommendations to the Governor to make decisions affecting the health and safety of the citizens of Connecticut. This exercise was the first time that Connecticut played with the integration of Federal partners to assist State Agencies in developing appropriate and timely courses of action for responding to a Millstone Power Station nuclear incident.

a. **MET:** Criterion 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2a.1, 2.b.1, 2.b.2, 2.c.1, 2.d.1, 3.d.1, 5.b.1

b. **DEFICIENCY: NONE**

c. **AREAS REQUIRING CORRECTIVE ACTION:** 3.a.1, 5.a.1

Issue No.: 38-04-3.a.1-A-01

Description: Kits for Emergency Workers do not contain potassium iodide. CTAP-4.2, Attachment 2, the Dosimetry Briefing Sheet states that KI is in the packets. However, Attachment 1, Radiation Exposure Control Checklist, and Attachment 4, Contents of Emergency Worker Dosimetry Packet, do not list KI among the contents. The understanding by the Radiological Officer was that KI could not be issued until authorization was from the Governor or the Health Director to take KI.

Possible Cause: Misunderstanding of current policy.

Reference: NUREG-0654, H,11, J,10,e; CTAP- 4.2, Attachment 2, the Dosimetry Briefing Sheet; CTAP- 4.2, Attachment 1, Radiation Exposure Control Checklist; CTAP – 4.2, Attachment 4, Contents of Emergency Worker Dosimetry Packet

Effect: Officers were sent to traffic control points with dosimetry but without the capability to take KI. While actions were taken to get KI to the Officers, there is a potential for delay in the taking of KI.

Recommendation: Put KI in the Emergency Worker Kits.

Schedule of Corrective Actions: There were three locations that misunderstood the training on KI. CT-OEM would like to request that this ARCA be accredited to the State OEM for better emphasis on this point in future training sessions. The State OEM will correct this ARCA through ongoing training sessions with emphasis on the fact that KI is

to be distributed; however the actual ingestion of KI does not happen until the State directs the public and emergency workers to take KI.

Issue No.: 38-04-5.a.1-A-02

Condition: While awaiting the completion of the call-down for the 2nd siren activation, the EAS Coordinator, who was to read the EAS message heard the Director of Groton City state that the city would shelter rather than evacuate, as stated in the PAD that had been issued. Because the message was to be read momentarily the EAS Coordinator made a pencil correction and changed Groton City from evacuation to shelter and proceeded to read it. This change was not approved by the State Director or Governor. Almost immediately the Mayor of Groton City was made to understand the necessity of evacuation. A third siren sounding and EAS were initiated minutes after the second. This third message with corrected information to the evacuating public corrects the issue per Initiative 1.5

Possible Cause: The Connecticut Office of Emergency Management EAS Coordinator and Groton City officials were aware that after the Governor signs a State of Emergency Declaration, Protective Action Decisions can only be made by authority of the Governor.

Reference: NUREG-0654 Reference E.5,7; G.3.a; G.4.c
State of Connecticut, Radiological Emergency Response Plan, Rev.06/04; Vol. 1, Section 2.6.2.
Effect: Conflicting information may have been issued to the public. The immediate corrective actions taken by the CT OEM Director, instructing the Operations Officer to call the Mayor of Groton City and explain that based upon information from CT OEM Department of Environmental Protection, Division of Radiation Liaison that the city needed to evacuate for the protection of the people and the Governor's decision to evacuate must be enforced. Groton City agreed and this resulted in the corrected EAS message indicating Groton City would evacuate.

Schedule of Corrective Actions: This issue was corrected on the spot with the implementation of the third Alert and Notification Sequence including Groton City in the evacuation order.

d. **NOT DEMONSTRATED: NONE**

e. **PRIOR ARCAs - RESOLVED:** 1.c.1

Issue No.: 38-02-1.c.1-A-01

Condition: The State OEM and the towns did not coordinate effectively, e.g., implementing the same precautionary activities and protective actions. This had the potential to negatively impact public safety.

For example, at 1100, the OEM Director denied the deployment of ambulances to New London to support evacuation. Meanwhile, the State Transportation Staging Area (STSA) log reported sending and then not sending ambulances to the City of New London from

1300 to 1330. Also during this time, the Town of East Lyme relocated special needs citizens to the L&M Hospital, which had been closed. Furthermore, they did not communicate this relocation to State OEM Area IV as required. (The Town reported that they did not tell Area IV because they did not need any assistance, i.e., they had their own buses.) Similarly, the Town of Groton dismissed students at 0940 without notifying the State or Area IV. While this action was allowable per procedures since it was before the State Declaration at 1007, the State Radiological Emergency Response Plan still requires coordination.

The State Division of Public Health (DPH) directed the City of New London and other towns to shelter-in-place all hospital and special needs patients. While this information was purportedly provided to towns via the DPH intranet "Public Health Network" (to which only the City of New London was connected), it was not contained in either Emergency Alert System message (EAS).

Corrective Action Demonstrated: September 14, 2004, The Connecticut Office of Emergency Management coordinated each of the Governor's protective action decisions, by conference telephone call, with all entities (towns and cities) within the 10-mile Emergency Planning Zone, including representatives of New York and Rhode Island.

All Department of Public Health (DPH) communications were 'blast faxed' and e-mailed to local public health offices over the DPH intranet 'Public Health Network'. Hospitals, Nursing Homes, and Clinics were then individually telephoned to ensure that timely Evacuation and Shelter messages were received as appropriate. This sensitive medical information was appropriately not included in the EAS messages.

f. PRIOR ARCAs - UNRESOLVED: NONE

1.2 Department of Environmental Protection (DEP)

The Department of Environmental Protection personnel demonstrated excellent response and coordination with other state agencies and federal participants. Dose assessment activities were performed rapidly and accurately demonstrating thorough knowledge of assessment programs.

a. MET: Criterion 1.a.1, 1.e.1, 2a.1, 2.b.1, 2.b.2, 2.c.1, 2.d.1, 3.d.1, 5.a.1, 5.b.1

b. DEFICIENCY: 1.c.1

Deficiency No.: 38-04-1.c.1-D-01

Condition: The Connecticut Department of Environmental Protection, Division of Radiation (DEPDOR) Director did not inform the Field Team Coordinator (FTC) of the decision to have Field Monitoring Team members take potassium iodide (KI).

Possible Cause: Although the decision to have emergency workers take KI was made on the DEP room with the FTC present (but not directly involved in the decision making), the Director did not confirm that the FTC was aware of the decision and would contact the FMT members of the decision.

Reference: NUREG-0654, J.10.e; CTAP-3.3, DEPOR-1, Attachment1, Director Checklist, General Emergency (Bravo/Alpha), Sheet 6 of 13.

Effect: The FMT members were not instructed to take KI. Not taking KI may have resulted in a dose greater that the established does limits.

Recommendation: Modify the procedure to include steps for the Director to inform the FTC of the KI decision and for verification of the use of KI by the FMT members. Train the DEPDOR Team on the new procedure.

Corrective Actions Demonstrated: The State Radiological Emergency Response plan has been revised to add a line item in DEPDOR-2 Dose Assessment and DEDOR-5, Duty Office that references consideration for the use of Potassium Iodide (KI) This ensures that all five positions of the Division Staff are aware of this decision point and monitor its application.

Each Field Monitoring Team (FMT) member will have a reminder card placed with their dosimetry package, as a reminder to contact the Field Team Coordinator at a General Emergency or when field iodine concentrations measurements reach 10-8uCi/cc or greater.

DEPDOR and Electric Boat personnel have been verbally briefed on these changes. Division staff received instruction on Plan revisions and the new Field Team, Field Monitoring Team procedures requiring contact with the Field Team Coordinator when field iodine concentrations reach 10-8uCi/cc or greater on November 10, 2004, and November 17, 2004. Staff were also provided copies of the documents that when implemented corrects the above deficiency and prevents it from reoccurring.

c. **AREAS REQUIRING CORRECTIVE ACTION:** 1.d.1

Issue No.: 38-04-1.d.1-A-03

Condition: Periodically throughout the demonstration some problems were encountered by the Emergency Operations Facility (EOF) Liaison such as no answer, encountering voice mail systems on the "Hot Ring Down" line and commercial landlines, and wrong telephone numbers on the telephone list.

Possible Cause: When the EOC is not activated for emergency response operations these offices are occupied by other state personnel. The voice mail systems are for recording messages relative to their routine daily work.

Reference: NUREG-0654, F.1,2

Effect: If critical information needed to be passed by the EOF liaison the problems encountered with the telephone systems could have delayed the passing of this information. In addition, the security codes or pin numbers for the individual voice mails systems are not available to retrieve messages for the emergency response team assigned to the work location.

Recommendation: It is recommended that the voice mail systems be disabled during the activation of the Emergency Operations Center (EOC). Additionally, upon activation of the EOC all of the telephone numbers in the center should be verified and an accurate telephone list be developed and distributed to all responding organizations and jurisdictions.

Schedule of Corrective Actions: Connecticut OEM REP Specialist coordinated a meeting with the OEM Communication Officer, a DEP liaison and Millstone personnel. Discussion included researching the problems encountered during the exercise, testing the phone numbers and direct links, and proposing how the problematic communications lines could be fixed. This will be accomplished as soon as possible to avoid a potential reoccurrence. Meetings are on going until all problems are resolved.

d. NOT DEMONSTRATED: NONE

e. PRIOR ARCAs - RESOLVED: NONE

f. PRIOR ARCAs - UNRESOLVED: NONE

1.3 Emergency Operations Facility (EOF)

The position of the DEP EOF Liaison is a single individual and his duties and responsibilities are well defined. The EOF Liaison was continually aware of ECL changes and escalating plant conditions due to his presence within the MPS EOF.
As soon as a new ECL was declared, the EOF Liaison notified DEP located at the Connecticut State Emergency Operations Center (SEOC).

a. MET: Criterion 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.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

1.4 State Field Monitoring Teams

1.4.1 Field Monitoring Team #1

CT Field Monitoring Team #1 was very knowledgeable regarding the field monitoring procedures, communication of data, and exposure control procedures. They were able to promptly locate the sampling location, conduct the survey, and transmit the data to the EOC. They always demonstrated good contamination control procedures.

a. MET: Criterion 1.d.1, 1.e.1, 3.a.1, 3.b.1, 4.a.1, 4.a.2, 4.a.3

b. **DEFICIENCY: NONE**

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

d. **NOT DEMONSTRATED: NONE**

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

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

1.4.2 Field Monitoring Team #2

The members of Department of Environmental Protection (DEP) Field Monitoring Team (FMT) #2 demonstrated excellent teamwork. Although members of separate divisions within the DEP, the two members of FMT # 2 provided a great deal of assistance to each other, even while operating under their own separate procedures. This type of teamwork is an example of good interdivisional cooperation and should be encouraged, including interdivisional training and the development of standard operating procedures to facilitate the sharing of some responsibilities.

a. **MET:** Criterion 1.d.1, 1.e.1, 3.a.1, 3.b.1, 4.a.1, 4.a.2, 4.a.3

b. **DEFICIENCY: NONE**

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

d. **NOT DEMONSTRATED: NONE**

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

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

1.5 State Field Relocation Teams (FRT)

1.5.1 Field Relocation Team #1:

Connecticut Field Relocation Team #1 was very knowledgeable regarding the field monitoring procedures, communication of data, and exposure control procedures. They were able to promptly locate the sampling location, conduct the survey, and transmit the data to the EOC. They always demonstrated good contamination control procedures.

a. **MET:** Criterion: 4.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**

1.5.2 Field Relocation Team #2:

The members of Department of Environmental Protection (DEP) Field Relocation Team #2 demonstrated excellent teamwork. Although members of separate divisions within the DEP, the two members of FRT #2 provided a great deal of assistance to each other, even while operating under their own separate procedures. This type of teamwork is an example of good interdivisional cooperation and should be encouraged, including interdivisional training and the development of standard operating procedures to facilitate the sharing of some responsibilities.

a. **MET:** Criterion: 4.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**

1.6 State Field Sampling Teams (FST)

1.6.1 Field Sampling Team #1 (Agriculture):

Connecticut Field Sampling Team #1 Agriculture was well versed in ingestion pathway sample procedures. They were able to efficiently locate and collect the required samples while minimizing the risk of contamination. Survey results were promptly transmitted to the EOC.

a. **MET:** Criterion: 1.d.1, 1.e.1, 3.a.1, 3.b.1, 4.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**

1.6.2 Field Sampling Team #2 (Agriculture):

The members of Department of Agriculture (DoAg) Field Sampling Team (FST) #2 made extensive use of their procedures on a step-by-step basis, insuring that samples were collected in the prescribed manner. Additionally, field sampling team members were very careful to avoid spreading contamination by changing gloves frequently and assuming that any unmonitored surface or any object contacting such a surface was potentially contaminated, and treating it as if was contaminated. This greatly reduces the likelihood that the samples, equipment, or personnel would be contaminated.

a. **MET:** Criterion: 1.d.1, 1.e.1, 3.a.1, 3.b.1, 4.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**

1.6.3 Field Sampling Team #3 (Department of Public Health):

During the course of the exercise, from the Millstone briefing to the Field Team Controller (FTC) briefing, to the dosimetry briefing and finally the performance by Field Sampling team #3, every one took the task very seriously. Personnel were professional in demeanor and in inter-action with one another. Whenever there were questions as to data transmitted over the radio or expectations for sample collection, the team appeared comfortable in resolving it among themselves before contacting the FTC.

a. **MET:** Criterion 1.d.1, 1.e.1, 3.a.1, 3.b.1, 4.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**

1.6.4 Field Sampling Team #4 (Department of Public Health):

The briefing s by the Field Team coordinator were comprehensive and detailed.
The Water Sampling Team members were very familiar with the sampling procedures and followed those procedures very effectively. There was good mutual understanding between

the Field Team Coordinator and the Water Sampling Members. The Sampling Team members were professional in their demeanor and approach.

a. **MET:** Criterion 1.d.1, 1.e.1, 3.a.1, 3.b.1, 4.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**

1.6.5 Field Sampling Team #5 (Consumer Protection):

From observation of contamination control techniques demonstrated by the Department of Consumer Protection (DCP) team, it was found that worker exposures were maintained as low as reasonably achievable (ALARA) throughout the exercise, and no concerns with implementation of emergency worker exposure control were identified. Team members were careful to prevent cross contamination of samples, protective clothing, and the vehicle interior.

a. **MET:** Criterion 1.d.1, 1.e.1, 3.a.1, 3.b.1, 4.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**

1.7 Joint Information Center

The Joint Information Center (JIC) function was accomplished in a commendable manner by the Governor's Emergency Communications Team. At the Alert ECL, it was set-up effectively, and efficiently. The JIC had three functions, ie., press releases, media relations, and public inquiry. The Media Supervisor for the first two functions performed in an outstanding manner.

The OEM Director conducted the media briefings quite effectively. He was followed by the Media Supervisor in some instances, who gave additional background information in a very professional manner.

Students of the Connecticut School of Broadcasting simulated members of the media and asked questions of State and Utility staff. This provided a realistic atmosphere to the JIC and training to the students.

a. **MET:** Criterion 1.c.1, 1.d.1, 1.e.1, 2.d.1, 3.e.2, 5.b.1.

b. **DEFICIENCY: NONE**

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

d. **NOT DEMONSTRATED: NONE**

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

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

1.8 State Department of Public Health (Command Center)

The Incident Commander at the command center was very efficient in handling many activities simultaneously during the busy periods. The staff contacting facilities had good telephone techniques conducive to keeping contacts calm under stressful circumstances. Communication staff was very knowledgeable and used great radio technique.

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

b. **DEFICIENCY: NONE**

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

d. **NOT DEMONSTRATED: NONE**

e. **PRIOR ARCAs - RESOLVED:** 3.c.1

Issue No.: 38-02-3.c.1-A-02

Note: This issue was identified at the New London EOC but the issue and the responsibility for its correction lies with the Department of Public Health, both at the DPH EOC and the Liaison position in the State EOC.

Condition: At 1000 the New London Health Director discussed the evacuation of the Hospital with the EMS Coordinator at the hospital. The support facilities were polled and the required number of bed spaces identified to receive all the patients. The evacuation commenced at 1012 utilizing town and mutual aid assets. This action was contrary to the State RERP.

Possible Cause: The Health Director and the EMS Coordinator at the hospital acted independently and without notifying Area IV or the State EOC. Their actions did not comply with plans. This appears to be a direction and control issue (1.c.1).

Reference: NUREG-0654, E.7; J.9, 10.c., d., e., g.

Effect: The requirement for ambulances to move the patients could have diverted the assets for another mission assigned by the State. The evacuation routes could become congested. There was a strain on the hospital staff.

Recommendation: Train the staff to coordinate all actions with the Area IV and State agencies before making such decisions. Ensure that the staff follow their plans and procedures.

Corrective Actions Demonstrated: Previous issue 38-02-3.c.1-A-02 was resolved during this exercise n that no similar situation occurred and all activities with regard to implementation of protective action recommendations were in accordance with plans and procedures.

f. PRIOR ARCAs - UNRESOLVED: NONE

1.9 OEM Area IV, Colchester

The Area IV staff demonstrated a sense of unity. The Staff worked together to provide a timely coordination of information between the local EPZ Towns and the State Office of Emergency Management. All EOC staff fully understood their plans and procedures and implemented them with no hesitation.

a. MET: Criterion 1.a.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.2, 3.d.1, 5.a.1

b. DEFICIENCY: NONE

c. AREAS REQUIRING CORRECTIVE ACTION: NONE

d. NOT DEMONSTRATED: NONE

e. PRIOR ARCAs - RESOLVED: 1.c.1

Issue No.: 38-02-1.c.1-A-03

Condition: Area IV staff did not inform the State EOC of early dismissal of schools in the Town and City of Groton.

Possible Cause: Message received via telephone was given a routine priority classification. Immediately after receipt of the early school dismissal for the Groton School District, the Area IV Coordinator was in the process of establishing an emergency planning zone town conference call.

No Specific requirement requires the Area Coordinator to keep the State EOC informed as to status changes in local EPC communities. This reporting requirement should be repeated for all emergency classification levels. This requirement would be applicable to all CT-OEM Area Coordinator checklists.

Reference: State of Connecticut Agency Procedures CTAP 3.2, OEM-6, Area IV Coordinator.

Effect: The State EOC and Media Center did not receive information about the Groton School District early dismissal. This prevented the Director and the State Media Center from providing information to the public as to the status of school children in the Groton School District. The lack of information about the Groton School District would have brought undue stress and concern to the parents who have children in these schools.

Recommendation: Conduct training on the need to pay more attention to incoming messages and ensure that messages are distributed to appropriate staff members for proper action. Actions completed b the EPZ communities should be reported to the State EOC for resources management and public information purposes.

Change the plan to reflect a requirement for the Area IV Coordinator to advise the State EOC of any actions taken by EPZ communities.

Corrective Action Taken: September 9, 2004, The Area IV communication officer reported all information to the State EOC as he received the information. As the towns provided information on school transfers and dismissals the information was forwarded to the State EOC. These observed actions correct Issue 38-02-1.c.1-03.

f. PRIOR ARCAs - UNRESOLVED: NONE

1.10 Montville State Police Troop E ACP/TCP

The TCP/ACP personnel received an excellent radiological briefing. The CT DOT participants were briefed by the CT DOT Equipment Supervisor and State Police participants were briefed by an officer from the Connecticut State Police Emergency Services. Both used wall charts of the Direct Reading Dosimeter (DRD) scales to make sure the participants understood the different scales and how to read and interpret them.

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

b. DEFICIENCY: NONE

c. AREAS REQUIRING CORRECTIVE ACTION: NONE

d. NOT DEMONSTRATED: NONE

e. PRIOR ARCAs - RESOLVED: NONE

f. PRIOR ARCAs – UNRESOLVED: NONE

1.11 Connecticut Department of Transportation (DOT)

The TCP/ACP personnel received an excellent radiological briefing. The CT DOT participants were briefed by the CT DOT Equipment Supervisor and State Police participants were briefed by an officer from the Connecticut State Police Emergency Services. Both used wall charts of the

Direct Reading Dosimeter (DRD) scales to make sure the participants understood the different scales and how to read and interpret them.

