



FEMA

Seabrook Nuclear Power Station

Licensee: **Florida Power and Light Energy –
Seabrook Station**

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**DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION I
99 High Street
Boston, Massachusetts 02110**

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I. EXECUTIVE SUMMARY

On November 17, 2004, the Federal Emergency Management Agency (FEMA), Region I, conducted an exercise in the Plume Exposure Pathway emergency planning zone (EPZ) around the Seabrook Nuclear Power Station. The purpose of the exercise was to assess the level of State and local preparedness in responding to a radiological emergency. This exercise was held in accordance with FEMA's policies and guidance concerning the exercise of State and local radiological emergency response plans (RERP) and procedures.

The most recent exercise at this site was conducted on November 17, 2004. Previous exercises were conducted in February 1986, June 1988, December 1990, June 1992, December 1994, September 1996, June 1998, June 7-8, 2000, and October 23, 2002. It should be noted that the 1986 exercise tested only the preparedness and plans for the New Hampshire portion of the plume exposure EPZ. The June 1988 exercise tested the plans and preparedness for the New Hampshire plume exposure EPZ and ingestion pathway and the Maine ingestion pathway. Also in June 1988, the Seabrook Plan for Massachusetts Communities (SPMC), developed by New Hampshire Yankee, reviewed and approved by FEMA, was tested for the Massachusetts plume exposure EPZ and ingestion pathway. The December 1990 exercise tested plans and preparedness for the New Hampshire plume exposure EPZ and the SPMC plans and preparedness for the Massachusetts plume exposure EPZ. In 1992 the State of Massachusetts developed and submitted to FEMA the State and Local Community plans in support of the Seabrook Nuclear Power Station. The June 1992, December 1994, June 2000, and October, 2002, exercises tested the plans and preparedness for the New Hampshire and Massachusetts plume exposure EPZ and ingestion pathway and the Maine ingestion pathway.

FEMA wishes to acknowledge the efforts of the many individuals in the State of New Hampshire, Commonwealth of Massachusetts, State of Maine, local communities, and private and volunteer organizations that participated in this exercise.

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

This report contains the final evaluation of the biennial exercise and the out-of-sequence activities.

The State and local organizations, except where noted in this report, demonstrated knowledge of their emergency response plans and procedures and adequately implemented them. There were no Deficiencies and fifteen Areas Requiring Corrective Action (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. Department of Transportation
 - U.S. Department of Agriculture
 - U.S. Department of the Interior
 - 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 Seabrook Nuclear Power Station to FEMA Region I by the State of New Hampshire and the Commonwealth of Massachusetts and involved local jurisdictions occurred in September 1987, and May 1992, respectively. A REP exercise was conducted on November 17, 2004, by FEMA Region I to assess the capabilities of State and local emergency preparedness organizations in implementing their RERPs and procedures to protect the public health and safety during a radiological emergency involving the Seabrook Nuclear Power Station. The purpose of this exercise report is to present the exercise results and findings on the performance of the offsite response organizations (ORO) during a simulated radiological emergency.

The findings presented in this report are based on the evaluations of the Federal evaluator team, with final determinations made by the FEMA Region 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,” 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 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. 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; and previous ARCAs that were resolved during this exercise and how it was corrected.

III. EXERCISE OVERVIEW

Contained in this section are data and basic information relevant to the November 17, 2004, exercise to test the offsite emergency response capabilities in the area surrounding the Seabrook Nuclear Power Station. This section of the exercise report includes a description of the plume pathway EPZ, a listing of all participating jurisdictions and functional entities that were evaluated, and a tabular presentation of the time of actual occurrence of key exercise events and activities.

A. Plume Emergency Planning Zone Description

The Seabrook Nuclear Power Station is located in the State of New Hampshire in southeast Rockingham County on the shore of Hampton Harbor and the Atlantic Ocean.

The 10-mile EPZ contains a total population of 331,680 within two counties: Rockingham County in New Hampshire and Essex County in Massachusetts. The land use is a mixture of residential, industrial and a diversified agricultural production. There are six State recreation areas in the EPZ: Rye, Hampton, and Seabrook Beaches in New Hampshire and Salisbury, Plum Island Beaches, and a Federal wildlife preserve in Massachusetts.