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

b. **DEFICIENCY: NONE**

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

d. **NOT DEMONSTRATED: NONE**

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

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

1.12 State Transportation Staging Area (STSA)

The Transportation Staging Area staff demonstrated a positive discipline to communicate with each other on their individual activities and to act as a team in support of the overall goal of providing supplemental transportation resources. Their activities reflect positively on their level of training and involvement.

The volunteer residents of the state Veterans' Home and Hospital performed their duties as they had been trained and reflected their continuing devotion to the welfare of their fellow citizens, their state and their country.

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

e. **DEFICIENCY: NONE**

c. **AREAS REQUIRING CORRECTIVE ACTION:** 3.b.1

Issue No.: 38-04-3.b.1-A-04

Condition: The Connecticut Transportation Staging Area (TSA) Radiological Briefer did not issue two 130 mg Potassium Iodide (KI) tablets to each transportation driver despite a requirement to do so in numerous sections of the procedures and the availability of a sufficient supply of KI tablets. The briefer stated to the evaluator that his procedures prohibited issuance of KI in dosimetry packets given to emergency workers unless an order to ingest KI had been issued by a state health official at the Headquarters, Office of Emergency Management (OEM). The briefer further stated, both to the evaluator and in the radiological briefing, that emergency workers who needed KI after deployment into the Emergency Planning Zone should obtain it from their destination sources (e.g., Schools, EOCs, host facilities.)

A similar issue, 38-00-14-A-04, written in the 2000 exercise, was corrected during the 2002 exercise at the TSA when two 130 mg tablets of KI were issued to drivers when they picked up their dosimetry packets and received a briefing on dosimetry and KI.

Possible Cause: The Transportation Staging Area Supervisor told the evaluator that the responsibility for storing and issuing KI to emergency drivers had only recently been transferred from the OEM Area III office to the STSA and that the revised procedures had only recently been received at the STSA. Although numerous changes were made in the agency procedures, some members of the staff who are trained to conduct the dosimetry briefings may not have learned of the changes prior to the exercise.

Reference: NUREG-0654, J.10,e; CTAP-3.2, OEM-8 2.2.2, 2.2.4, Attachments 2 and 3; CTAP-4.2, Attachment 10.

Effect: If the ingestion of KI had been recommended after the emergency driver leaves the STSA, it could not have been taken until the KI was issued at a destination location.

Recommendation: Retraining of all TSA staff who might be required to act as the Radiological Briefer or to issue dosimetry and KI should include special emphasis on the need to include the tablets in all dosimetry packets issued to drivers, but to caution drivers, in the dosimetry/KI briefing, not to ingest (swallow) the tablets until specifically directed to do so by their supervisor.

Schedule of Corrective Actions: The FEMA recommendation has been accepted. Training will be accomplished as quickly as possible to ensure that the TSA staff is aware that KI needs to be included in the dosimetry packets and that they are to emphasize that the drivers not ingest LI until specifically directed to do so by their supervisor. This will be accomplished at the next scheduled training event with the TSA personnel.

d. NOT DEMONSTRATED: NONE

e. PRIOR ARCAs - RESOLVED: NONE

f. PRIOR ARCAs - UNRESOLVED: NONE

1.13 Connecticut State Laboratory

The staff of the DPH Laboratory performed their functions in a very professional manner. Each team member contributed effectively to the tasks. Management and staff were extremely receptive to comments and dedicated to the continued process improvement.

a. MET: Criterion 1.b.1, 1.c.1

b. DEFICIENCY: NONE

c. AREAS REQUIRING CORRECTIVE ACTION: 4.c.1

Issue No.: 38-04 - 4.c.1-A-05

Description: The bagged milk sample was smeared for external contamination. However, the bottom surface of the bagged liquid sample was not smear surveyed for external contamination.

Possible Cause: The staff member was concentrating on the immediately accessible surfaces. Previous vegetation samples had only 2 surfaces, not a third created by the bottom of the jar.

Reference: NUREG-0654, C.3., I.8., J.11, Connecticut Agency Procedure (CTAP), state Radiological Emergency Response Plan, CTAP-3.7, DPH-3.

Recommendation: Add a section to **CTAP-3.7, DPH-3** describing the smear survey process, specifically addressing the requirement to survey "all external surfaces, including bag bottoms".

Corrective Action Demonstrated: A redemonstration showed the proper smear survey, including the bottom surface of the bag.

d. NOT DEMONSTRATED: NONE

f. PRIOR ARCAs - RESOLVED:

Issue No. 38-97-25-A-06 (Criterion 4.c.1)

Condition: Procedures used for monitoring for contamination on persons were not adequate to detect levels of contamination in excess of FEMA guidance. The distance from the probe to the to the surface of about four to six inches was too great, the path width of about six inches was too great and the probe speed of about two feet/second was too fast for the instrument/ detector (CDV 700) being used.

Plans for the radiation laboratory operations do not include monitoring procedures for portable instruments, but procedures are included in Attachment 11 [currently Attachment 4] to Section CTAP-4.3 of the State Plan. This document includes specifications for probe distance of one half inch and probe speed of six inches per second.

Corrective Action Demonstrated: The floor plan currently listed in Connecticut Agency Procedure (CTAP)-3.7, DPH-3, positions the sample receipt table immediately inside the doorway. Sample team personnel remain on the sidewalk area and place the samples on the tabletop. No sample team personnel are permitted access to the building. Therefore, it is no longer necessary to monitor personnel for contamination. The table top and paperwork surfaces are monitored frequently between sample receipt groups.

However, the CDV 700 was used to monitor samples. A procedure for performing a functional check of the instrument is contained in Attachment 6 of CTAP-3.7, DPH-3. A procedure for using the instrument to perform surveys of materials is contained in Attachment 7. The recommended probe distance has been modified to 1 inch in Section CTAP-4.3 of the State Plan. The 1-inch probe-to-surface distance is reflected in the CTAP-3.7, DPH-3.

Issue No.: 38-97-25-A-07 (Criterion 4.c.1)

Condition: Contamination control for surfaces was not apparent for the exercise. However, the spread of contamination to the Chemistry and Industrial Hygiene Laboratory and Radiation Laboratory could seriously delay the determination of appropriate protective actions. No temporary coverings were provided for the floor plan at the reception center, the hot sample storage area, or the wheel carts at the reception area. No provisions were made to add another plastic bag to 'hot' samples or to smear them to determine whether the measured radiation might be coming from contamination on the exterior surfaces.

Corrective Actions Demonstrated: Contamination control has been addressed adequately in all of the areas listed in ISSUE# 38-97-25-A-07. Surface areas for receipt and holding of samples were covered by absorbent paper. The floor area under the sample receipt table was covered by a plastic sheet. The sample receipt table is now positioned immediately inside the doorway. Sample team personnel are no longer permitted access to the building. Therefore, there is no longer any need to cover floor surfaces, except the area immediately associated with sample receipt, with removable coverings. No potential contamination from feet would be expected using the current floor plan.

These changes are reflected in the floor plan diagram in the Connecticut Agency Procedure State Radiological Emergency Response Plan (CTAP-3.7, DPH-3) and in the checklists in the procedure.

A wheeled cart is no longer part of the receipt area equipment. Samples are smeared for external contamination and checked for internal dose rate. Samples which are determined to be above the acceptance levels for internal and/or external contamination are double bagged and sealed. Samples are then placed directly into either a Blue plastic container (<2 times background) or a Red plastic container (≥2 times background). The red plastic container will prevent the spread of any potential contamination which might leak from samples which are in the "hot" storage area. Therefore, the temporary floor covering for the "hot" storage area mentioned in the ISSUE# 38-97-25-A-07 is no longer critical to contamination control.

All items providing corrective actions for this issue have been addressed in current procedure revisions, except the floor covering under the sample receipt table and a smear survey of the "Red Container" before it is moved to the storage area. Although these items were observed/ simulated during the exercise, it is recommended that references to these steps be added to the procedure to insure consistency in future events.

f. PRIOR ARCAs - UNRESOLVED: NONE

2. RISK JURISDICTIONS

2.1 East Lyme EOC

Briefings by the Chief Executive Officer were frequent and informative. During the course of the exercise six were conducted. Information from the conference calls with the State Area IV coordinator was presented to the EOC Staff.

The Deputy Executive Officer used the Emergency Management Directors checklist to ensure completion of required actions. This helped keep everyone on track and ensured follow up to completion.

The conference calls with the Area IV coordinator and the frequent updates helped the EOC to stay informed and also gave them an opportunity to ask questions or get clarification.

a. **MET:** Objective 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.c1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.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:** 2.c.1

Issue No.: 38-02-2.c.1-A-05

Description: Early in the exercise, the Chief Executive Officer (CEO) relocated students from schools to the high school. The transfer was executed without coordination or approval of the CT-OEM Area IV.

The CEO also made a decision to move several special needs patients to L&M Hospital. This was done without coordination or approval.

Recommendation: There needs to be more training of the RERP so that emergency officials clearly understand the need for continuous communication and coordination.

Corrective Action Demonstrated: At 0910 hours the Chief Executive Officer made the decision to voluntarily transfer students from Niantic Central School to the East Lyme High School. The EOC staff was informed at this time. The State Police and Public Works were also directed to assist with the transfer by providing escorts for the busses. At 0915 hours the State Area IV coordinator was advised of the voluntary school transfer. This action corrects the previous Issue 38-02-2.c.1-A-05.

f. **PRIOR ARCAs - UNRESOLVED:**

2.2 Hamlet of Fishers Island, NY, EOC

A recent addition to radio communications capabilities was the establishment of a new dedicated radio frequency for communications between Fishers Island, the Town of Southold, and the Plum Island Animal Disease Center. The Town of Southold was able to obtain a special license to set up the new radio frequency.

a. **MET:** Criterion 1.a.1, 1.c.1, 1.d.1, 1.e.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.1, 5.a.3, 5.b.1

b. DEFICIENCY: NONE

c. AREAS REQUIRING CORRECTIVE ACTION: 3.a.1

Issue No.: 38-04-3.a.1-A-06

Condition: Dosimetry was not issued to emergency workers in accordance with the RERP Plan and extent of play. The State of Connecticut Agency Procedure 4.2 Radiation Exposure Control and CTAP - 4.3 for Radiological Monitoring requires emergency workers be issued dosimetry in jurisdictions within the 10 mile Emergency Planning Zone (EPZ).

Possible Cause: Lack of training.

Reference: NUREG-0654, 3.a. b

Effect: Emergency worker could accumulate doses of radioactivity without their knowledge.

Recommendation: Additional training on plans and procedures for radiological monitoring would be required for emergency workers.

Corrective Actions Demonstrated: This issue was corrected through training and redemonstration. Immediately after the exercise dosimetry training was conducted for all members in the Hamlet of Fishers Island EOC.

d. NOT DEMONSTRATED: NONE

e. PRIOR ARCAs - RESOLVED: NONE

f. PRIOR ARCAs - UNRESOLVED: NONE

2.3 City of Groton EOC

The City of Groton EOC Staff demonstrated excellent communications during briefings to resolve impediments that arose during the exercise. The staff also maintained an excellent database of special needs populations.

a. MET: Criterion 1.a.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.1, 5.a.3, 5.b.1

b. DEFICIENCY: NONE

c. AREAS REQUIRING CORRECTIVE ACTION: 1.c.1

Issue No.: 38-04-1.c.1-A-07

Condition: The City of Groton could not demonstrate timely implementation of Protective Action Decisions (PADs) as directed by the State and specified in State procedures. State

procedure states that local communities are not allowed to make PADs after the Governor had declared a State of Emergency. This involved the refusal to evacuate as directed by the State during the first PAD. This was corrected on the spot when the City of Groton subsequently agreed to evacuate after receiving a call from the SEOC indicating that evacuation was essential.

Possible Cause: Key decision makers at the City of Groton Emergency Operations Center failed to follow State procedures regarding the issuance of PADS.

Reference: NUREG-0654, A. 1. d; A.2.a.b

Effect: The public residing in the City of Groton would not have been evacuated in a timely fashion and could have received doses which exceeded the EPA Protective Action Guides (PAGS)

Corrective Actions Demonstrated: This issue was corrected per initiative 1.5, when the City agreed to evacuate as the original PAD directed. However, the City of Groton Emergency Operations Center decision-makers should review the plans and procedures to ensure PAD's are implemented in a timely fashion.

d. NOT DEMONSTRATED: NONE

e. PRIOR ARCAs - RESOLVED: NONE

g. PRIOR ARCAs - UNRESOLVED: NONE

2.4 Town of Groton EOC

The Town of Groton activated their EOC in accordance with the plans, procedures and extent of play. The Town of Groton provided the capability of key personnel with leadership roles to provide direction and control to the overall response effort for which they are responsible.

a. **MET:** Criterion 1.a.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.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

2.5 Ledyard EOC

The Ledyard EOC is located in the basement of the high school with more than ample room. It is well equipped with maps and charts for any emergency operation that may arise, nuclear or civil. The communications center was modern and up-to-date with the latest communication radios, telephones, fax, amateur radio, and cellular phones. The emergency management coordinator always planned ahead for the next step in the emergency. A very smooth operation.

a. **MET:** Criterion 1.a.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.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**

2.6 Lyme EOC

The Lyme Emergency Management Director (EMD) devised a plan to minimize route alerting. The EMD plotted the siren coverage areas on a Lyme municipal map. When a siren failure is detected, only the area not covered by overlapping sirens needs to be route alerted instead of the whole area covered by the affected siren.

a. **MET:** Criterion 1.a.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.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**

2.7 Montville EOC

The staff demonstrated a sense of unity. All EOC staff fully understood their plans and procedures and implemented them with no hesitation. Their EOC is a new facility and was an asset to staff. It contributed to greater efficiency by being located on one floor.

a. **MET:** Criterion 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.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:** 3.a.1

Issue No.: 38-02-3.a.1-A-06

Condition: The briefing regarding emergency worker exposure control did not contain key information included in town procedures. During a re-demonstration the Radiological Defense Officer (RDO) again did not follow procedures and omitted key information.

Possible Cause: The RDO and Assistant RDO did not use or follow the prescribed procedure for briefings, resulting in the omission of key steps in the process.

Reference: NUREG-0654, K.3, and Montville Plan: Attachment 1 to Radiation Exposure Control, LCP- 4.2.

Effect: The briefed emergency worker did not fully understand the purpose of the dosimeter kit and its components, was not clear as to call-back, turn-back, or maximum exposure limit, and did not sign the briefing acknowledgement form.

Recommendation: Four improvements are recommended: (1) the prescribed local procedure should be utilized by the RDO during the briefing; (2) the instructional language should be simplified; (3) the worker should be questioned to ensure adequate understanding of the exposure control concepts; and (4) all forms should be completed and signed.

Corrective Action Demonstrated: September14, 2004; The Radiological Officer provided a comprehensive and detailed briefing to all emergency workers. This briefing corrects previous ARCA 38-02-3.a.1-06

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

2.8 City of New London EOC

There were several strengths apparent within the New London Emergency Operations Center (EOC). First and foremost was the teamwork within the EOC. One example of such teamwork occurred at a press briefing. When the Health Department representative agreed to do a press briefing on potassium iodide, the School Superintendent volunteered to assist her by providing a translation in Spanish. With the exception of one new team member, the participants were a veteran team. The team also demonstrated their ability to think beyond the written procedures when necessary. For example, when planning the precautionary transfer of school children it was recognized that there were not sufficient buses to transfer all the children at the same time. In

addition to requesting additional buses as identified in the School Superintendent's procedure, the Superintendent prioritized the transfer by transporting elementary children first.

a. **MET: Criterion**: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.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**

2.9 Old Lyme EOC

The Old Lyme Emergency Operations Center displayed two strengths. The first was the introduction of a computerized status board, which provided for the Time, Incident Class, Posture Code, and space for comments on each entry. This tool gave the staff the ability to scroll the information on the status board when they needed specific information not immediately visible.

A second strength was the excellent staff participation in the implementation of the Protective Action Decisions and the Precautionary Protective Actions.

The School District Plan for Old Lyme was an extremely well developed document and very detailed in its content.

a. **MET:** Criterion 1.a.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.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**

2.10 Waterford EOC

The Waterford Emergency Operations Center Staff was a very dedicated, knowledgeable, and professional staff who worked well together in accomplishing their emergency response assignments. Excellent direction and control was demonstrated by the First Selectman and the Emergency Management Director.

All four nursing homes interviewed in Waterford, CT had plans to evacuate or shelter their clients. The four nursing homes are aware of the new Department of Public Health Policy of sheltering in place. Each of the homes has potassium Iodide (KI) kits and plans for implementing KI should it become necessary. They also knew additional KI was available from the Department of Public Health or from the Town of Waterford. They all knew the required numbers and types of vehicles and where their clients would be relocated should they require evacuation.

a. **MET:** Criterion 1.a.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.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**

2.11 Schools/Bus Evacuation - Towns of East Lyme and Old Lyme

The School District Plan for Old Lyme was an extremely well developed document and very detailed in its content. For example, a color code (hand stamp) is used to identify students who have taken Potassium Iodide (Green), who haven't taken KI (no stamp), and those who can't take KI (red). A log is kept of these transactions and kept updated as the situation changes. Another example is when students are transferred to the Host School, they are divided up by class, kept together by class in a specific location at the Host Facility by area with attendance taken periodically so as not to misplace anyone.
The Plan is detailed in many ways and deserves recognition for an excellent document.

a. **MET:** Objective 3.c.2, Questionnaire

b. **DEFICIENCY: NONE**

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

d. **NOT DEMONSTRATED: NONE**

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

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

2.12 Special Populations - Nursing Homes

All of the four nursing homes that were interviewed in Waterford, CT had plans dealing with ways to evacuate or shelter their clients. Should they have to evacuate they all knew the numbers and types of vehicles needed. They know where their clients would be relocated should they require evacuation. The four nursing homes are aware of the new Department if Public Health Policy of

sheltering in place. Each of the homes have potassium iodide (KI) kits and plans for implementing KI should it become necessary. They also knew if the need additional KI that kit was available from the Department of Public Health or from the Town of Waterford.

All of the nursing home staffs were very professional and knowledgeable about their responsibilities concerning emergency responses.

a. **MET:** 3.c.1, Questionnaire

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 JURISDICTIONS

3.1 Stonington EOC

Stonington is a support community that serves as a disembarkation point for the evacuated residents from Town of Southold, Fishers Island, New York.

The Emergency Management Director (EMD)/Chief Executive Officer was in charge of the EOC and conducted excellent briefings of the staff, encouraged brain storming of potential issues and what-if's during the EOC briefings. The EMD demonstrated very strong leadership. The computerized log-keeping program kept the EOC staff apprised of the situation in progress as information became available.

The Public Works Department prepared and moved the ferry gangway to the disembarkation pier in less than 30 minuets after notification that the gangway would need to be taken to the Stonington Town Fishing Dock pier.

a. **MET:** Criterion 1.a.1, 1.b.1, 1.c.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**

4. STATE OF RHODE ISLAND

4.1 State Emergency Operations Center

The demonstration of all the staff of the EOC, media center, health department and environmental management demonstrated an enthusiasm and professionalism that was evident throughout the demonstration both days. Their efforts to get the most accurate information was impressive. The staff should feel confident that they could and would succeed if an incident at Millstone were to occur.

a. **MET:** 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.d.1, 3.b.1, 3.d.1, 3.e.1, 3.e.2, 5.b.1

b. **DEFICIENCY: NONE**

c. **AREAS REQUIRING CORRECTIVE ACTION:** 1.b.1

Issue No.: 38-04-1.b.1-A-08

Condition: The space identified for the Public Information Center (PIC) is not adequate to support emergency responses. According to the plan Classroom A at the Rhode Island Emergency Management Agency is the identified PIC. However, there was no privacy for PIOs or media and all were in the same area as the media briefings. Media monitoring was partially conducted in the State EOC area. As there were many discussions and conference calls the televisions had to remain on mute. If there had been a broadcast with misinformation it would have not been heard or addressed.

Possible Cause: The PIO work area was in the same area as the media briefings. Media work area was located across from the PIO area. There was no means of separation or privacy. In addition, there were no television hookups in the media room; therefore, a staff member was placed in the EOC to monitor the two televisions for three stations.

Reference: Appendix G, State of Rhode Island, Ingestion Pathway Plan, Rev 1/01, page 1 of 60.

Effect: There could have been confusion and delays in providing information to the public. Having the media, PIOS and the briefing area all within one space did not create a positive environment.

Recommendation: Revise the plan to indicate that the PIC would be located in the Armory.

Schedule of Corrective Actions: The present space utilized for the Public information Center (PIC) is only temporary. It does have the necessary equipment or space and must also be used by other operational personnel. A new area is being researched and planned for a EOC and will include a PIC area. The "Armory" mentioned in the FEMA response has only been available in large emergencies and not utilized for exercises. It is not under RIEMA control but the RI Army National Guard. The projected construction date is January 2006, Any changes to the date will be forwarded to FEMA Region I.

d. **NOT DEMONSTRATED: NONE**

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

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

4.2 Department of Public Health

a. **MET:** 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.d.1, 3.b.1, 3.d.1, 3.e.1, 3.e.2, 5.b.1

b. **DEFICIENCY: NONE**

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

d. **NOT DEMONSTRATED: NONE**

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

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

4.3 State Police

a. **MET:** 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.d.1, 3.b.1, 3.d.1, 3.e.1, 3.e.2, 5.b.1

b. **DEFICIENCY: NONE**

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

d. **NOT DEMONSTRATED: NONE**

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

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

4.4 Department of Environmental Management

The Rhode Island Emergency Operations Center (EOC) team worked very well together to perform their assigned duties. Personnel were knowledgeable and professional. Decisions were made in a timely manner. EOC personnel effectively used their equipment and maintained good discipline in the EOC because of its small size.

a. **MET:** 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.d.1, 3.b.1, 3.d.1, 3.e.1, 3.e.2, 5.b.1

b. **DEFICIENCY: NONE**

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

d. **NOT DEMONSTRATED: NONE**

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

f. PRIOR ARCAs - UNRESOLVED: NONE

4.5 Media Center

The Rhode Island Joint Information Center staff are to be commended for their teamwork while overcoming work environment constraints.

The Public Information Assistant is commended for her thoroughness and support throughout the exercise.

The development and use of individual position checklist greatly facilitated the actions of the participants. Since ingestion pathway exercises are only once every six years the checklists are a good tool for successful implementation of emergency responsibilities.

a. MET: 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

4.6 Rhode Island Contract Laboratory (FRAMATONE)

Laboratory management and staff are extremely proficient in their duties. Individuals are knowledgeable. The lab is equipped to reliably process a variety of samples and activity levels. Overall, a well run laboratory.

a. MET: 4.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

4.7 13th Civil Support Team RI Army National Guard

The 13th CST demonstrated proficiency and professionalism in conducting monitoring, decontamination, and sample transfer and accountability activities. Emergency workers were

given dosimetry to monitor any contamination, and other health and safety issues, such as trip hazards, were considered in setting up the sample receipt and decontamination area. Sample integrity was maintained and samples were given serial numbers prior to accepting the samples from the Field Sampling Teams.

a. **MET:** 3.a.1, 3.b.1, 4.b.1, 6.a.1, 6.b.1

b. **DEFICIENCY: NONE**

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

d. **NOT DEMONSTRATED: NONE**

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

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

4.8 State Field Sampling Teams

4.8.1 Field Sampling Team #1

The day of the exercise, September 16, 2004, was a particularly wet and drizzly day. All field sample teams overcame the weather and worked through the difficulties imposed to collecting the best sample possible for this exercise. Prior to and during each phase of the sample collection process Field Sample Team #1 talked through each step, resolved any difficulties and efficiently got the required samples. The participation of the State Police as transporter and survey/dosimeter communicator greatly enhances the operation of the environmental sample collection process.

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

4.8.2 Field Sampling Team #2

The field sampling team members were devoted professionals and were well versed in sample collecting procedures.

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

4.8.3 Field Sampling Team #3

The field sample team demonstrated the ability to take soil, water, and vegetation samples in the field in an effective manner. Good contamination and exposure control was shown during handling of samples and implementation of workers' duties while in the field. Overall, the field sampling team performed effectively and in accordance with the plan and procedures.

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

b. **DEFICIENCY: NONE**

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

d. **NOT DEMONSTRATED: NONE**

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

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

APPENDIX 1

ACRONYMS AND ABBREVIATIONS

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

ACP	Access Control Point
AMA	American Medical Association
ANI	American Nuclear Insurers
ARC	American Red Cross
ARCA	Area Requiring Corrective Action
CCC	Congregate Care Center
CDC	Center for Disease Control
CD-V	Civil Defense - Victoreen
CFR	Code of Federal Regulations
CPM	Counts Per Minute
DEP	Department of Environmental Protection
DEP/DOR	Department of Environmental Protection/Division of Radiation
DHHS	U.S. Department of Health and Human Services
DHS/OEMS	Department of Health Services/Office of Emergency Medical Services
DHS	Department of Homeland Security
DOC	U.S. Department of Commerce
DOE	U.S. Department of Energy
DOI	U.S. Department of the Interior
DOT	U.S. Department of Transportation
DRD	Direct Reading Dosimeter
EAL	Emergency Action Level
EAS	Emergency Alert System
ECL	Emergency Classification Level
EEM	Exercise Evaluation Methodology
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EPA	U.S. Environmental Protection Agency
EPZ	Emergency Planning Zone
ETA	Estimated Time of Arrival
ETE	Evacuation Time Estimate
EWMDS	Emergency Worker Monitoring and Decontamination Station
FAA	Federal Aviation Agency
FCC	Federal Communications Commission
FDA	U.S. Food and Drug Administration
FEMA	Federal Emergency Management Agency
FR	Federal Register
FTC	Field Team Coordinator
ft/min	feet per minute
ft^3/min	cubic feet per minute
GE	General Emergency
GM	Guidance Memorandum

IP	Implementing Procedure
JMC	Joint Media Center
JPIC	Joint Public Information Center
KI	Potassium Iodide
mR	milliroentgen
mR/h	milliroentgen per hour
NOAA	National Oceanic and Atmospheric Administration
NOUE	Notification of Unusual Event
NRC	U.S. Nuclear Regulatory Commission
NUREG-0654	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*
NWS	National Weather Service
OEM	Office of Emergency Management
ORO	Offsite Response Organization
PAD	Protective Action Decision
PAG	Protective Action Guide
PAO	Public Affairs Official
PAR	Protective Action Recommendation
PIADC	Plum Island Animal Disease Center
PIO	Public Information Officer
POR	Point Of Review
R	Roentgen
RAC	Regional Assistance Committee
RACES	Radio Amateur Civil Emergency Service
RC	Reception Center
REA	Radioactive Emergency Area
REM	Roentgen Equivalent Man
REP	Radiological Emergency Preparedness
RERP	Radiological Emergency Response Plan
R/h	Roentgen(s) per hour
RO	Radiological Officer
SAE	Site Area Emergency
SEOC	State Emergency Operations Center
TCP	Traffic Control Point
TDD	Telecommunications Device for the Deaf
TL	Team Leader
TLD	Thermoluminescent Dosimeter
UHF	Ultra High Frequency
USCG	U.S. Coast Guard
USDA	U.S. Department of Agriculture
VHF	Very High Frequency
WP	Warning Point

APPENDIX 2

EXERCISE EVALUATORS AND TEAM LEADERS

The following is a list of the personnel who evaluated the Millstone Power Station Plume Exposure Pathway exercise on March 15, 2000. Evaluator Team Leaders are indicated by the letters "(TL)" after their names. The organization which each evaluator represents is indicated by the following abbreviations:

FEMA Hqs	-	Federal Emergency Management Agency - Hqs
FEMA RI	-	Federal Emergency Management Agency – Region I
FEMA RII	-	Federal Emergency Management Agency – Region II
FEMA RVII	-	Federal Emergency Management Agency – Region VII
ICF	-	ICF Consulting
FDA	-	U.S. Food and Drug Administration
NRC	-	U.S. Nuclear Regulatory Commission
NY State	-	Monroe County, New York

EVALUATION SITE	EVALUATOR	ORGANIZATION
GENERAL OBSERVATIONS	K. Horak	FEMA RI
	D. Bell	FEMA RI
STATE OF CONNECTICUT		
State Emergency Operations Center	R. Swartz (TL)	FEMA RI
	L. DeMarco	FEMA RI
	R. Smith	ICF
Department of Environmental Protection	M. Geer	ICF
	H. Berry	ICF
Emergency Operations Facility	H. Berry	ICF
Field Monitoring Teams	R. Bernacki (TL)	FDA RAC
	D. Stuenkel	ICF
Field Sampling Teams	R. Bernacki	FDA RAC
	D. Stuenkel	ICF
	H. Bodecker	NY State
Field Sampling Teams	S. Maingi	ICF
	C. Gordon	NRC RI
Joint Media Center	H. Christiansen	ICF
	R. Samsel	ICF
Department of Health	J. Hickey	ICF

EVALUATION SITE	EVALUATOR	ORGANIZATION
OEM Area IV, Colchester	W. Gaudet	FEMA RI
State Police Access Control/ Traffic Control Points	P. Taylor	ICF
State Department of Transportation - Norwich	P. Taylor	ICF
State Transportation Staging Area	R. Van K. Lott	ICF ICF
Connecticut State Labs	R. Argall	ICF
RISK JURISDICTIONS		
East Lyme	W. Cullen	ICF
Hamlet of Fishers Island, NY	B. Hasemann	FEMA RII
City of Groton	D. Jacobsen	ICF
Town of Groton	P. Malool	FEMA RII
Ledyard	J. Barrett	ICF
Lyme	C. Zeppenfeld	ICF
Montville	J. Gibbons	FEMA RI
City of New London	T. Blackmon	ICF
Old Lyme	Q. Iannazzo	ICF
Waterford	A. Lookabaugh T. Hollins	ICF FEMA RI
SUPPORT JURISDICTIONS		
Stonington	W. McCance	ICF
STATE OF RHODE ISLAND		
State Emergency Operations Center	R. Poole	FEMA RI
Department of Public Health	P. Tenorio	FEMA Hqs.

EVALUATION SITE	EVALUATOR	ORGANIZATION
Rhode Island State Police	J. Young	FEMA RVII
Department of Environment Management	E. Wojnas	ICF
	G. Goldberg	ICF
Media Center	J. Young	FEMA RVII
Rhode Island State Lab (FRAMATONE)	R. Argall	ICF
13th Civil Support Team Army National Guard	G. Goldberg	ICF
State Field Sampling Teams	H. Boedecker	NY State
	S. Maingi	ICF
	C. Gordon	NRC RI RAC

APPENDIX 3

EXERCISE CRITERION AND EXTENT-OF-PLAY AGREEMENT

This appendix lists the exercise criterion which were scheduled for demonstration in the Millstone Power Station Plume/Ingestion Exposure Pathway exercise on September 14-16, 2004, and the extent-of-play agreement approved by FEMA Region I on June 28, 2004, for Connecticut and August 27, 2004, for Rhode Island.

The evaluation criteria, outlined in the Federal Register on September 12, 2001, and amended April 25, 2002, represent a functional translation of the planning standards and evaluation criteria of NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for the Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980.

Because the evaluation criteria are intended for use at all nuclear power plant sites, and because of variations among offsite plans and procedures, an extent-of-play agreement is prepared by the State and approved by FEMA to provide evaluators with guidance on expected actual demonstration of the evaluation criteria.

A. Evaluation Criteria

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

a. Evaluation Area 1: Emergency Operations Management

Sub-element 1.a – Mobilization

Criterion 1.a.1: Off-Site Response Organizations (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)

Sub-element 1.b – Facilities

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

Sub-element 1.c - Direction and Control

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

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.)

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., J.10.a.b.e.f.j.k., 11, K.3.a.)

b. Evaluation Area 2: Protective Action Decision-Making

Sub-element 2.a - Emergency Worker Exposure Control

Criterion 2.a.1: Off-Site Response Organizations (OROs) use a decision-making process, considering relevant factors and appropriate coordination, to insure that an exposure control system, including the use of potassium iodide (KI), is in place for emergency workers including provisions to authorize radiation exposure in excess of administrative limits or protective action guides. (NUREG-0654, K.4.)

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

Criterion 2.b.1: Appropriate protective action recommendations (PARs) are based on available information on plant conditions, field monitoring data, and licensee and Off-Site Response Organizations (OROs) dose projections, as well as knowledge of on-site and off-site environmental conditions. (NUREG-0654, I.8., 10., 11. and Supplement 3.)

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 potassium iodide (KI), if Off-Site Response Organizations (OROs) policy). (NUREG-0654, J.9., 10.m.)

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

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

c. Evaluation Area 3: Protective Action Implementation

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

Criterion 3.a.1: The Off-Site Response Organizations (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.)

Sub-element 3.b – Implementation of Potassium Iodide (KI) Decision

Criterion 3.b.1: Potassium iodide (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 (not the general public) is maintained. (NUREG-0654, E. 7., J. 10. e., f.)

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

Criterion 3.c.1: Protective action decisions (PADs) are implemented for special population groups within areas subject to protective actions. (NUREG-0654, E.7., J.9., 10.c.d.e.g.)

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

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., k.)

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

d. 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.8., 9., 11.)

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

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.8., 9., 11.)

d. Evaluation Area 5: Emergency Notification and Public Information

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

Criterion 5.a.1: Activities associated with primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized off-

site emergency officials to notify the public of an emergency situation. The initial instructional message to the public must include as a minimum: 1) identification of the State or local government organization and the official with the authority for providing the alert signal and instructional message; 2) identification of the commercial nuclear power plant and a statement that an emergency situation exists at the plant; 3) reference to REP-specific emergency information (e.g., brochures and information in telephone books) for use by the general public during an emergency; and 4) a closing statement asking the affected and potentially affected population to stay tuned for additional information. (10 CFR Part 50, Appendix E & NUREG-0654, E. 1., 4., 5., 6., 7.)

Criterion 5.a.3: Activities associated with FEMA approved exception areas (where applicable) are completed within 45 minutes following the initial decision by authorized off-site 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 Off-Site Response Organizations (OROs) of a failure of the primary alert and notification system. (NUREG-0654, E. 6., Appendix 3.B.2.c)

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

Criterion 5.b.1: Off-Site Response Organizations (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,a.,b.,c.)

f. Evaluation Area 6: Support Operations/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.

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

Criterion 6.b.1 The facility/ Off-Site Response Organization (ORO) has adequate procedures and resources for the accomplishment of monitoring and decontamination of emergency worker equipment including vehicles.

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. 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.

B. Extent-of-Play Agreement

The extent-of-play agreement on the following pages was submitted by the State of Connecticut and the State of Rhode Island and was approved by FEMA Region I on June 28, 2004 and August 27, 2004, respectively, in preparation for the Millstone Power Station Plume Exposure Pathway exercise on September 14-16, 2004. The extent-of-play agreement includes any significant modification or change in the level of demonstration of each exercise objective listed in Subsection A of this appendix.

Evaluation Area 1 – Emergency Operations Management
Sub-element 1.a.1. Mobilization.

Criterion 1.a.1: Off-site Response organization 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)

Intent
This sub-element is derived from NUREG-0654 which provides that OROs should have the capability to alert, notify, and mobilize emergency personnel and to activate and staff emergency facilities.

EXTENT OF PLAY - GENERAL

Responsible OROs should demonstrate the capability to receive notification of an emergency situation from the licensee, verify the notification, and contact, alert, and mobilize key emergency personnel in a timely manner. In addition, responsible OROs should demonstrate the activation of facilities for immediate use by mobilized personnel when they arrive to begin emergency operations. Activation of facilities should be completed in accordance with the plan and/or procedures. Pre-positioning of emergency personnel is appropriate, in accordance with the extent of play agreement, at those facilities located beyond a normal commuting distance from the individual's duty location or residence. Further, pre-positioning of staff for an out-of-sequence demonstration is appropriate in accordance with the extent of play agreement.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EXTENT OF PLAY – SPECIFIC

Plume Exposure Pathway – September 14, 2004

1. The following locations and agencies will be pre-positioned and/or demonstrated off-line from the exercise scenario:
   - State Department of Environmental Protection (DEP) Field Teams will be pre-staged at State Police Barracks E in Montville in conjunction with the exercise.
2. A roster and/or procedures indicating 24-hour staffing capability for **key** positions (those emergency personnel necessary to carry out critical functions), as indicated in the plan and/or procedures, will be provided to the evaluator **(demonstration of a shift change is not required).**
3. The State Transportation Staging Area at the Veterans Home in Rocky Hill, CT will demonstrate mobilization as per the plan.

Ingestion Pathway – September 15-16, 2004

Not applicable

Areas Requiring Corrective Action (ARCA)

NONE

Evaluation Area 1 – Emergency Operations Management
Sub-element 1.b.1. Facilities.

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

Intent
This sub-element is derived from NUREG-0654, which provides that OROs should have facilities to support emergency response.

EXTENT OF PLAY - GENERAL

Facilities will only be specifically evaluated for this criterion if they are new or have substantial changes in structure or mission. Responsible OROs should demonstrate the availability of facilities that support the accomplishment of emergency operations. Some of the areas to be considered are: adequate space, furnishings, lighting, restrooms, ventilation, backup power and/or alternate facility (if required to support operations).

Facilities must be set up based on the ORO's plans and procedures and demonstrated, as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway – September 14, 2004

1. This objective will be demonstrated by **Montville** since it has a new emergency operations center which has not been evaluated. A source of backup power and maintenance logs, if available, will be discussed.

Ingestion Pathway – September 15-16, 2004

1. State DPH Laboratory will be evaluated during the Ingestion Pathway exercise only.

Sub Element 1.b.1 Facilities has been approved for an On-the-Spot Correction.

Areas Requiring Corrective Action (ARCA)

NONE

Evaluation Area 1 – Emergency Operations Management
Sub-element 1.c.1. Direction and Control.

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

Intent

This sub-element is derived from NUREG-0654, which provides that the ORO have the capability to control their overall response to an emergency.

EXTENT OF PLAY - GENERAL

Leadership personnel should demonstrate the ability to carry out essential functions of the response effort, for example; keeping the staff informed through periodic briefings and/or other means, coordinating with other appropriate OROs and ensuring completion of requirements and requests.

All activities associated with direction and control must be performed based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway – September 14, 2004

1. The State Transportation Staging Area at the Veterans Home in Rocky Hill, CT will demonstrate direction and control as per the plan.

Ingestion Pathway – September 15-16, 2004

1. A briefing will be provided to players, prior to the ingestion pathway exercise, outlining status of plume events leading to the ingestion pathway along with objectives and decisions already made at the State EOC.

Areas Requiring Corrective Action (ARCA)

38-02-1.c1-01: **The State OEM and the towns did not coordinate effectively, e.g., implementing the same precautionary activities and protective actions. This had the potential to negatively impact public safety. (State EOC)**

38-02-1.c1-03: **Area IV staff did not inform the State EOC of early dismissal of schools in the Town and City of Groton. (Area IV)**

Evaluation Area 1 – Emergency Operations Management
Sub-element 1.d.1. Communications and 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.)

Intent

This sub-element is derived from NUREG-0654, which provides that OROs should establish reliable primary and backup communication systems to ensure communications with key emergency personnel at locations such as the following: appropriate contiguous governments within the emergency planning zone (EPZ), Federal emergency response organizations, the licensee and its facilities, emergency operations centers (EOC), and field teams.

EXTENT OF PLAY - GENERAL

OROs will demonstrate that a primary, and at least one backup system, are fully functional at the beginning of an exercise. If a communications system or systems are not functional, but exercise performance is not affected, no exercise issue will be assessed. Communications equipment and procedures for facilities and field units should be used as needed for the transmission and receipt of exercise messages. All facilities and field teams should have the capability to access at least one communication system that is independent of the commercial telephone system. Responsible OROs should demonstrate the capability to manage the communication systems and ensure that all message traffic is handled without delays that might disrupt the conduct of emergency operations. OROs should ensure that a coordinated communication link for fixed and mobile medical support facilities exist.