The area is served by various forms of transportation. Interstate 95 passes within two miles west of the site, Interstate 495 passes four miles to the south, US Route 1 passes within 1/8 mile west of the site, and NH Route 1A passes 1 1/2 miles east of the site. There is boat traffic within Hampton Harbor and the ocean. Three airports serve the area, one in Manchester, New Hampshire, 30 miles west; one in Portland, Maine, 45 miles north; and one in Boston, Massachusetts, 35 miles south. The EPZ is divided into seven Emergency Response Planning Areas (ERPAs); five in New Hampshire and two in Massachusetts.

B. Exercise Participants

The following agencies, organizations, and units of government participated in the Seabrook Nuclear Power Station exercise on November 17, 2004, and various out of sequence exercises and drills.

STATE OF NEW HAMPSHIRE

STATE EMERGENCY OPERATIONS CENTER

- Bureau of Emergency Management
- Governor's Office
- Department of Agriculture
- Department of Transportation
- Department of Resources and Economic Development
- Fish and Game
- Division of Public Health Services (DPHS)
- Public Utilities Commission
- Department of Education
- State Police
- American Red Cross
- Florida Power and Light Energy-Seabrook
- Radio Amateurs in support of Civil Emergency Services (RACES)
- US Army National Guard
- US Coast Guard
- Civil Air Patrol

EMERGENCY OPERATIONS FACILITY

- Division of Public Health Services (DPHS)
- Bureau of Emergency Management

INCIDENT FIELD OFFICE

- New Hampshire:
 - Bureau of Emergency Management (NHBEM)
 - New Hampshire Division of Public Health Services (DPHS)
 - New Hampshire State Police
 - Department of Resources and Economic Development, Division of Parks and Recreation (DRED)
 - Department of Transportation, Maintenance and Turnpike Bureau
- Southwestern New Hampshire District Fire Mutual Aid (Keene)
- Maine Emergency Management Agency
- United States Coast Guard

MEDIA CENTER

New Hampshire Office of Emergency Management
Massachusetts Emergency Management Agency
Florida Power and Light Energy - Seabrook

FIELD MONITORING TEAMS #1 and #2

Department of Public Health Services (NHDPHS)

ROCKINGHAM COUNTY DISPATCH CENTER

Rockingham County Sheriffs Department

RISK JURISDICTIONS (NEW HAMPSHIRE)

BRENTWOOD

Board of Selectmen
Fire Department
Police Department
Town Clerk's Office
RACES

EAST KINGSTON

Board of Selectmen
Police Department
Volunteer Fire Department
Public Works
Health Department

EXETER

Town Manager
Police Department
Fire Department
Department of Public Works
Emergency Medical Services
RACES
Philips Exeter Academy

GREENLAND

Town Selectmen
Emergency Management
Police Department
Volunteer Fire/Rescue Department
Town Clerk
RACES

HAMPTON

Town Manager
Police Department
Fire Department
Department of Public Works

HAMPTON FALLS

Town Selectmen
Fire Department
Police Department
Public Works

KENSINGTON

Police Dept.
Fire Dept.
RACES

KINGSTON

Chairman of the Council of Selectmen
Town Police
Fire Department
School Superintendent
Highway Department
Health Department
Emergency Management
RACES

NEW CASTLE

Town Selectman
Fire Department
Road Agent
Police Department

NEWFIELDS

Emergency Management Director
Police Department
RACES

NEWTON

Town Selectman
Police Chief
Emergency Management Director
Fire Department
Tax Assessor
Emergency Medical Technicians (EMTs)

NORTH HAMPTON

Board of Selectman
Fire Department
Police Department
Public Works
RACES

PORTSMOUTH

City Manager
Fire Department
Police Department
Public Works
Department of Health
School Superintendent

RYE

Office of Emergency Management
Police Department
Fire Department
Department of Public Works
RACES

SEABROOK

Town Selectman
Town Manager
Police Department
Fire Department
Department of Public Works
RACES