The specific communications capabilities of OROs should be commensurate with that specified in the response plan and/or procedures. Exercise scenarios could require the failure of a communications system and the use of an alternate system.

All activities associated with the management of communications capabilities must be demonstrated based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway – September 14, 2004

1. Communications from the State to the EPZ communities will be relayed through the State Office of Emergency Management (OEM) Area 4 Coordinator.
2. Direct communications between the State and Millstone Station will be established between the site Emergency Operations Facility (EOF) and the State EOC (Department of Environmental Protection, Division of Radiation and through the Millstone Power Station (Dominion) Nuclear News Group.).
3. The State Transportation Staging Area at the Veterans Home in Rocky Hill, CT will demonstrate communications and equipment per the plan.

Ingestion Pathway – September 15-16, 2004

No site-specific modifications.

Sub Element 1.d.1 has been approved for an On-the-Spot Correction.

Areas Requiring Corrective Action (ARCA)

NONE

Evaluation Area 1 – Emergency Operations Management
Sub-element 1.e.1. 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., J.10.a.b.e.f.j.k., 11, K.3.a.)

Intent

This sub-element is derived from NUREG-0654, which provides that OROs have emergency equipment and supplies adequate to support the emergency response.

EXTENT OF PLAY - GENERAL

Equipment within the facility(ies) should be sufficient and consistent with the role assigned to that facility in the ORO's plans and/or procedures in support of emergency operations. Use of maps and displays is encouraged.

All instruments, including air sampling flow meters (field teams only), should be inspected, inventoried, and operationally checked before each use. They should be calibrated in accordance with the manufacturer's recommendations (or at least annually for the unmodified CDV-700 series or if there are no manufacturer's recommendations for a specific instrument; modified CDV-700 instruments should be calibrated in accordance with the recommendation of the modification manufacturer.). A label indicating such calibration should be on each instrument or verifiable by other means. Note: Field team equipment is evaluated under 4.a.1; radiological laboratory equipment under 4.c.1; reception center and emergency worker facilities' equipment is evaluated under 6.a.1; and ambulance and medical facilities' equipment is evaluated under 6.d.1.
Sufficient quantities of appropriate direct-reading and permanent record dosimetry and dosimeter chargers should be available for issuance to all categories of emergency workers that could be deployed from that facility. **Appropriate direct-reading dosimeters should allow individual(s) to read the administrative reporting limits and maximum exposure limits contained in the ORO's plans and procedures.**
Dosimeters should be inspected for electrical leakage at least annually and replaced, if necessary. CDV-138s, due to their documented history of electrical leakage problems, should be inspected for electrical leakage at least quarterly and replaced if necessary. This leakage testing will be verified during the exercise, through documentation submitted in the Annual Letter of Certification, and/or through a staff assistance visit.
Responsible OROs should demonstrate the capability to maintain inventories of KI sufficient for use by emergency workers, as indicated on rosters; institutionalized individuals, as indicated in capacity lists for facilities; and, where stipulated by the plan and/or procedures, members of the general public (including transients) within the plume pathway EPZ.
Quantities of dosimetry and KI available and storage locations(s) will be confirmed by physical inspection at storage location(s) or through documentation of current inventory submitted during the exercise, provided in the Annual Letter of Certification submission, and/or verified during a Staff Assistance Visit. Available supplies of KI should be within the expiration date indicated on KI bottles or blister packs. As an alternative, the ORO may produce a letter from FEMA indicating that the KI supply remains potent, in accordance with Food and Drug Administration (FDA) guidance. FEMA issues these letters based upon the findings of the certified independent laboratory that performed the analysis at the ORO's request and expense.

At locations where traffic and access control personnel are deployed, appropriate equipment (e.g., vehicles, barriers, traffic cones and signs, etc.) should be available or their availability described.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EXTENT OF PLAY - SPECIFIC

Plume Exposure pathway – September 14, 2004

Dosimetry:

1. Each community and Connecticut State Police location involved in traffic control has been provided with emergency worker dosimetry packets. These Packets include: a Permanent Reading Dosimeter or PRD (in lieu of a thermoluminescent dosimeter) and two self-reading dosimeters (SRD) in the 0R (Roentgen) to 5R and the 0R to 200R ranges.
2. Each Direct Reading Dosimeter has a sticker with the date of the last calibration/electrical leakage test.

Potassium Iodide – KI:

1. KI is included in the dosimetry packets for emergency workers.

Status Boards, etc..

2. This objective will be demonstrated by Montville to include: status board(s), maps and EOC equipment.

The State Transportation Staging Area at the Veterans Home in Rocky Hill, CT will demonstrate that they have the equipment and supplies sufficient to support emergency operations as per the plan.

Ingestion Pathway – September 15-16, 2004
No site-specific modifications.

Sub Element 1.e.1 has been approved for an On-the-Spot Correction.

Areas Requiring Corrective Action (ARCA)

NONE

Evaluation Area 2 – Protective Action Decision-Making
Sub-element 2.a.1. 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, K.4.)

Intent

This sub-element is derived from NUREG-0654, which provides that an ORO have the capability to assess and control the radiation exposure received by emergency workers and have a decision chain in place as specified in the ORO's plans and procedures to authorize emergency worker exposure limits to be exceeded for specific missions.

Radiation exposure limits for emergency workers are the recommended accumulated dose limits or exposure rates that emergency workers may be permitted to incur during an emergency. These limits include any pre-established administrative reporting limits (that take into consideration Total Effective Dose Equivalent or organ-specific limits) identified in the ORO's plans and procedures.

EXTENT OF PLAY - GENERAL

OROs authorized to send emergency workers into the plume exposure pathway EPZ should demonstrate a capability to meet the criterion based on their emergency plans and procedures.

Responsible OROs should demonstrate the capability to make decisions concerning the authorization of exposure levels in excess of pre-authorized levels and to the number of emergency workers receiving radiation dose above pre-authorized levels.

As appropriate, OROs should demonstrate the capability to make decisions on the distribution and administration of KI, as a protective measure, based on the ORO's plan and/or procedures or projected thyroid dose compared with the established protective action guides (PAGs) for KI administration.

All activities must be based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EXTENT OF PLAY - SPECIFIC

Plume Exposure pathway – September 14, 2004

1. The capability to make decisions concerning the authorization of exposure levels in excess of pre-authorized levels and to the number of emergency workers receiving radiation dose above pre-authorized levels will be accomplished through controller injected messages.

Ingestion Pathway – September 15-16, 2004

No site-specific modifications.

Areas Requiring Corrective Action (ARCA)

NONE

Evaluation Area 2 – Protective Action Decision-Making
Sub-element 2.b.1 RAD Assessment - Protective Action Recommendations-Plume Phase.

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., 11. and Supplement 3.)

Intent

This sub-element is derived from NUREG-0654, which indicates that OROs have the capability to independently project integrated dose from exposure rates or other information and compare the estimated dose savings with the protective action guides. OROs have the capability to choose, among a range of protective actions, those most appropriate in a given emergency situation. OROs base these choices on protective action guides (PAGs) from the ORO's plans and procedures, or EPA 400-R-92-001 and other criteria, such as, plant conditions, licensee protective action recommendations, coordination of protective action decisions with other political jurisdictions (e.g. other affected OROs), availability of appropriate in-place shelter, weather conditions, evacuation time estimates, and situations that create higher than normal risk from evacuation.

EXTENT OF PLAY - GENERAL

During the initial stage of the emergency response, following notification of plant conditions that may warrant offsite protective actions, the ORO should demonstrate the capability to use appropriate means, described in the plan and/or procedures, to develop protective action recommendations (PARs) for decision-makers based on available information and recommendations from the licensee and field monitoring data, if available.

When release and meteorological data are provided by the licensee, the ORO also considers these data. The ORO should demonstrate a reliable capability to validate dose projections. The types of calculations to be demonstrated depend on the data available and the need for assessments to support the PARs appropriate to the scenario. In all cases, calculation of projected dose should be demonstrated. Projected doses should be related to quantities and units of the PAGs to which they will be compared. PARs should be promptly transmitted to decision-makers in a prearranged format.

Differences greater than a factor of 10 between projected doses by the licensee and the ORO should be discussed with the licensee with respect to the input data and assumptions used the use of different models, or other possible reasons. Resolution of these differences should be incorporated into the PAR if timely and appropriate. The ORO should demonstrate the capability to use any additional data to refine projected doses and exposure rates and revise the associated PARs.

All activities must be based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EXTENT OF PLAY - SPECIFIC

Plume Exposure pathway – September 14, 2004

1. This is primarily a State objective however, until a Governor's *State of Emergency Declaration* is made, local officials may make decisions concerning their communities' protective and precautionary actions.

Ingestion Pathway – September 15-16, 2004

Not Applicable

Areas Requiring Corrective Action (ARCA)

NONE

Evaluation Area 2 – Protective Action Decision-Making
Sub-element 2.b.2 RAD Assessment- Protective Action Decisions - Plume Phase.

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.m.)

Intent

This sub-element is derived from NUREG-0654, which indicates that OROs have the capability to independently project integrated dose from exposure rates or other information and compare the estimated dose savings with the protective action guides. OROs have the capability to choose, among a range of protective actions, those most appropriate in a given emergency situation and base these choices on protective action guides (PAGs) from the ORO's plans and procedures, FRC Reports Numbers 5 and 7 or EPA 400-R-92-001 and other criteria, such as, plant conditions, licensee protective action recommendations, coordination of protective action decisions with other political jurisdictions (e.g. other affected OROs), availability of appropriate in-place shelter, weather conditions, evacuation time estimates, and situations that create higher than normal risk from evacuation.

EXTENT OF PLAY - GENERAL

OROs should have the capability to make both initial and subsequent PADs. They should demonstrate the capability to make initial PADs within a timely manner appropriate to the situation, based on notification from the licensee, assessment of plant status and releases, and PARs from the utility and ORO staff.

The dose assessment personnel may provide additional PARs based on the subsequent dose projections, field data, or information on plant conditions. The decision-makers should demonstrate the capability to change protective actions as appropriate based on these projections.

If the ORO has determined that KI will be used as a protective measure for the general public under off-site plans, then the ORO should demonstrate the capability to make decisions on the distribution and administration of KI as a protective measure for the general public to supplement shelter and evacuation protective actions. This decision should be based on the ORO's plan and/or procedures or projected thyroid dose compared with the established PAG for KI administration. The KI decision-making process should involve close coordination with appropriate assessment and decision-making staff.

If more than one ORO is involved in decision-making, OROs should communicate and coordinate PADs with affected OROs. OROs should demonstrate the capability to communicate the contents of decisions to the affected jurisdictions.

All decision-making activities by ORO personnel must be performed based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EXTENT OF PLAY - SPECIFIC

Plume Exposure pathway – September 14, 2004

1. This is primarily a State objective however, until a Governor's *State of Emergency Declaration* is made, local officials may make decisions concerning their communities' protective and precautionary actions.

Ingestion Pathway – September 15-16, 2004

Not Applicable

Areas Requiring Corrective Action (ARCA)

NONE

Evaluation Area 2 – Protective Action Decision-Making
Sub-element 2.c.1 PADs Consideration of Protective Actions for Special Populations.

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

Intent

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to determine protective action recommendations, including evacuation, sheltering and use of potassium iodide (KI), if applicable, for special population groups (e.g., hospitals, nursing homes, correctional facilities, schools, licensed day care centers, mobility impaired individuals, and transportation dependent individuals). Focus is on those special population groups that are (or potentially will be) affected by a radiological release from a nuclear power plant.

EXTENT OF PLAY - GENERAL

Usually, it is appropriate to implement evacuation in areas where doses are projected to exceed the lower end of the range of PAGs, except for situations where there is a high-risk environment or where high-risk groups (e.g., the immobile or infirm) are involved: In these cases, examples of factors that should be considered are weather conditions, shelter availability, availability of transportation assets, risk of evacuation vs. risk from the avoided dose, and precautionary school evacuations. In situations were an institutionalized population cannot be evacuated, the administration of KI should be considered by the OROs.

Applicable OROs should demonstrate the capability to alert and notify all public school systems/districts of emergency conditions that are expected to or may necessitate protective actions for students. Contact with public school systems/ districts must be actual.

In accordance with plans and/or procedures, OROs and/or officials of participating public school systems/districts should demonstrate the capability to make prompt decisions on protective actions for students. Officials should demonstrate that the decision making process for protective actions considers (e.g., either accepts automatically or gives heavy weight to) protective action recommendations made by ORO personnel, the ECL at which these recommendations are received, preplanned strategies for protective actions for that ECL, and the location of students at the time (e.g., whether the students are still at home, en route to the school, or at the school).

All decision-making activities associated with protective actions, including consideration of available resources, for special population groups must be based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EXTENT OF PLAY - SPECIFIC

Plume Exposure pathway – September 14, 2004

No site-specific modifications.

Ingestion Pathway – September 15-16, 2004

Not Applicable

Area Requiring Corrective Action (ARCA)

38-02-2.c.1-05: **The East Lyme Chief Executive Officer (1st Selectman) relocated students from schools to the high school. The transfer was executed without coordination or approval of the CT OEM Area IV Coordinator. (East Lyme)**

Evaluation Area 2: Protective Action Decision-Making
Sub-element 2.d.1 – Radiological Assessment and Decision-Making for the Ingestion Exposure Pathway

Criterion 2.d.1: Radiological consequences for the ingestion pathway are assessed and appropriate protective action decisions are made based on the ORO planning criteria. (NUREG-0654, I.8., J.11)

Intent

This sub-element is derived from NUREG-0654, which provides that OROs have the means to assess the radiological consequences for the ingestion exposure pathway, relate them to the appropriate protective action guides (PAGs), and make timely, appropriate protective action decisions to mitigate exposure from the ingestion pathway.

During an accident at a nuclear power plant, a release of radioactive material may contaminate water supplies and agricultural products in the surrounding areas. Any such contamination would likely occur during the plume phase of the accident, and depending on the nature of the release could impact the ingestion pathway for weeks or years.

EXTENT OF PLAY – GENERAL

We expect that the ORO will take precautionary actions to protect food and water supplies, or to minimize exposure to potentially contaminated water and food, in accordance with their respective plans and procedures. Often such precautionary actions are initiated by the OROs based on criteria related to the facility's emergency classification levels (ECL). Such action may include recommendations to place milk animals on stored feed and to use protected water supplies.

The ORO should use its procedures (for example, development of a sampling plan) to assess the radiological consequences of a release on the food and water supplies. The ORO assessment should include the evaluation of the radiological analyses of representative samples of water, food, and other ingestible substances of local interest from potentially impacted areas, the characterization of the releases from the facility, and the extent of areas potentially impacted by the release. During this assessment, OROs should consider the use of agricultural and watershed data within the 50-mile EPZ. The radiological impacts on the food and water should then be compared to the appropriate ingestion PAGs contained in the ORO's plan and/or procedures. (The plan and/or procedures may contain PAGs based on specific dose commitment criteria or based on criteria as recommended by current Food and Drug Administration guidance.) Timely and appropriate recommendations should be provided to the ORO decision-makers group for implementation decisions. As time permits, the ORO may also include a comparison of taking or not taking a given action on the resultant ingestion pathway dose commitments.

The ORO should demonstrate timely decisions to minimize radiological impacts from the ingestion pathway, based on the given assessments and other information available. Any such decisions should be communicated and to the extent practical, coordinated with neighboring and local OROs.

OROs should use Federal resources, as identified in the Federal Radiological Emergency Response Plan (FRERP), and other resources (e.g., compacts, nuclear insurers, etc), if available. Evaluation of this criterion will take into consideration the level of Federal and other resources participating.

All activities must be based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EXTENT OF PLAY - SPECIFIC

Plume Exposure pathway – September 14, 2004

Not Applicable

Ingestion Pathway – September 15-16, 2004

1. This is primarily a State objective for decision making, sampling and analyzing results.

Areas Requiring Corrective Action (ARCA)

NONE

Evaluation Area 2: Protective Action Decision-Making
Sub-element 2.e.1. – Radiological Assessment and Decision-Making Concerning Relocation, Re-entry, and Return

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

Intent

The sub-element is derived from NUREG-0654, which provides that OROs have the capability to make decisions on relocation, re-entry, and return of the general public. These decisions are essential for the protection of the public from the direct long-term exposure to deposited radioactive materials from a severe accident at a commercial nuclear power plant.

EXTENT OF PLAY - GENERAL

Relocation: OROs (DEP-DOR) should demonstrate the capability to estimate integrated dose in contaminated areas and to compare these estimates with PAGs, apply decision criteria for relocation of those individuals in the general public who have not been evacuated but where projected doses are in excess of relocation PAGs and control access to evacuated and restricted areas. Decisions are made for relocating members of the evacuated public who lived in areas that now have residual radiation levels in excess of the PAGs. Determination of areas to be restricted should be based on factors such as the mix of radionuclides in deposited materials, calculated exposure rates vs. the PAGs and field samples of vegetation and soil analyses.

Re-entry: Decisions should be made regarding the location of control points and policies regarding access and exposure control for emergency workers and members of the general public who need to enter the evacuated area to perform specific tasks or missions.

Examples of control procedures are the assignment of or checking for, direct reading and non direct-reading dosimeters for emergency workers; questions regarding the individual's objectives and locations expected to be visited and associated timeframes; availability of maps and plots of radiation exposure rates; advice on areas to avoid; and procedures for exit including: monitoring of individuals, vehicles, and equipment, decision criteria regarding decontamination; and proper disposition of emergency worker dosimeters and maintenance of emergency worker radiation exposure records.

Responsible OROs should demonstrate the capability to develop a strategy for authorized re-entry of individuals into the restricted zone, based on established decision criteria. OROs should demonstrate the capability to modify those policies for security purposes (e.g., police patrols), for maintenance of essential services (e.g., fire protection and utilities), and for other critical functions. They should demonstrate the capability to use decision-making criteria in allowing access to the restricted zone by the public for various reasons , such as to maintain property (e.g., to care for the farm animals or secure machinery for storage), or to retrieve important possessions. Coordinated policies for access and exposure control should be developed among all agencies with roles to perform in the restricted zone. OROs should demonstrate the capability to establish polices for provision of dosimetry to all individuals allowed to re-enter the restricted zone. The extent that OROs need to develop policies on re-entry will be determined by scenario events.

Return: Decisions are to be based on environmental data and political boundaries or physical/geological features, which allow identification of the boundaries of areas to which members of the general public may return. Return is permitted to the boundary of the restricted area that is based on the relocation PAG.

Other factors that the ORO should consider are, for example: conditions that permit the cancellation of the emergency classification level and the relaxation of associated restrictive measures, basing return recommendations (i.e., permitting populations that were previously evacuated to reoccupy their homes and businesses on an unrestricted basis) on measurements of radiation from ground deposition; and the capability to identify services and facilities that require restoration within a few days and to identify the

procedures and resources for their restoration. Examples of these services and facilities are: medical and social services, utilities, roads, schools, and intermediate term housing for relocated persons.

All activities must be based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EXTENT OF PLAY - SPECIFIC

Plume Exposure pathway – September 14, 2004

Not Applicable

Ingestion Pathway – September 15-16, 2004

1. This is a State only objective.

Areas Requiring corrective Action (ARCA)

NONE

Evaluation Area 3 – Protective Action Implementation
Sub-element 3.a.1. 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.)

Intent

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to provide for the following: distribution, use, collection, and processing of direct-reading dosimeters and permanent record dosimeters; provide for direct-reading dosimeters to be read at appropriate frequencies by emergency workers; maintain a radiation dose record for each emergency worker; and provide for establishing a decision chain or authorization procedure for emergency workers to incur radiation exposures in excess of protective action guides, always applying the ALARA (As Low As is Reasonably Achievable) principle as appropriate.

EXTENT OF PLAY - GENERAL

OROs should demonstrate the capability to provide appropriate direct-reading and permanent record dosimetry, dosimetry chargers, and instructions on the use of dosimetry to emergency workers. **For evaluation purposes, appropriate direct-reading dosimetry is defined as dosimetry that allows individual(s) to read the administrative reporting limits (that are pre-established at a level low enough to consider subsequent calculation of Total Effective Dose Equivalent) and maximum exposure limits (for those emergency workers involved in life saving activities) contained in the OROs plans and procedures.**

Each emergency worker should have the basic knowledge of radiation exposure limits as specified in the ORO's plan and/or procedures. Procedures to monitor and record dosimeter readings and to manage radiological exposure control should be demonstrated.

During a plume phase exercise, emergency workers should demonstrate the procedures to be followed when administrative exposure limits and turn-back values are reached. The emergency worker should report accumulated exposures during the exercise as indicated in the plans and

procedures. OROs should demonstrate the actions described in the plan and/or procedures by determining whether to replace the worker, to authorize the worker to incur additional exposures or to take other actions. If scenario events do not require emergency workers to seek authorizations for additional exposure, evaluators should interview at least two emergency workers, to determine their knowledge of whom to contact in the event authorization is needed and at what exposure levels. Emergency workers may use any available resources (e.g. written procedures and/or co-workers) in providing responses.

Although it is desirable for all emergency workers to each have a direct-reading dosimeter, there may be situations where team members will be in close proximity to each other during the entire mission and adequate control of exposure can be effected for all members of the team by one dosimeter worn by the team leader. Emergency workers who are assigned to low exposure rate areas, e.g., at reception centers, counting laboratories, emergency operations centers, and communications centers, may have individual direct-reading dosimeters or they may be monitored by dosimeters strategically placed in the work area. It should be noted that, even in these situations, each team member must still have their own permanent record dosimeter.

Individuals without specific radiological response missions, such as farmers for animal care, essential utility service personnel, or other members of the public who must re-enter an evacuated area following or during the plume passage, should be limited to the lowest radiological exposure commensurate with completing their missions.
All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EXTENT OF PLAY - SPECIFIC

Plume Exposure pathway – September 14, 2004

1. One dosimetry packet will be issued to each individual in the local EOCs.

Ingestion Pathway – September 15-16, 2004

1. Field Sample Team personnel will simulate the use of protective clothing in public areas.
2. Field Sample Teams, ACP's, State & Local Police, and DOT directed into the field will be issued individual dosimetry.
3. State EOC staff will not be issued individual dosimetry.
4. Only Field Sample Teams and DPH Lab participants will demonstrate dosimetry issue.

Sub Element 3.a.1 has been approved for an On-the-Spot Correction.

Areas Requiring Corrective Action (ARCA)

38-02-3.a.1-06: The Radiological Defense Officer (RDO) omitted key information during the briefing regarding emergency worker exposure control. (Montville)

Evaluation Area 3 – Protective Action Implementation
Sub-element 3.b.1. 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 (not the general public) is maintained. (NUREG-0654, E. 7., J. 10. e., f.)

Intent

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to provide radioprotective drugs for emergency workers, institutionalized individuals, and, if in the plan and/or procedures, to the general public for whom immediate evacuation may not be feasible, very difficult, or significantly delayed. While it is necessary for OROs to have the capability to provide KI to emergency workers and institutionalized individuals, the provision of KI to the general public is an ORO option, reflected in ORO's plans and procedures. Provisions should include the availability of adequate quantities, storage, and means of the distribution of radioprotective drugs.

EXTENT OF PLAY - GENERAL

OROs should demonstrate the capability to make KI available to emergency workers, institutionalized individuals, and, where provided for in the ORO plan and/or procedures, to members of the general public. OROs should demonstrate the capability to accomplish distribution of KI consistent with decisions made. Organizations should have the capability to develop and maintain lists of emergency workers and institutionalized individuals who have ingested KI, including documentation of the date(s) and time(s) they were instructed to ingest KI. The ingestion of KI recommended by the designated ORO health official is voluntary. For evaluation purposes, the actual ingestion of KI is not necessary. OROs should demonstrate the capability to formulate and disseminate appropriate instructions on the use of KI for those advised to take it. If a recommendation is made for the general public to take KI, appropriate information should be provided to the public by the means of notification specified in the ORO's plan and/or procedures.

Emergency workers should demonstrate the basic knowledge of procedures for the use of KI whether or not the scenario drives the use of KI. This can be accomplished by an interview with the evaluator.

All activities must be based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EXTENT OF PLAY - SPECIFIC

Plume Exposure pathway – September 14, 2004

1. The State Department of Public Health Commissioner in consultation with the Department of Environmental Protection and the Governor will issue the recommendation of the use of potassium iodide for the general public in addition to the public protective actions (evacuation and or sheltering).

Ingestion Pathway – September 15-16, 2004

Not Applicable

Areas Requiring Corrective Action (ARCA)

NONE

Evaluation Area 3 – Protective Action Implementation
Sub-element 3.c.1. Implementation of Protective Actions – Special Populations.

Criterion 3.c.1: Protective action decisions are implemented for special population groups, other than schools, within areas subject to protective actions. (NUREG-0654, E.7., J.9., 10.c.d.e.g.)

Intent

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to implement protective action decisions, including evacuation and/or sheltering, for all

special populations. Focus is on those special populations that are (or potentially will be) affected by a radiological release from a nuclear power plant.

EXTENT OF PLAY - GENERAL

Applicable OROs should demonstrate the capability to alert and notify (e.g., provide protective action recommendations and emergency information and instructions) special populations (hospitals, nursing homes, correctional facilities, mobility impaired individuals, transportation dependent, etc). OROs should demonstrate the capability to provide for the needs of special populations in accordance with the ORO's plans and procedures.

Contact with special populations and reception facilities may be actual or simulated, as agreed to in the Extent of Play. Some contacts with transportation providers should be actual, as negotiated in the extent of play. All actual and simulated contacts should be logged.

All implementing activities associated with protective actions for special populations must be based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EXTENT OF PLAY - SPECIFIC

Plume Exposure pathway – September 14, 2004

1. State DOC will demonstrate contacting the Niantic Correctional Institution.
2. The State Public Health Department will demonstrate contacting nursing facilities and L & M Hospital within the plume EPZ from the DPH Command Center.
3. Communities will demonstrate this objective by table-top discussion to include: identification of special needs populations, transportation requirements and the coordination of activities with the State OEM to obtain additional transportation resources as necessary.
4. During the week of September 13, 2004 (out of sequence), pre-designated nursing care facilities will be surveyed to discuss their emergency procedures. The designated nursing homes include: B*ayview Health Care Center, Haven Health Care Center of Waterford, Fountainview Care Center and Greentree Manor Nursing & Rehabilitation Center all in Waterford, CT.*

Ingestion Pathway – September 15-16, 2004

Not Applicable

Area Requiring Corrective Action (ARCA)

38-02-3.c.1-02: **Contrary to RERP procedures a local Health Director and the EMS Coordinator for the hospital acted independently and without notifying the CT Department of Public Health when it "evacuated" the hospital. (CT DPH)**

Evaluation Area 3 – Protective Action Implementation
Sub-element 3.c.2. Implementation of Protective Actions – Schools.

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

Intent

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to implement protective action decisions, including evacuation and/or sheltering, for all special populations. Focus is on those special population groups that are (or potentially will be) affected by a radiological release from a nuclear power plant.

EXTENT OF PLAY - GENERAL

Applicable OROs should demonstrate the capability to alert and notify all public school systems/districts, licensed day care centers, and participating private schools within the emergency planning zone of emergency conditions that are expected to or may necessitate protective actions for students.

In accordance with plans and/or procedures, OROs and/or officials of participating public and private schools and licensed day care centers should demonstrate the capability to make and implement prompt decisions on protective actions for students. Officials should demonstrate that the decision making process for protective actions considers (e.g., either accepts automatically or gives heavy weight to) protective action recommendations made by ORO personnel, the ECL at which these recommendations are received, preplanned strategies for protective actions for that ECL, and the location of students at the time (e.g., whether the students are still at home, en route to the school, or at the school).

Implementation of protective actions should be completed subject to the following provisions: At least one school in a school system or district within the EPZ, as appropriate, needs to demonstrate the implementation of protective actions. The implementation of canceling the school day, dismissing early, or sheltering should be simulated by describing to evaluators the procedures that would be followed. If evacuation is the implemented protective action, all activities to coordinate and complete the evacuation of students to reception centers, congregate care centers, or host schools may actually be demonstrated or accomplished through an interview process. If accomplished through an interview process, appropriate school personnel including decision making officials (e.g., superintendent/principal, transportation director/bus dispatcher), and at least one bus driver (and the bus driver's escort, if applicable) should be available to demonstrate knowledge of their role(s) in the evacuation of school children. Communications capabilities between school officials and the buses, if required by the plan and/or procedures, should be verified.

Officials of the participating school(s) or school system(s) should demonstrate the capability to develop and provide timely information to OROs for use in messages to parents, the general public, and the media on the status of protective actions for schools.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless specified above or indicated in the extent of play agreement.

EXTENT OF PLAY - SPECIFIC

Plume Exposure pathway – September 14, 2004

1. The following two selected communities will discuss the ability and resources necessary to implement protective actions for school children:
    - East Lyme School System
    - Old Lyme School System
    - During the week of September 13, 2004, the towns of East Lyme and Old Lyme will conduct a discussion of their plans with the respective school superintendents and one designated school principal in each district.
2. Appropriate activities associated with the demonstration of school protective actions will be discussed/simulated in those EPZ communities affected by the scenario plume on September 14, 2004.
3. The State Public Health Department will demonstrate contacting licensed day care providers/facilities within the plume EPZ from the DPH Command Center.

4. **Day care centers to be surveyed has yet to be determined . UPDATE – Daycare centers surveys will begin in October 2004.**

Ingestion Pathway – September 15-16, 2004
Not applicable.

Area Requiring Corrective Action (ARCA)
NONE

Evaluation Area 3 – Protective Action Implementation
Sub-element 3.d.1. Implementation of Traffic and Access Control –TCP/ACP are established.

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., k.)

Intent
This sub-element is derived from NUREG-0654, which provides that OROs have the capability to implement protective action plans, including relocation and restriction of access to evacuated areas. This sub-element focuses on selecting, establishing, and staffing of traffic and access control points and removal of impediments to the flow of evacuation traffic.

EXTENT OF PLAY - GENERAL
OROs should demonstrate the capability to select, establish, and staff appropriate traffic and access control points consistent with evacuation/sheltering decisions (for example evacuating, sheltering and relocation), in a timely manner. OROs should demonstrate the capability to provide instructions to traffic and access control staff on actions to take when modifications in protective action strategies necessitate changes in evacuation patterns or in the area(s) where access is controlled.

Traffic and access control staff should demonstrate accurate knowledge of their roles and responsibilities. This capability may be demonstrated by actual deployment or by interview in accordance with the extent of play agreement.

In instances where OROs lack authority necessary to control access by certain types of traffic (rail, water, and air traffic), they should demonstrate the capability to contact the State or Federal agencies with authority to control access.

All activities must be based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless specified above or indicated in the extent of play agreement.

EXTENT OF PLAY - SPECIFIC
Plume Exposure Pathway – September 14, 2004
1. Traffic access and control points will be discussed in each of the EPZ town.
2. Coordination and implementation of the State Traffic Management Plan is a State Police responsibility. The State police liaison in the State EOC will direct implementation of the plan by the State Police barracks in the affected area. Each barracks assigns troopers or officers to control points within its jurisdiction.
3. Actual/physical implementation of traffic control points (TCPs) will not be demonstrated, evaluation will be accomplished through discussion with FEMA Evaluators and appropriate law enforcement officials.

4. However, barrier materials will be observed by FEMA evaluators for Montville State Police Barracks after the plume phase – actual barriers are stored at State DOT District II Office.

EXTENT OF PLAY – SPECIFIC continued

Ingestion Pathway September 15-16, 2004

1. The establishing of checkpoints for food transportation control will be demonstrated at the State EOC by responsible agencies through tabletop discussion.

Area Requiring Corrective Action (ARCA)

NONE

Evaluation Area 3 – Protective Action Implementation
Sub-element 3.d.2. Impediments to Evacuation are Identified and Resolved.

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

Intent

This sub-element is derived from NUREG-0654, which provides that OROs have the capability to implement protective action plans, including relocation and restriction of access to evacuated areas. This sub-element focuses on selecting, establishing, and staffing of traffic and access control points and removal of impediments to the flow of evacuation traffic.

EXTENT OF PLAY - GENERAL

OROs should demonstrate the capability, as required by the scenario, to identify and take appropriate actions concerning impediments to evacuation. Actual dispatch of resources to deal with impediments, such as wreckers, need not be demonstrated; however, simulated contacts should be logged.

All activities must be based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless specified above or indicated in the extent of play agreement.

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway September 14, 2004

No site-specific modifications.

Ingestion Pathway September 15-16, 2004

Not applicable.

Area Requiring Corrective Action (ARCA)

NONE

Evaluation Area 3 – Protective Action Implementation
Sub-element 3.e.1 – Implementation of Ingestion Pathway Decisions

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

Intent

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to implement protective actions, based on criteria recommended by current Food and Drug Administration guidance, for the ingestion pathway emergency planning zone (IPZ), the area within an approximate 50-mile radius of the nuclear power plant. This sub-element focuses on those actions required for implementation of protective actions.

EXTENT OF PLAY - GENERAL

Applicable OROs should demonstrate the capability to secure and utilize current information on the locations of dairy farms, meat and poultry producers, fisheries, fruit growers, vegetable growers, grain producers, food processing plants, and water supply intake points to implement protective actions within the ingestion pathway EPZ.

OROs should use Federal resources as identified in the FRERP, and other resources (e.g. compacts, nuclear insurers, etc), if available. Evaluation of this criterion will take into consideration the level of Federal and other resources participating in the exercise.

All activities must be based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway – September 14, 2004

Not applicable.

Ingestion Pathway – September 15-16, 2004

1. Selected local ORO officials will discuss the implementation process of the State's decisions. This will take place during a tabletop on Day 3 of the exercise at a designated location

Areas Requiring corrective Action (ARCA)

NONE

Evaluation Area 3: Protective Action Implementation
Sub-element 3.e.2 – Implementation of Ingestion Pathway Decisions

Criterion 3.e.2: Appropriate measures, strategies, and pre-printed instructional material are developed for implementing protective action decisions for contaminated water, food products, milk, and agricultural production. (NUREG-0654, E.5., 7., J.9, 11.)

Intent

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to implement protective actions, based on criteria recommended by current Food and Drug Administration guidance, for the ingestion pathway emergency planning zone (IPZ), the area within an approximate 50-mile radius of the nuclear power plant. This sub-element focuses on those actions required for implementation of protective actions.

EXTENT OF PLAY - GENERAL

Development of measures and strategies for implementation of IPZ protective actions should be demonstrated by formulation of protective action information for the general public and food producers and processors. This includes either pre-distributed public information material in the Ingestion Pathway Zone or the capability for rapid distribution of appropriate camera-ready

information and instructions to pre-determined individuals and businesses. OROs should demonstrate the capability to control, restrict or prevent distribution of contaminated food by commercial sectors.

Exercise play should include demonstration of communications and coordination between organizations to implement protective actions. Actual field play of implementation activities may be simulated. For example, communications and coordination with agencies responsible for enforcing food controls within the IPZ should be demonstrated, but actual communications with food producers and processors may be simulated.
All activities must be based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway – September 14, 2004

Not applicable.

Ingestion Pathway – September 15-16, 2004

1. Implementation activities for the selection and distribution of preprinted protective action information will be demonstrated, as driven by the exercise play.
2. Instructional or information messages on ingestion pathway protective measures will be developed for news briefings although actual broadcast of messages will be simulated.
3. A representative from the RIEMA will be provided to assist with coordination and communications between CT and RI
4. Actual communications with food producers and processors will be simulated.

Areas Requiring Corrective Action (ARCA)

NONE

Evaluation Area 3: Protective Action Implementation
Sub-element 3.f.1 – Implementation of Relocation, Re-entry, and Return Decisions

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

Intent

This sub-element is derived from NUREG-0654, which provides that OROs should demonstrate the capability to implement plans, procedures, and decisions for relocation, re-entry, and return. Implementation of these decisions is essential for the protection of the public from the direct long-term exposure to deposited radioactive materials from a severe accident at a commercial nuclear power plant.

EXTENT OF PLAY - GENERAL

Relocation: OROs should demonstrate the capability to coordinate and implement decisions concerning relocation of individuals, not previously evacuated, to an area where radiological contamination will not expose the general public to doses that exceed the relocation PAGs. OROs should also demonstrate the capability to provide for short-term or long-term relocation of evacuees who lived in areas that have residual radiation levels above the (first-, second-, and fifty-year) PAGs.

Areas of consideration should include the capability to communicate with OROs regarding timing of actions, notification of the population of the procedures for relocation, and the notification of, and advice for,

evacuated individuals who will be converted to relocation status in situations where they will not be able to return to their homes due to high levels of contamination. OROs should also demonstrate the capability to communicate instructions to the public regarding relocation decisions.

Re-entry: OROs should demonstrate the capability to control re-entry and exit of individuals who need to temporarily re-enter the restricted area, to protect them from unnecessary radiation exposure and for exit of vehicles and other equipment to control the spread of contamination outside the restricted area. Monitoring and decontamination facilities will be established as appropriate.

Examples of control procedure subjects are: (1) the assignment of, or checking for, direct-reading and non-direct-reading dosimeters for emergency workers; (2) questions regarding the individuals' objectives and locations expected to be visited and associated timeframes; (3) maps and plots of radiation exposure rates; (4) advice on areas to avoid; and procedures for exit, including monitoring of individuals, vehicles, and equipment, decision criteria regarding contamination, proper disposition of emergency worker dosimeters, and maintenance of emergency worker radiation exposure records.

Return: OROs should demonstrate the capability to implement policies concerning return of members of the public to areas that were evacuated during the plume phase. OROs should demonstrate the capability to identify and prioritize services and facilities that require restoration within a few days, and to identify the procedures and resources for their restoration. Examples of these services and facilities are medical and social services, utilities, roads, schools, and intermediate term housing for relocated persons.

Communications among OROs for relocation, re-entry, and return may be simulated; however all simulated or actual contacts should be documented. These discussions may be accomplished in a group setting.

OROs should use Federal resources as identified in the FRERP, and other resources (e.g. compacts, nuclear insurers, etc), if available. Evaluation of this criterion will take into consideration the level of Federal and other resources participating in the exercise.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway – September 14, 2004

Not applicable.

Ingestion Pathway – September 15-16, 2004

1. Will be demonstrated via tabletop discussion and presentation to local town representatives.

Areas Requiring corrective Action (ARCA)

NONE

Evaluation Area 4 – Field Measurement and Analysis
Sub-element 4.a.1. Plume Phase Field Teams are Equipped to Perform Measurement.

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.8., 9., 11.)

Intent

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to deploy field teams with the equipment, methods, and expertise necessary to determine the location of airborne radiation and particulate deposition on the ground from an airborne plume. In addition, NUREG-0654 indicates that OROs should have the capability to use field teams within the plume emergency planning zone to measure airborne radioiodine in the presence of noble gases and to measure radioactive particulate material in the airborne plume.

In the event of an accident at a nuclear power plant, the possible release of radioactive material may pose a risk to the nearby population and environment. Although accident assessment methods are available to project the extent and magnitude of a release, these methods are subject to large uncertainties. During an accident, it is important to collect field radiological data in order to help characterize any radiological release. This does not imply that plume exposure projections should be made from the field data. Adequate equipment and procedures are essential to such field measurement efforts.

EXTENT OF PLAY - GENERAL

Field teams should be equipped with all instruments and supplies necessary to accomplish their missions. This should include instruments capable of measuring gamma exposure rates and detecting the presence of beta radiation. These instruments should be capable of measuring a range of activity and exposure, including radiological protection/exposure control of team members and detection of activity on the air sample collection media, consistent with the intended use of the instrument and the ORO's plans and procedures. An appropriate radioactive check source should be used to verify proper operational response for each low range radiation measurement instrument (less than 1 R/hr) and for high range instruments when available. If a source is not available for a high range instrument, a procedure should exist to operationally test the instrument before entering an area where only a high range instrument can make useful readings.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway – September 14, 2004

1. Air sample cartridges used during the exercise have been specifically designated for drill or exercise use only. These cartridges may be used *more than once* during the exercise. The inventory of air sample cartridges to be used in an actual emergency is located at the DEP in Hartford, at the Millstone Power Station and at the Montville State Police barracks. The actual inventory list will be made available.

Ingestion Pathway – September 15-16, 2004

Not applicable.

Area Requiring Corrective Action (ARCA)

NONE

Evaluation Area 4 – Field Measurement and Analysis
Sub-element 4.a.2. Plume Phase Field Teams Collected Data.

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

Intent

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to deploy field teams with the equipment, methods, and expertise necessary to determine the location of airborne radiation and particulate deposition on the ground from an airborne plume. In addition, NUREG-0654 indicates that OROs should have the capability to use field teams within the plume emergency planning zone to measure airborne radioiodine in the presence of noble gases and to measure radioactive particulate material in the airborne plume.

In the event of an accident at a nuclear power plant, the possible release of radioactive material may pose a risk to the nearby population and environment. Although accident assessment methods are available to project the extent and magnitude of a release, these methods are subject to large uncertainties. During an accident, it is important to collect field radiological data in order to help characterize any radiological release. This does not imply that plume exposure projections should be made from the field data. Adequate equipment and procedures are essential to such field measurement efforts.

EXTENT OF PLAY - GENERAL

Responsible OROs should demonstrate the capability to brief teams on predicted plume location and direction, travel speed, and exposure control procedures before deployment.

Field measurements are needed to help characterize the release and to support the adequacy of implemented protective actions or to be a factor in modifying protective actions. Teams should be directed to take measurements in such locations, at such times to provide information sufficient to characterize the plume and impacts.

If the responsibility to obtain peak measurements in the plume has been accepted by license field monitoring teams, with concurrence from OROs, there is no requirement for these measurements to be repeated by State and local monitoring teams. If the license teams do not obtain peak measurements in the plume, it is the ORO's decision as to whether peak measurements are necessary to sufficiently characterize the plume. The sharing and coordination of plume measurement information among all field teams (licensee, federal, and ORO) is essential. Coordination concerning transfer of samples, including a chain-of-custody form, to a radiological laboratory should be demonstrated.

OROs should use Federal resources as identified in the Federal Radiological Emergency Response Plan (FRERP), and other resources (e.g., compacts, etc), if available. Evaluation of this criterion will take into consideration the level of Federal and other resources participating in the exercise.

All activities must be based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway – September 14, 2004

No site-specific modifications.

Ingestion Pathway – September 15-16, 2004

Not applicable.

Area Requiring Corrective Action (ARCA)

NONE

Evaluation Area 4 – Field Measurement and Analysis
Sub-element 4.a.3. Radiation Measured and Samples Collected.

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.8., 9., 11.)

Intent

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to deploy field teams with the equipment, methods, and expertise necessary to determine the location of airborne radiation and particulate deposition on the ground from an airborne plume. In addition, NUREG-0654 indicates that OROs should have the capability to use field teams within the plume emergency planning zone to measure airborne radioiodine in the presence of noble gases and to measure radioactive particulate material in the airborne plume.

In the event of an accident at a nuclear power plant, the possible release of radioactive material may pose a risk to the nearby population and environment. Although accident assessment methods are available to project the extent and magnitude of a release, these methods are subject to large uncertainties. During an accident, it is important to collect field radiological data in order to help characterize any radiological release. This does not imply that plume exposure projections should be made from the field data. Adequate equipment and procedures are essential to such field measurement efforts.

EXTENT OF PLAY - GENERAL

Field teams should demonstrate the capability to report measurements and field data pertaining to the measurement of airborne radioiodine and particulates to the field team coordinator, dose assessment, or other appropriate authority. If samples have radioactivity significantly above background, the appropriate authority should consider the need for expedited laboratory analyses of these samples. OROs should share data in a timely manner with all appropriate OROs. The methodology, including contamination control, instrumentation, preparation of samples, and a chain-of-custody form for transfer to a laboratory, will be in accordance with the ORO plan and/or procedures.

ORO's should use Federal resources as identified in the FRERP, and other resources (e.g., compacts, etc), if available. Evaluation of this criterion will take into consideration the level of Federal and other resources participating in the exercise.

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway – September 14, 2004

1. Based upon the compressed timeframe of the plume exercise DEP field air monitoring teams will be dispatched from State Police Troop E (Montville) barracks.
2. DEP will deploy 2 field teams, **to three locations each**, who will determine plume characteristics by field measurements.

3. Each DEP Field Monitoring Team will be dispatched to three sampling points **each** where they will take radiation (dose rate) measurements **at each of the three locations** and report them to their Field Team Controller (FTC). **Each DEP Team will take at least one (particulate & iodine) air sample.**

Ingestion Pathway – September 15-16, 2004
Not applicable.

Area Requiring Corrective Action (ARCA)
NONE

1. Note: In paragraph 3, references to a dose rate of 30mR/hr representing the plume centerline have been deleted per agreement with FEMA since a dose rate is no longer specified in the evaluation criteria as long as it is sufficient to require a protective action.

Evaluation Area 4: Field Measurement and Analysis
Sub-element 4.b.1. – Post Plume Phase Field Measurements and Sampling

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

Intent
This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to assess the actual or potential magnitude and locations of radiological hazards in the ingestion emergency planning zone (IPZ) and for relocation, re-entry and return measures.

This sub-element focuses on the collection of environmental samples for laboratory analyses that are essential for decisions on protection of the public from contaminated food and water and direct radiation from deposited materials.

EXTENT OF PLAY - GENERAL
The ORO field teams should demonstrate the capability to take measurements and samples, at such times and locations as directed, to enable an adequate assessment of the ingestion pathway and to support re-entry, relocation, and return decisions. When resources are available, the use of aerial surveys and in-situ gamma measurement is appropriate. All methodology, including contamination control, instrumentation, preparation of samples, and a chain-of-custody form for transfer to a laboratory, will be in accordance with the ORO's plan and/or procedures.

Ingestion pathway samples should be secured from agricultural products and water. Samples in support of relocation and return should be secured from soil, vegetation, and other surfaces in areas that received radioactive ground deposition.

OROs should use Federal resources as identified in the FRERP, and other resources (e.g. compacts, nuclear insurers, etc), if available. Evaluation of this criterion will take into consideration the level of Federal and other resources participating in the exercise.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway – September 14, 2004

Post Plume Pathway– September 14

1. Two (2) DEP Relocation Teams **(same players as Monitoring Teams)** will collect two smear samples **each, at two different locations each.**
2. **Smear samples will be packaged but will not be delivered to the DPH LAB for analysis.**

Ingestion Pathway – September 15-16, 2004 (continued)

2. **Five (5)** Sampling Teams will be assembled **at the CT State Armory in Hartford** to demonstrate equipment and procedures for the collection and transport of IP samples:

   Two (2) Department of Public Health Team will collect 2 water samples each. (Each of these teams will do sampling at only one reservoir.)
   One (1) Consumer Protection Team will collect 2 samples from one location.
   Two (2) Agriculture teams will collect 4 samples each, to include soil, milk, eggs, green chop or other vegetation in season. These samples may be collected at one location per team, if available. However, if all required samples are not available at one location per team, a second location must be visited to collect the balance samples

3. Samples collected will be delivered directly to the DPH Laboratory for receipt/chain-of-custody demonstration by each sampling team.

Areas Requiring Corrective Action (ARCA)

NONE

Evaluation Area 4: Field Measurement and Analysis
Sub-element 4.c.1 - Laboratory Operations

Criterion 4.c.1: The laboratory is capable of performing required radiological analyses to support protective action decisions. (NUREG-0654, C.3., I.8., 9., J.11)

Intent

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to perform laboratory analyses of radioactivity in air, liquid, and environmental samples to support protective action decision-making.

EXTENT OF PLAY - GENERAL

The laboratory staff should demonstrate the capability to follow appropriate procedures for receiving samples, including logging of information, preventing contamination of the laboratory, preventing buildup of background radiation due to stored samples, preventing cross contamination of samples, preserving samples that may spoil (e.g., milk), and keeping track of sample identity. In addition, the laboratory staff should demonstrate the capability to prepare samples for conducting measurements.

The laboratory should be appropriately equipped to provide analyses of media, as requested, on a timely basis, of sufficient quality and sensitivity to support assessments and decisions as anticipated by the ORO's plans and procedures. The laboratory(ies) instrument calibrations should be traceable to standards provided by the National Institute of Standards and Technology. Laboratory methods used to analyze typical radionuclides released in a reactor incident should be as described in the plans and procedures.

New or revised methods may be used to analyze atypical radionuclide releases (e.g. transuranics or as a result of a terrorist event) or if warranted by circumstances of the event. Analysis may require resources beyond those of the ORO.

The laboratory staff should be qualified in radioanalytical techniques and contamination control procedures.

OROs should use Federal resources as identified in the FRERP, and other resources (e.g. compacts, nuclear insurers, etc), if available. Evaluation of this criterion will take into consideration the level of Federal and other resources participating in the exercise

.

All activities must be based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway –September 14, 2004

Not applicable.

Ingestion Pathway – September 15-16, 2004

1. Laboratory operations will be demonstrated out of sequence with the main scenario timeline, as negotiated with FEMA. (The lab will demonstrate chain of custody Sept 15th and lab analysis on Sept. 16th)
2. The CT DPH Laboratory will demonstrate sample radioanalysis, using controller-provided samples and sample data.
3. The State DPH Lab will set up a sample receipt area and demonstrate receipt of (10) samples delivered by controller, out-of-sequence from Field Team demonstration.

   The lab will prepare to analyze:
   - Two parts of the iodine field sample from the plume phase, including the filter.
   - One crop sample in season.
   - Milk (if there are any dairies with grazing cows within the affected area).
   - Surface water if used for drinking (after treatment).
   - Pasture grass.
4. The laboratory will demonstrate initial counting of the samples, however, full counting periods will be truncated to facilitate exercise play. Laboratory personnel will discuss appropriate count times for samples to be processed.

Areas Requiring corrective Action (ARCA)

38-97-25-A-06 Procedures used for monitoring for contamination on persons were not adequate to detect levels of contamination in excess of FEMA guidance. The distance from the probe to the surface of about four to six inches was too great, the path width of about six inches was too wide and the probe speed of about two feet/second was too fast for the instrument/detector being used (CD-V 700) being used. Plans for the radiation laboratory operations do not monitoring procedures for portable instrument, but procedures are included in Attachment 11 to Section CTAP-4.3 of the State Plan. This document includes specifications for probe distance of one-half inch and probe speed of six inches per second.

38-97-25-A-07 Contamination control for surfaces was not apparent for the exercise. However, the spread of contamination to the Chemistry and Industrial Hygiene Laboratory and the Radiation Laboratory could seriously delay the determination of appropriate protective actions. No temporary coverings were provided for the floor at the reception area, the hot sample storage area, or the wheel-carts at the reception area. No provisions were made to add another plastic bag to "hot" samples or to smear them to determine whether the measured radiation might be coming from contamination on the exterior surfaces.

Evaluation Area 5 – Emergency Notification and Public Information
Sub-element 5.a.1. Primary Alert Completed in Timely Manner.

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: 1) identification of the State or local government organization and the official with the authority for providing the alert signal and instructional message; 2) identification of the commercial nuclear power plant and a statement that an emergency situation exists at the plant; 3) reference to REP-specific emergency information (e.g., brochures and information in telephone books) for use by the general public during an emergency; and 4) a closing statement asking the affected and potentially affected population to stay tuned for additional information. (10 CFR Part 50, Appendix E & NUREG-0654, E. 1., 4., 5., 6., 7.)

Intent

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to provide prompt instructions to the public within the plume pathway EPZ. Specific provisions addressed in this sub-element are derived from the Nuclear Regulatory Commission (NRC) regulations (10 CFR Part 50, Appendix E.IV.D.), and FEMA-REP-10, "Guide for the Evaluation of Alert and Notification systems for Nuclear Power Plants."

EXTENT OF PLAY - GENERAL

Responsible OROs should demonstrate the capability to sequentially provide an alert signal followed by an initial instructional message to populated areas (permanent resident and transient) throughout the 10-mile plume pathway EPZ. Following the decision to activate the alert and notification system, in accordance with the ORO's plan and/or procedures, completion of system activation should be accomplished in a timely manner **(will not be subject to specific time requirements)** for primary alerting/notification. The initial message should include the elements required by current FEMA REP guidance.

For exercise purposes, timely is defined as **"the responsible ORO personnel/ representatives demonstrate actions to disseminate the appropriate information/ instructions with a sense of urgency and without undue delay."** If message dissemination is to be identified as not having been accomplished in a timely manner, the evaluator(s) will document a specific delay or cause as to why a message was not considered timely.

Procedures to broadcast the message should be fully demonstrated as they would in an actual emergency up to the point of transmission. Broadcast of the message(s) or test messages **is not required**. The alert signal activation may be simulated. However, the procedures should be demonstrated up to the point of actual activation.

The capability of the primary notification system to broadcast an instructional message on a 24-hour basis should be verified during an interview with appropriate personnel from the primary notification system.

All activities for this criterion must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, except as noted above or otherwise indicated in the extent of play agreement.

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway – September 14, 2004

1. Activation of the public alerting systems (PAS) (sirens) will be simulated.
2. Alert and notification activities leading to Emergency Alerting System (EAS) simulation and the release of EAS messages will be demonstrated. Through coordination by the State, local officials would then simulate activation of their public alerting system (PAS) to precede an instructional message release.
3. Activation of the EAS will occur at State OEM only. However, actual transmission of EAS messages to the public will be simulated. The State RERP does not permit activation of EAS by local CEOs after the Governor declares a state of emergency.
4. Demonstration of all EAS activities will include: selection of the EAS message to be broadcast, arranging communications with the appropriate EAS station for message transmission and simulated narration of the selected message.
5. Additional information and amplified instructions, in the form of press releases and news advisories, will supplement EAS messages.

Ingestion Pathway – September 15-16 ,2004

Not applicable.

Area Requiring Corrective Action (ARCA)

NONE

Evaluation Area 5 – Emergency Notification and Public Information
Sub-element 5.a.2. Reserved

Criterion: Reserved by FEMA for future use.

N/A

Intent

N/A

EXTENT OF PLAY – GENERAL

N/A

EXTENT OF PLAY – SPECIFIC

N/A

Area Requiring Corrective Action (ARCA)

N/A

Evaluation Area 5 – Emergency Notification and Public Information
Sub-element 5.a.3. Notification of Exception Areas and/or Back-up Alert and Notification System Within 45 Minutes.

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)

Intent

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to provide prompt instructions to the public within the plume pathway EPZ. Specific provisions addressed in this sub-element are derived from the Nuclear Regulatory Commission (NRC) regulations (10 CFR Part 50, Appendix E.IV.D.) and FEMA-REP-10, "Guide for the Evaluation of Alert and Notification systems for Nuclear Power Plants."

EXTENT OF PLAY - GENERAL

OROs with FEMA-approved exception areas (identified in the approved Alert and Notification System Design Report) 5-10 miles from the nuclear power plant should demonstrate the capability to accomplish primary alerting and notification of the exception area(s) within 45 minutes following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. The 45-minute clock will begin when the OROs make the decision to activate the alert and notification system for the first time for a specific emergency situation. The initial message should, at a minimum, include: a statement that an emergency exists at the plant and where to obtain additional information.

For exception area alerting, at least one route needs to be demonstrated and evaluated. The selected routes should vary from exercise to exercise. However, the most difficult route should be demonstrated at least once every six years. All alert and notification activities along the route should be simulated (e.g., the message that would actually be used is read for the evaluator, but not actually broadcast) as agreed upon in the extent of play. Actual testing of the mobile public address system will be conducted at some agreed upon location.

Backup alert and notification of the public should be completed within 45 minutes following the detection by the ORO of a failure of the primary alert and notification system. Backup route alerting needs only be demonstrated and evaluated, in accordance with the ORO's plan and/or procedures and the extent of play agreement, if the exercise scenario calls for failure of any portion of the primary system(s), or if any portion of the primary system(s) actually fails to function. If demonstrated, only one route needs to be selected and demonstrated. All alert and notification activities along the route should be simulated (e.g., the message that would actually be used is read for the evaluator, but not actually broadcast) as agreed upon in the extent of play. Actual testing of the Public Address system will be conducted at some agreed upon location.

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway – September 14, 2004

1. Each EPZ town will demonstrate, **out of sequence - immediately following the plume exercise**, back up route alerting within 45 minutes due to one (1) simulated siren failure. The "failed" siren area will be designated by the community.

Ingestion Pathway – September 15-16, 2004
Not applicable

Area Requiring Corrective Action (ARCA)
NONE

Evaluation Area 5 – Emergency Notification and Public Information
Sub-element 5.b.1 Notification of Information to Public in a Timely Manner.

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,a.,b.,c.)

Intent
This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to disseminate to the public appropriate emergency information and instructions including any recommended protective actions. In addition, NUREG-0654 provides that OROs should ensure the capability exists for providing information to the media. This includes the availability of a physical location for use by the media during an emergency. NUREG-0654 also provides that a system be available for dealing with rumors. **This system will hereafter be known as the Public Inquiry Hotline.**

EXTENT OF PLAY - GENERAL
Subsequent emergency information and instructions should be provided to the public and the media in a timely manner **(will not be subject to specific time requirements)**. For exercise purposes, timely is defined as "the responsible ORO personnel/representatives demonstrate actions to disseminate the appropriate information/instructions with a sense of urgency and without undue delay." If message dissemination is to be identified as not having been accomplished in a timely manner, the evaluator(s) will document a specific delay or cause as to why a message was not considered timely.

The OROs should ensure that emergency information and instructions are consistent with protective action decisions made by appropriate officials. The emergency information should contain all necessary and applicable instructions (e.g., evacuation instructions, evacuation routes, reception center locations, what to take when evacuating, information concerning pets, shelter-in-place instructions, information concerning protective actions for schools and special populations, public inquiry telephone number, etc.) to assist the public in carrying out protective action decisions provided to them. OROs should demonstrate the capability to use language that is clear and understandable to the public within both the plume and ingestion pathway EPZs. This includes demonstration of the capability to use familiar landmarks and boundaries to describe protective action areas.

The emergency information should be all-inclusive by including previously identified protective action areas that are still valid as well as new areas. The OROs should demonstrate the capability to ensure that emergency information that is no longer valid is rescinded and not repeated by broadcast media. In addition, the OROs should demonstrate the capability to ensure that current emergency information is repeated at pre-established intervals in accordance with the plan and/or procedures.

OROs should demonstrate the capability to develop emergency information in a non-English language when required by the plan and/or procedures.

If ingestion pathway measures are exercised, OROs should demonstrate that a system exists for rapid dissemination of ingestion pathway information to pre-determined individuals and businesses in accordance with the ORO's plan and/or procedures.

OROs should demonstrate the capability to provide timely, accurate, concise, and coordinated information to the news media for subsequent dissemination to the public. This would include demonstration of the capability to conduct timely and pertinent media briefings and distribute media releases as the situation warrants. The OROs should demonstrate the capability to respond appropriately to inquiries from the news media. All information presented in media briefings and media releases should be consistent with protective action decisions and other emergency information provided to the public. Copies of pertinent emergency information (e.g., EAS messages and media releases) and media information kits should be available for dissemination to the media.

OROs should demonstrate that an effective system is in place for dealing with calls to the Public Inquiry Hotline. Hotline staff should demonstrate the capability to provide or obtain accurate information for callers or refer them to an appropriate information source. Information from the hotline staff, including information that corrects false or inaccurate information when trends are noted, should be included, as appropriate, in emergency information provided to the public, media briefings, and/or media releases.

All activities for this criterion must be based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway – September 14, 2004

Public Instructions and Emergency Communications:

1. Protective action implementation will be initiated and coordinated by the State OEM through transmission to its Area IV office and subsequent relaying to the affected local governments.
2. The State RERP does not permit activation of the EAS by local CEOs after the Governor declares a state of emergency.
3. Activation of a joint media center at the State Armory will be demonstrated by using mock media.

Public Inquiry/Rumor Control (Informational Call Line):

1. A control cell will initiate rumors into the system at the State level. The control cell will demonstrate this criteria by the insertion of rumors to the rumor control staff beginning *after* the Governor's state of emergency declaration.
   2. Since actual EAS broadcasts will not be made, monitoring of the EAS stations and EAS operability testing will be demonstrated/simulated in the EAS room (operability testing) and the State Joint Media Center (monitoring).

Ingestion Pathway – September 15-16, 2004

1. The issue of Press Releases to agencies outside exercise play will be simulated.
2. During the ingestion portion of the exercise (day 2 and 3) JMC operations will be limited in scope but will include one preliminary notification briefing/news conferences and one Protective Action briefing/news conference.
3. The Governor's Press Office may voluntarily participate in the demonstration. If a representative of the Governor's Press Office is not present for the exercise, the Director, OEM or Designee may appoint an individual to demonstrate this function.

4. Actual reproduction and distribution of protective action information materials to individuals and businesses will be simulated by discussions with evaluators.
5. Instructional or informational messages on ingestion pathway protective measures will be developed for news briefings although actual broadcast of messages will be simulated.
6. Rumor Control/Public Inquiry will not be demonstrated during the Ingestion Pathway portion of the exercise.

Sub Element 5.b.1 has been approved for an On-the-Spot Correction.

Areas Requiring Corrective Action (ARCA)

NONE

Extent of Play
Rhode Island Emergency Management Agency
(RIEMA) - Millstone Station FEMA Evaluated Ingestion Pathway
Exercise-September15-16, 2004

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)

INTENT

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to alert, notify, and mobilize emergency personnel and to activate and staff emergency facilities.

EXTENT OF PLAY

Responsible OROs should demonstrate the capability to receive notification of an emergency situation from the licensee, verify the notification, and contact, alert, and mobilize key emergency personnel in a timely manner. Responsible OROs should demonstrate the activation of facilities for immediate use by mobilized personnel when they arrive to begin emergency operations. Activation of facilities should be completed in accordance with the plan and/or procedures. Pre-positioning of emergency personnel is appropriate, in accordance with the extent of play agreement, at those facilities located beyond a normal commuting distance from the individual's duty location or residence. Further, pre-positioning of staff for out-of-sequence demonstrations is appropriate in accordance with the extent of play agreement.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Region Extent of Play:

Formal mobilization of emergency personnel will be simulated:

EOC personnel will pre-stage at the RIEMA EOC.

Field Sample Teams will pre-stage at the RIEMA Offices for briefing and deployment

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)

INTENT

This sub-element is derived from NUREG-0654, which provides that OROs have facilities to support the emergency response.

EXTENT OF PLAY

Facilities will only be specifically evaluated for this criterion if they are new or have substantial changes in structure or mission. Responsible OROs should demonstrate the availability of facilities that support the accomplishment of emergency operations. Some of the areas to be considered are: adequate space, furnishings, lighting, restrooms, ventilation, backup power and/or alternate facility (if required to support operations).

Facilities must be set up based on the ORO's plans and procedures and demonstrated, as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Region Extent Of Play:

Laboratory facilities will be demonstrated out-of-sequence in accordance with the plan and procedures.

EOC facility will be demonstrated.

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., 2.a., b.)

INTENT

This sub-element is derived from NUREG-0654, which provides that OROs have the capability to control their overall response to an emergency.

EXTENT OF PLAY

Leadership personnel should demonstrate the ability to carry out essential functions of the response effort, for example: keeping the staff informed through periodic briefings and/or other means, coordinating with other appropriate OROs, and ensuring completion of requirements and requests.

All activities associated with direction and control must be performed based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Region Extent Of Play:

Direction and Control activities will be demonstrated during and after EOC activation in accordance with the plan and procedures.

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.)

INTENT

This sub-element is derived from NUREG-0654, which provides that OROs should establish reliable primary and backup communication systems to ensure communications with key emergency personnel at locations such as the following: appropriate contiguous governments within the emergency planning zone (EPZ), Federal emergency response organizations, the licensee and its facilities, emergency operations centers (EOC), and field teams.

EXTENT OF PLAY

OROs will demonstrate that a primary and at least one backup system are fully functional at the beginning of an exercise. If a communications system or systems are not functional, but exercise performance is not affected, no exercise issue will be assessed. Communications equipment and procedures for facilities and field units should be used as needed for the transmission and receipt of exercise messages. All facilities and field teams should have the capability to access at least one communication system that is independent of the commercial telephone system. Responsible OROs should demonstrate the capability to manage the communication

systems and ensure that all message traffic is handled without delays that might disrupt the conduct of emergency operations. OROs should ensure that a coordinated communication link for fixed and mobile medical support facilities exist.

The specific communications capabilities of OROs should be commensurate with that specified in the response plan and/or procedures. Exercise scenarios could require the failure of a communications system and the use of an alternate system, as negotiated in the extent of play agreement.

All activities associated with the management of communications capabilities must be demonstrated based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Region Extent of Play:

Communication capabilities will be demonstrated between EOC Communications Center and Field Teams.

Communications between RI and CT should be demonstrated as well.

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., J.10.a.b.e.f.j.k., 11, K.3.a.)

INTENT

This sub-element is derived from NUREG-0654, which provides that OROs have emergency equipment and supplies adequate to support the emergency response.

EXTENT OF PLAY

Equipment within the facility(ies) should be sufficient and consistent with the role assigned to that facility in the ORO's plans and/or procedures in support of emergency operations. Use of maps and displays is encouraged.

All instruments should be inspected, inventoried, and operationally checked before each use. Instruments should be calibrated in accordance with the manufacturer's recommendations. Unmodified CDV-700 series instruments and other instruments without a manufacturer's recommendation should be calibrated annually. Modified CDV-700 instruments should be calibrated in accordance with the recommendation of the modification manufacturer. A label indicating such calibration should be on each instrument or calibrated frequency can be verified by other means. Additionally, instruments being used to measure activity should have a range of readings sticker
affixed to the side of the instrument. The above considerations should be included in 4.a.1 for field team equipment; 4.c.1 for radiological laboratory equipment (does not apply to analytical equipment; under 4.c.1; reception center and emergency worker facilities' equipment under 6.a.1; and ambulance and medical facilities' equipment under 6.d.1.

Sufficient quantities of appropriate direct-reading and permanent record dosimetry and dosimeter chargers should be available for issuance to all categories of emergency workers that could be deployed from that facility. Appropriate **direct-reading dosimeters should allow individual(s) to read the administrative reporting limits and maximum exposure limits contained in the ORO's plans and procedures.**

Dosimetry should be inspected for electrical leakage at least annually and replaced, if necessary. **CDV-138s, due to their documented history of electrical leakage problems, should be inspected for electrical leakage at least quarterly and replaced if necessary.** This leakage testing will be verified during the exercise, through documentation submitted in the Annual Letter of Certification, and/or through a staff assistance visit.

Responsible OROs should demonstrate the capability to maintain inventories of KI sufficient for use by emergency workers, as indicated on rosters; institutionalized individuals, as indicated in capacity lists for facilities; and, where stipulated by the plan and/or procedures, members of the general public (including transients) within the plume pathway EPZ.

Quantities of dosimetry and KI available and storage locations(s) will be confirmed by physical inspection at storage location(s) or through documentation of current inventory submitted during the exercise, provided in the Annual Letter of Certification submission, and/or verified during a Staff Assistance Visit. Available supplies of KI should be within the expiration date indicated on KI bottles or blister packs. As an alternative, the ORO may produce a letter from a certified private or State laboratory indicating that the KI supply remains potent, in accordance with U.S. Pharmacopoeia standards.

At locations where traffic and access control personnel are deployed, appropriate equipment (e.g., vehicles, barriers, traffic cones and signs, etc.) should be available or their availability described.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Region Extent of Play:

Survey meters, DRD's and KI are not applicable to the RI State EOC.
Traffic and Access Control

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

Sub-element 2.a – Emergency Worker Exposure Control

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

INTENT

This sub-element is derived from NUREG-0654, which provides that an ORO have the capability to assess and control the radiation exposure received by emergency workers and have a decision chain in place as specified in the ORO's plans and procedures to authorize emergency worker exposure limits to be exceeded for specific missions.

Radiation exposure limits for emergency workers are the recommended accumulated dose limits or exposure rates that emergency workers may be permitted to incur during an emergency. These limits include any pre-established administrative reporting limits (that take into consideration Total Effective Dose Equivalent or organ-specific limits) identified in the ORO's plans and procedures.

EXTENT OF PLAY

OROs authorized to send emergency workers into the plume exposure pathway EPZ should demonstrate a capability to meet the criterion based on their emergency plans and procedures.

Responsible OROs, if necessary, should demonstrate the capability to make decisions concerning the authorization of exposure levels in excess of pre-authorized levels and to the number of emergency workers receiving radiation dose above pre-authorized levels.

As appropriate, OROs should demonstrate the capability to make decisions on the distribution and administration of KI, as a protective measure, based on the ORO's
plan and/or procedures or projected thyroid dose compared with the established protective action guides (PAGs) for KI administration.

All activities must be based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

REGION EXTENT OF PLAY:

. KI is not utilized in the state, due to Ingestion Exposure Pathway only. The criteria is not applicable to the RI Ingestion Exposure Pathway.

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

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

Criterion 2.d.1: Radiological consequences for the ingestion pathway are assessed and appropriate protective action decisions are made based on the ORO planning criteria. (NUREG-0654, I.8., J.11)

INTENT

This sub-element is derived from NUREG-0654, which provides that OROs have the means to assess the radiological consequences for the ingestion exposure pathway, relate them to the appropriate protective action guides (PAGs), and make timely, appropriate protective action decisions to mitigate exposure from the ingestion pathway.
During an accident at a nuclear power plant, a release of radioactive material may contaminate water supplies and agricultural products in the surrounding areas. Any such contamination would likely occur during the plume phase of the accident, and depending on the nature of the release could impact the ingestion pathway for weeks or years.

EXTENT OF PLAY

We expect that the ORO will take precautionary actions to protect food and water supplies, or to minimize exposure to potentially contaminated water and food, in accordance with their respective plans and procedures. Often such precautionary actions are initiated by the OROs based on criteria related to the facility's emergency classification levels (ECL). Such action may include recommendations to place milk animals on stored feed and to use protected water supplies.

The ORO should use its procedures (for example, development of a sampling plan) to assess the radiological consequences of a release on the food and water supplies. The ORO assessment should include the evaluation of the radiological analyses of representative samples of water, food, and other ingestible substances of local interest from potentially impacted areas, the characterization of the releases from the

facility, and the extent of areas potentially impacted by the release. During this assessment, OROs should consider the use of agricultural and watershed data within the 50-mile EPZ. The radiological impacts on the food and water should then be compared to the appropriate ingestion PAGs contained in the ORO's plan and/or procedures. (The plan and/or procedures may contain PAGs based on specific dose commitment criteria or based on criteria as recommended by current Food and Drug Administration guidance.) Timely and appropriate recommendations should be provided to the ORO decision-makers group for implementation decisions. As time permits, the ORO may also include a comparison of taking or not taking a given action on the resultant ingestion pathway dose commitments.

The ORO should demonstrate timely decisions to minimize radiological impacts from the ingestion pathway, based on the given assessments and other information available. Any such decisions should be communicated and to the extent practical, coordinated with neighboring and local OROs.

OROs should use Federal resources, as identified in the Federal Radiological Emergency Response Plan (FRERP), and other resources (e.g., compacts, nuclear insurers, etc), if available. Evaluation of this criterion will take into consideration the level of Federal and other resources participating.

All activities must be based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

REGION EXTENT OF PLAY:

Responsible EOC staff will assess results of crop, water, milk and food provided from lab analysis.

Recommended Protective Actions will be evaluated via EOC discussion.

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.)

INTENT

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to provide for the following: distribution, use, collection, and processing of direct-reading dosimeters and permanent record dosimeters; the reading of direct-reading dosimetry by emergency workers at appropriate frequencies; maintaining a radiation dose record for each emergency worker; and establishing a decision chain or authorization procedure for emergency workers to incur radiation exposures in excess of protective action guides, always applying the ALARA (As Low As is Reasonably Achievable) principle as appropriate.

EXTENT OF PLAY

OROs should demonstrate the capability to provide appropriate direct-reading and permanent record dosimetry, dosimetry chargers, and instructions on the use of dosimetry to emergency workers. **For evaluation purposes, appropriate direct-reading dosimetry is defined as dosimetry that allows individual(s) to read**
the administrative reporting limits (that are pre-established at a level low enough to consider subsequent calculation of Total Effective Dose Equivalent) and maximum exposure limits (for those emergency workers involved in life saving activities) contained in the OROs plans and procedures.

Each emergency worker should have the basic knowledge of radiation exposure limits as specified in the ORO's plan and/or procedures. Procedures to monitor and record dosimeter readings and to manage radiological exposure control should be demonstrated.

During a plume phase exercise, emergency workers should demonstrate the procedures to be followed when administrative exposure limits and turn-back values are reached. The emergency worker should report accumulated

exposures during the exercise as indicated in the plans and procedures. OROs should demonstrate the actions described in the plan and/or procedures by determining whether to replace the worker, to authorize the worker to incur additional exposures or to take other actions. If scenario events do not require emergency workers to seek authorizations for additional exposure, evaluators should interview at least two emergency workers, to determine their knowledge of whom to contact in the event authorization is needed and at what exposure levels. Emergency workers may use any available resources (e.g. written procedures and/or co-workers) in providing responses.

Although it is desirable for all emergency workers to each have a direct-reading dosimeter, there may be situations where team members will be in close proximity to each other during the entire mission and adequate control of exposure can be effected for all members of the team by one dosimeter worn by the team leader. Emergency workers who are assigned to low exposure rate areas, e.g., at reception centers, counting laboratories, emergency operations centers, and communications centers, may have individual direct-reading dosimeters or they may be monitored by dosimeters strategically placed in the work area. It should be noted that, even in these situations, each team member must still have their own permanent record dosimeter.

Individuals without specific radiological response missions, such as farmers for animal care, essential utility service personnel, or other members of the public who must re-enter an evacuated area following or during the plume passage, should be limited to the lowest radiological exposure commensurate with completing their missions.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Region Extent of Play:

Dosimetry will be issued to Field Sample Team personnel at the RIEMA building.

Field Sample Team personnel will use boots and gloves as protective clothing.

Monitoring and decontamination of field sampling teams will be demonstrated by selected personnel of the 13th CST (WMD), Coventry Air National Guard Base.

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., k.)

INTENT

This sub-element is derived from NUREG-0654, which provides that OROs have the capability to implement protective action plans, including relocation and restriction of access to evacuated/sheltered areas. This sub-element focuses on selecting, establishing, and staffing of traffic and access control points and removal of impediments to the flow of evacuation traffic.

EXTENT OF PLAY

OROs should demonstrate the capability to select, establish, and staff appropriate traffic and access control points consistent with protective action decisions (for example, evacuating, sheltering, and relocation), in a timely manner. OROs should demonstrate the capability to provide instructions to traffic and access control staff on actions to take when modifications in protective action strategies necessitate changes in evacuation patterns or in the area(s) where access is controlled.

Traffic and access control staff should demonstrate accurate knowledge of their roles and responsibilities. This capability may be demonstrated by actual deployment or by interview in accordance with the extent of play agreement.
In instances where OROs lack authority necessary to control access by certain types of traffic (rail, water, and air traffic), they should demonstrate the capability to contact the State or Federal agencies with authority to control access.

All activities must be based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless specified above or indicated in the extent of play agreement.

REGION EXTENT OF PLAY:

The establishing of check points for food embargo control will be conducted at the State EOC by responsible agencies through tabletop discussion.
The State EOC will establish traffic control points to restrict Rhode Island traffic from entering the affected CT area, based upon a CT request.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION
Sub-element 3.e – Implementation of Ingestion Pathway Decisions

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

INTENT

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to implement protective actions, based on criteria recommended by current Food and Drug Administration guidance, for the ingestion pathway emergency planning zone (IPZ), the area within an approximate 50-mile radius of the nuclear power plant. This sub-element focuses on those actions required for implementation of protective actions.

EXTENT OF PLAY

Applicable OROs should demonstrate the capability to secure and utilize current information on the locations of dairy farms, meat and poultry producers, fisheries, fruit growers, vegetable growers, grain producers, food processing plants, and water supply intake points to implement protective actions within the ingestion pathway EPZ.

OROs should use Federal resources as identified in the FRERP, and other resources (e.g. compacts, nuclear insurers, etc), if available. Evaluation of this criterion will take into consideration the level of Federal and other resources participating in the exercise.

All activities must be based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

REGION EXTENT OF PLAY:

Requests to outside agencies for support will be simulated unless otherwise stated, i.e. actual exercise participation of federal agencies.
Responsible state agencies in the EOC may establish traffic control points for embargoing crops, dairy items, animals and fish products.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION
Sub-element 3.e – Implementation of Ingestion Pathway Decisions

Criterion 3.e.2: Appropriate measures, strategies, and pre-printed instructional material are developed for implementing protective action decisions for contaminated water, food products, milk, and agricultural production. (NUREG-0654, E.5., 7., J.9, 11.)

INTENT

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to implement protective actions, based on criteria recommended by current Food and Drug Administration guidance, for the ingestion pathway emergency planning zone (IPZ), the area within an approximate 50-mile radius of the nuclear power plant. This sub-element focuses on those actions required for implementation of protective actions.

EXTENT OF PLAY

Development of measures and strategies for implementation of IPZ protective actions should be demonstrated by formulation of protective action information for the general public and food producers and processors. This includes either pre-distributed public information material in the Ingestion Pathway Zone or the capability for rapid distribution of appropriate camera-ready information and instructions to pre-determined individuals and businesses. OROs should demonstrate the capability to control, restrict or prevent distribution of
contaminated food by commercial sectors.

Exercise play should include demonstration of communications and coordination between organizations to implement protective actions. Actual field play of implementation activities may be simulated. For example, communications and coordination with agencies responsible for enforcing food controls within the IPZ should be demonstrated, but actual communications with food producers and processors may be simulated.

All activities must be based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

REGION EXTENT OF PLAY:

Instructional or information messages on ingestion pathway protective measures will be developed for news briefings although actual broadcast of messages will be simulated.

A representative from the RIEMA will be provided to assist with coordination of information and communications between CT and RI.

EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSIS

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

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

INTENT

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to assess the actual or potential magnitude and locations of radiological hazards in the ingestion emergency planning zone (IPZ) and for relocation, re-entry and return measures.

This sub-element focuses on the collection of environmental samples for laboratory analyses that are essential for decisions on protection of the public from contaminated food and water and direct radiation from deposited materials.

EXTENT OF PLAY

The ORO field teams should demonstrate the capability to take measurements and samples, at such times and locations as directed, to enable an adequate assessment of the ingestion pathway and to support re-entry, relocation, and return decisions. When resources are available, the use of aerial surveys and in-situ gamma measurement is appropriate. All methodology, including contamination control, instrumentation, preparation of samples, and a chain-of-custody form for transfer to a laboratory, will be in accordance with the ORO's plan and/or procedures.

Ingestion pathway samples should be secured from agricultural products and water. Samples in support of relocation and return should be secured from soil, vegetation, and other surfaces in areas that received radioactive ground deposition.

OROs should use Federal resources as identified in the FRERP, and other resources (e.g. compacts, nuclear insurers, etc), if available. Evaluation of this criterion will take into consideration the level of Federal and other resources participating in the exercise.

All activities must be must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

REGION EXTENT OF PLAY:

Logistics and resources to support the federal response will be simulated.

RIEMA will provide a state representative to the CT EOC.

The Field Sample Team Coordinator will assemble and direct the three (3) Field Sampling Teams. He will also insure dosimetry and communications are adequate to demonstrate equipment and procedures for the collection and transport of IP samples.

The Field Sample Teams will take 3 samples, water, foliage and soil to the Coventry Air National Guard Complex. They will then deliver the samples to the 13th Civil Support Team (WMD) for demonstration of receipt/chain-of-custody and at least one team or each team will be monitored for contamination.

EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSIS

Sub-element 4.c - Laboratory Operations

Criterion 4.c.1: The laboratory is capable of performing required radiological analyses to support protective action decisions. (NUREG-0654, C.3., I.8., 9., J.11)

INTENT

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to perform laboratory analyses of radioactivity in air, liquid, and environmental samples to support protective action decision-making.

EXTENT OF PLAY

The laboratory staff should demonstrate the capability to follow appropriate procedures for receiving samples, including logging of information, preventing contamination of the laboratory, preventing buildup of background radiation due to stored samples, preventing cross contamination of samples, preserving samples that may spoil (e.g., milk), and keeping track of sample identity. In addition, the laboratory staff should demonstrate the capability to prepare samples for conducting measurements.

The laboratory should be appropriately equipped to provide analyses of media, as requested, on a timely basis, of sufficient quality and sensitivity to support assessments and decisions as anticipated by the ORO's plans and procedures. The laboratory(ies) instrument calibrations should be traceable to standards provided by the National Institute of Standards and Technology. Laboratory methods used to analyze typical radionuclides released in a reactor incident should be as described in the plans and procedures. New or revised methods may be used to analyze atypical radionuclide releases (e.g. transuranics or as a result of a terrorist event) or if warranted by circumstances of the event. Analysis may require resources beyond those of the ORO.

The laboratory staff should be qualified in radioanalytical techniques and contamination control procedures.

OROs should use Federal resources as identified in the FRERP, and other resources (e.g. compacts, nuclear insurers, etc), if available. Evaluation of this criterion will take into consideration the level of Federal and other resources participating in the exercise.

All activities must be based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

REGION EXTENT OF PLAY:

Laboratory operations will be demonstrated out of sequence with the main scenario timeline, as negotiated with FEMA.

The Ariva/Framatome Laboratory, Westborough, MA will demonstrate sample radioanalysis, using controller provided samples and sample data.

The laboratory will demonstrate receipt of samples and initial counting of the samples, however, full counting periods will be truncated to facilitate exercise play. One (1) water, (1) soil (1) foliage will be prepared for analysis results by the lab.

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,a.,b.,c.)

INTENT

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to disseminate to the public appropriate emergency information and instructions including any recommended protective actions. In addition, NUREG-0654 provides that OROs should ensure the capability exists for providing information to the media. This includes the availability of a physical location for use by the media during an emergency. NUREG-0654 also provides that a system be available for dealing with rumors. This system will hereafter be known as the public inquiry hotline.

EXTENT OF PLAY

Subsequent emergency information and instructions should be provided to the public and the media in a timely manner **(will not be subject to specific time requirements)**. For exercise purposes, timely is defined as "the responsible ORO personnel/representatives demonstrate actions to disseminate the appropriate
information/instructions with a sense of urgency and without undue delay." If message dissemination is to be identified as not having been accomplished in a
timely manner, the evaluator(s) will document a specific delay or cause as to why a message was not considered timely.

The OROs should ensure that emergency information and instructions are consistent with protective action decisions made by appropriate officials. The emergency information should contain all necessary and applicable instructions (e.g., evacuation instructions, evacuation routes, reception center locations, what to take when evacuating, information concerning pets, shelter-in-place instructions, information concerning protective actions for schools and special populations, public inquiry telephone number, etc.) to assist the public in carrying out protective action decisions provided to them. The ORO should also be prepared to disclose and explain the Emergency Classification Level (ECL) of the incident. At a minimum, this information must be included in media briefings and/or media releases. OROs should demonstrate the capability to use language that is clear and understandable to the public within both the plume and ingestion pathway

EPZs. This includes demonstration of the capability to use familiar landmarks and boundaries to describe protective action areas.

The emergency information should be all-inclusive by including previously identified protective action areas that are still valid, as well as new areas. The OROs should demonstrate the capability to ensure that emergency information that is no longer valid is rescinded and not repeated by broadcast media. In addition, the OROs should demonstrate the capability to ensure that current emergency information is repeated at pre-established intervals in accordance with the plan and/or procedures.

OROs should demonstrate the capability to develop emergency information in a non-English language when required by the plan and/or procedures.

If ingestion pathway measures are exercised, OROs should demonstrate that a system exists for rapid dissemination of ingestion pathway information to pre-determined individuals and businesses in accordance with the ORO's plan and/or procedures.

OROs should demonstrate the capability to provide timely, accurate, concise, and coordinated information to the news media for subsequent dissemination to the public. This would include demonstration of the capability to conduct timely and pertinent media briefings and distribute media releases as the situation warrants. The OROs should demonstrate the capability to respond appropriately to inquiries from the news media. All information presented in media briefings and media releases should be consistent with protective action decisions and other emergency information provided to the public. Copies of pertinent emergency information (e.g., EAS messages and media releases) and media information kits should be available for dissemination to the media.

OROs should demonstrate that an effective system is in place for dealing with calls to the public inquiry hotline. Hotline staff should demonstrate the capability to provide or obtain accurate information for callers or refer them to an appropriate information source. Information from the hotline staff, including information that corrects false or inaccurate information when trends are noted, should be included, as appropriate, in emergency information provided to the public, media briefings, and/or media releases.

All activities for this criterion must be based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

REGION EXTENT OF PLAY:

One preliminary notification mock briefing/news conference(s) and one Protective Action mock briefing/news conference will be demonstrated during the exercise scenario.

The Governor's Press Office may voluntarily participate in the demonstration. If a representative of the Governor's Press Office is not present for the exercise, the Director, OEM or Designee may appoint an individual to demonstrate this function.

Actual reproduction and distribution of protective action information materials to individuals and businesses will be simulated by discussions with evaluators.

Instructional or information messages on ingestion pathway protective measures will be developed for news briefings although actual broadcast of messages will be simulated.

A representative from Rhode Island will be sent to CTOEM to coordinate and communicate with the RIEOC to ensure that News Briefings and Conferences are timely and in concert with information released from CTOEM.
A Public Information/Rumor Control line will be establish by RIEMA.

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.; K.5.b.)

The following INTENT, EXTENT OF PLAY, **and** REGION (insert #) Extent of Play **information is provided for general reference only. Consult the extent of play agreement and your Team Leader for how it applies to your assigned location.**

INTENT

This sub-element is derived from NUREG-0654, which provides that OROs have the capability to implement radiological monitoring and decontamination of evacuees and emergency workers, while minimizing contamination of the facility, and registration of evacuees at reception centers.

EXTENT OF PLAY

Radiological monitoring, decontamination, and registration facilities for evacuees/ emergency workers should be set up and demonstrated as they would be in an actual emergency or as indicated in the extent of play agreement. This would include adequate space for evacuees' vehicles. Expected demonstration should include 1/3 of the monitoring teams/portal monitors required to monitor 20% of the population allocated to the facility within 12 hours. Before using a monitoring instrument(s), the monitor(s) should demonstrate the process of checking the instrument(s) for proper operation.

Staff responsible for the radiological monitoring of evacuees should demonstrate the capability to attain and sustain a monitoring productivity rate per hour needed to monitor the 20% emergency planning zone (EPZ) population planning base within about 12 hours. This monitoring productivity rate per hour is the number of evacuees that can be monitored per hour by the total complement of monitors using an appropriate monitoring procedure. A minimum of six individuals per monitoring station should be monitored, using equipment and procedures specified in the plan and/or procedures, to allow demonstration of monitoring, decontamination, and registration capabilities. The monitoring sequences for the first six simulated evacuees per monitoring team will be timed by the evaluators in order to determine whether the twelve-hour requirement can be meet. Monitoring of emergency workers does not have to meet the twelve-hour requirement. However, appropriate

monitoring procedures should be demonstrated for a minimum of two emergency workers.

Decontamination of evacuees/emergency workers may be simulated and conducted by interview. The availability of provisions for separately showering should be demonstrated or explained. The staff should demonstrate provisions for limiting the spread of contamination. Provisions could include floor coverings, signs and appropriate means (e.g. partitions, roped-off areas) to separate clean from potentially contaminated areas. Provisions should also exist to separate contaminated and uncontaminated individuals, provide changes of clothing for individuals whose clothing is contaminated, and store contaminated clothing and personal belongings to prevent further contamination of evacuees or facilities. In addition, for any individual found to be contaminated, procedures should be discussed concerning the handling of potential contamination of vehicles and personal belongings.

Monitoring personnel should explain the use of action levels for determining the need for decontamination. They should also explain the procedures for referring evacuees who cannot be adequately decontaminated for assessment and follow up in accordance with the ORO's plans and procedures. Contamination of the individual will be determined by controller inject and not simulated with any low-level radiation source.

The capability to register individuals upon completion of the monitoring and decontamination activities should be demonstrated. The registration activities demonstrated should include the establishment of a registration record for each individual, consisting of the individual's name, address, results of monitoring, and time of decontamination, if any, or as otherwise designated in the plan. Audio recorders, camcorders, or written records are all acceptable means for registration.

All activities associated with this criterion must be based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

REGION EXTENT OF PLAY:

Monitoring and Decontamination is for the Field Sample Teams (Emergency Workers), this is preformed by the 13th Civil Support Team (WMD). Monitoring Teams, Portal Monitors, Registration , Medical Facilities, showering, floor coverings, partitions, change of clothes, personal belongings etc are not applicable to the state.

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)

The following INTENT, EXTENT OF PLAY, **and** REGION (insert #) Extent of Play **information is provided for general reference only. Consult the extent of play agreement and your Team Leader for how it applies to your assigned location.**

INTENT

This sub-element is derived from NUREG-0654, which provides that OROs have the capability to implement radiological monitoring and decontamination of emergency worker equipment, including vehicles.

EXTENT OF PLAY

The monitoring staff should demonstrate the capability to monitor equipment, including vehicles, for contamination in accordance with the ORO's plans and procedures. Specific attention should be given to equipment, including vehicles, that was in contact with individuals found to be contaminated. The monitoring staff should demonstrate the capability to make decisions on the need for decontamination of equipment including vehicles based on guidance levels and procedures stated in the plan and/or procedures.

The area to be used for monitoring and decontamination should be set up as it would be in an actual emergency, with all route markings instrumentation, record keeping and contamination control measures in place. Monitoring procedures should be demonstrated for a minimum of one vehicle. It is generally not necessary to monitor the entire surface of vehicles. However, the capability to monitor areas such as radiator grills, bumpers, wheel wells, tires, and door handles should be demonstrated. Interior surfaces of vehicles that were in contact with individuals found to be contaminated should also be checked.

Decontamination capabilities, and provisions for vehicles and equipment that cannot be decontaminated, may be simulated and conducted by interview.

All activities associated with this criterion must be based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

REGION EXTENT OF PLAY:

Monitoring and Decontamination will be preformed in the 13th CST parking lot area. Only one vehicle will be decontaminated, outside only. Wash water will not be contained, per their procedures.

APPENDIX 4

EXERCISE SCENARIO

REAL TIME (military)	ELAPSED TIME (minutes)	DETAILED SCENARIO DESCRIPTION	MESSAGE NUMBER

Note: The utilization of the simulator is controlled by the Nuclear Training Department. An approved Simulator Exercise Guide is used by the Simulator Instructor to operate the simulator within the parameters established for this Emergency Preparedness scenario.

Initial Conditions

The drill date is assumed to be Tuesday, September 14, 2004.

On-site personnel are limited to the normal weekday complement. Unit 3 is currently and has been operating at 100% power for the past 50 days.

Units 1 and 2 operating modes are as found.

Reactor Engineering is in the process of moving spent fuel assemblies in the Fuel Building.

All plant parameters are normal except for those identified below.

"B" QSS Pump is out of service for pump bearing replacement. Tech Spec 3.6.2.1 Containment Quench Spray System was entered 12 hours ago (9/13/04 1900). Crews are working around the clock to return the pump to service **(Mini Scenario 6.1)**.

Health Physics KAMAN is Out of Service.

Initial Meteorological Conditions

Meteorological conditions will be provided by the Unit 3 Simulator. SERO personnel will utilize OFIS DRILL to access data.
The 142' wind direction is FROM 202° at a wind speed of ≈ 7.2 mph.
Forecast data will be provided by controller.

REAL TIME (military)	ELAPSED TIME (minutes)	DETAILED SCENARIO DESCRIPTION	MESSAGE NUMBER
		Detailed Scenario Timeline	
0715	H -15	Initial Conditions are provided to Simulator players.	SERO 1
		NOTE – Turnover will be provided at 0715 to provide the Operations crew with adequate time to review their boards and to conduct an abbreviated shift turnover.	
		NOTE - As appropriate, Controllers may inform players of the following initial core parameters when requested:	
		Average Core Burnup = **1000** MWD/MT BOL; Equilibrium Xenon RCS Boron - **1420** PPM	
0730	H+00:00	Initial conditions established; drill begins.	SERO2
0740	H+10	Reactor Engineering notifies the control room that a fuel bundle has been dropped from the spent fuel crane hoist. The top nozzle has separated from the assembly. The fuel bundle has fallen and is laying side ways on top of a rack. The assembly appears damaged. Bubbles are coming up from the assembly. Radiation monitors in the area are increasing. **(Mini Scenario 6.2)**	SERO3
		The OPS Crew will respond with EOP 3502, Fuel Handling Accident.	
		As part of the response to EOP 3502 a request will be made to Security to verify all personnel have exited the Fuel Building. Security should run an actual card reader check. The report back to OPS will be that everyone has exited the Fuel Building.	SERO4
0745	H+15	The Shift Manager will assess accident conditions, declare an **ALERT C-1** based on RA1 #2, Fuel Handling Accident Causing Damage to Spent Fuel, Indicated by Fuel Building OR Containment Radiation Monitors Increasing.	
		Shift Manager will assume the role of Control Room Director of Station Emergency Operations (CR DSEO). Subsequent CR DSEO actions are specified in Procedure EPI-FAP01, Control Room Emergency Operations.	

REAL TIME (military)	ELAPSED TIME (minutes)	DETAILED SCENARIO DESCRIPTION	MESSAGE NUMBER
		Following the ALERT C-1 declaration, SERO members will be notified and begin activation of the Technical Support Center, Operational Support Center, Emergency Operations Facility, and Joint Media Center.	SERO 5 SERO 6
Upon Arrival		Initial conditions will be provided to non-Control Room personnel as they respond to their assigned facilities.	SERO 7
0755	H+25	If no emergency declaration has been made or is pending, the Shift Manager will be directed to declare an **ALERT C-1** in accordance with FAP06-003, Initiating Condition RA1 #2, Fuel Handling Accident Causing Damage to Spent Fuel, Indicated by Fuel Building OR Containment Radiation Monitors Increasing.	SERO 8c
0800	H+30	State, Local Community, and SERO notifications complete via ENRS.	
0925	H+115	2-3 Control Rods drop. ATWS occurs. Crew cannot trip reactor from Control Room and enter FR-S.1, Response To Nuclear Power Generation ATWS. RMS-04A/05A, Containment High Range Monitors elevate to approximately 4 R/hr indicating fuel clad failure. RMS-69A, Failed Fuel Monitor will rise indicating fuel clad failure. Chemistry samples will be requested to verify fuel clad failure has occurred.	
0930	H+120	The Manager of Control Room Operations and the Assistant Director Technical Support will assess accident conditions and discuss the situation with the EOF-DSEO. The EOF-DSEO will declare a **SITE AREA EMERGENCY C-2** in accordance with Procedure EPI-FAP06-003, Classification and PARs, based on ES1, ATWS, FR-S.1 is entered directly from E-0.	SERO 9 SERO 10
~0933	H+123	Reactor Trip Breakers are manually opened. The Reactor trips with three stuck rods. The rods eventually insert into the core. Safety Injection may occur at approximately this time. The safety injection will not have an impact on the outcome of this portion of the scenario.	

REAL TIME (military)	ELAPSED TIME (minutes)	DETAILED SCENARIO DESCRIPTION	MESSAGE NUMBER
0940	H+130	If no emergency declaration has been made or is pending, the EOF DSEO will be directed to declare a **SITE AREA EMERGENCY C-2** in accordance with Procedure EPI-FAP06-003, Classification and PARs, based on ES1, ATWS, FR-S.1 is entered directly from E-0.	SERO 11c
0945	H+135	State, Local Community, and SERO notifications complete via ENRS.	
1000	H+150	Fire at Unit 3 hydrogen bank reported. The fire is severe enough that one of the hydrogen bottles launches as a missile. The bottle strikes the Unit 3 Enclosure Building causing a large hole in the enclosure. **(Mini-Scenario 6.3)**	SERO 12
		The Fire Brigade will respond to combat the fire (response is in accordance with FPI-50).	
		Note: The fire does not impact the SAE classification.	
		Security may be asked if there is any indication that the fire was the result of intentional damage or sabotage. If requested, the Security Controller will provide information that there is NO indication that the fire was a result of a deliberate act or sabotage.	SERO 13
1100	H+210	142' wind stabilizes - direction will be FROM 240° at a wind speed of ≈ 9.3 mph.	
1110	H+220	Large Break LOCA occurs coincident with a failure of the Containment. Containment High Range monitors will indicate > 500 R/hr. Barrier Reference Tables will indicate a Loss of All Three Barriers.	
		Reports from the field indicate a large steam release from the hole in the enclosure building.	SERO 14
		The 'A' QSS pump will not start due to an electrical fault. **(Mini-Scenario 6.4)** The 'B' QSS pump will not be available due to maintenance work. Therefore, there will be no spray of containment for the first 11 minutes of the scenario.	
1112	H+222	'B' EDG emergency trips due to low running oil pressure. **(Mini-Scenario 6.5)**	Simulator Prompt

REAL TIME (military)	ELAPSED TIME (minutes)	DETAILED SCENARIO DESCRIPTION	MESSAGE NUMBER
1115	H+225	The Manager of Control Room Operations and the Assistant Director Technical Support will assess accident conditions and discuss the situation with the DSEO. The DSEO will declare a **GENERAL EMERGENCY, State Posture Code ALPHA** in accordance with Procedure MP-EPI-FAP06-003, based on BG1, All Three Barriers: FCB3(L), RE-04A/05A Reading >500 R/hr, RCB2(L), RCS Subcooling < 32°F Due to RCS Leak (115°F Adverse CTMT), and CNB3(L), Rapid Unexplained CTMT Pressure Decrease Following Initial Increase.	SERO 15 SERO 16
1115	H+225	Based on current radiological release and meteorological conditions, and associated procedural requirements, Millstone should issue the following PARs when the General Emergency is declared: **EVACUATE:** Zones PAR – **A and B and E** **SHELTER:** All Other Zones NOTE: Depending on how quickly a Dose Assessment is completed the initial PAR may not contain a recommendation for KI. Once the dose assessment indicates that Thyroid CDE ≥ 5Rem the PAR will be updated to recommend KI. If two PARs are generated, each will be included as a PI opportunity.	
1117	H+227	'A' SI Pump trips due to failed breaker. **(Mini-Scenario 6.6)**	Simulator Prompt
1125	H+235	If no emergency declaration has been made or is pending, the DSEO will be directed to declare a **GENERAL EMERGENCY, State Posture Code ALPHA** in accordance with Procedure MP-EPI-FAP06-003, based on BG1, All Three Barriers: FCB3(L), RE-04A/05A Reading >500 R/hr, RCB2(L), RCS Subcooling < 32°F Due to RCS Leak (115°F Adverse CTMT), and CNB3(L), Rapid Unexplained CTMT Pressure Decrease Following Initial Increase.	SERO 17c
1125	H+235	If no PAR has been recommended to the State the DSEO will be directed to issue the following: **EVACUATE:** Zones PAR – **A and B and E** **SHELTER:** All Other Zones	SERO 18c
1130	H+240	State, Local Community, and SERO notifications complete via ENRS.	

REAL TIME (military)	ELAPSED TIME (minutes)	DETAILED SCENARIO DESCRIPTION	MESSAGE NUMBER
~1135	H+245	ISO New England informs station of grid instabilities. Warns of potential to lose incoming lines to Millstone. ISO NE will keep station informed of grid conditions.	SERO 19
~1200	H+270	Containment conditions established which effectively terminate the release.	
1330	H+360	Drill play is terminated as directed by the Drill Manager. Emergency response facility managers are directed to begin deactivation and restoration of their respective facilities.	SERO 20
1345	H+375	Controllers commence debriefs at each emergency response facility.	