SOUTH HAMPTON

Town Officials
Emergency Management
Fire Department
Police Department

STRATHAM

Town Manager
Emergency Management Director
Fire Department
Police Department
Medical Coordinator
Highway Department
Transportation Department
Communications Coordinator
RACES

SUPPORT JURISDICTIONS (NEW HAMPSHIRE)

MANCHESTER EOC

Mayor's Office
Fire Department
Police Department
Health Department
American Red Cross
School Superintendents Office
Transportation Authority
RACES

DOVER EOC

Fire Department
Police Department
RACES

ROCHESTER EOC

City Manager
Fire Department
Public Works Department
Health Department
Frisbie Memorial Hospital
RACES

STATE TRANSPORTATION STAGING AREA

Rockingham County Sheriffs Department
University of New Hampshire Volunteers

WENTWORTH DOUGLASS HOSPITAL

Fire Department Ambulance
Wentworth Douglass Hospital Staff

ROCHESTER RECEPTION CENTER

Rochester Police Department
Rochester Fire Department
Berwick, ME Fire Department

SOUTHSIDE MIDDLE SCHOOL RECEPTION CENTER - MANCHESTER

Fire Department
Police Department
Hillsboro County Sheriffs Department

COMMONWEALTH OF MASSACHUSETTS

STATE EMERGENCY OPERATIONS CENTER

Emergency Management Agency
Secretary of State Citizens Information Line
State Police
Department of Public Health
Department of Mental Health
Highway Department
National Guard
American Red Cross
Department of Food and Agriculture
Florida Power and Light Energy – Seabrook
Federal Emergency Management Agency

EMERGENCY OPERATIONS FACILITIES

Emergency Management Agency
Department of Public Health

MEDIA CENTER

Massachusetts Emergency Management Agency
New Hampshire Office of Emergency Management
Florida Power and Light Energy - Seabrook

REGION I (Tewksbury)

Emergency Management Agency
Region I – Massachusetts Emergency Management Agency
State Police
American Red Cross
Department of Mental Health
Highway Department
RACES
Central Medical Emergency Direction (C-MED)

MASSACHUSETTS NUCLEAR INCIDENT ADVISORY TEAMS #12 and #15

Department of Public Health, Radiation Control Program
University of Massachusetts at Lowell
North Andover Fire Department

STATE POLICE TROOP A, DANVERS

State Police Troop A

RISK JURISDICTIONS (MASSACHUSETTS)

AMESBURY

Mayor
Emergency Management
Fire Department
Police Department
Transportation Department
Public Works Department

MERRIMAC

Town Selectman
Emergency Management Agency
Police Department
Fire Department

NEWBURY

Board of Selectmen
Police Department
Fire Department
Highway Department
Triton School District

NEWBURYPORT

Emergency Management Agency
Department of Public Works
Fire Department
Harbor Master
Police Department

SALISBURY

Municipal Government
Police Department
Fire Department
Department of Public Works
Emergency Management

WEST NEWBURY

Town Selectmen
Emergency Management
Police Department
Fire Department
Public Works

SCHOOL DISTRICTS

Amesbury School District
Newburyport School District
Pentucket School District
Trident Regional School District

SPECIAL FACILITIES AND DAY CARE

See Section 5.7, page 78, for complete listing of facilities and day cares

STATE TRANSPORTATION STAGING AREA – Northern Essex Community College

Volunteer College Personnel
CERT Volunteers

LOCAL TRANSPORTATION STAGING AREAS

Amesbury Fire Department
Merrimac Fire Department
Newbury Fire Department
Newburyport Fire Department
Salisbury Fire Department
West Newbury Fire Department

MASCONOMET RECEPTION CENTER

Department of Mental Health
American Red Cross
District 3 HazMat Team
Animal Rescue League
Danvers Fire Department
Danvers Police Department

C. Exercise Timeline

Table 1, on the following page, presents the time at which key events and activities occurred during the Seabrook Nuclear Power Station exercise on November 17, 2004 (plume exposure). Also included are times notifications were made to the participating jurisdictions/functional entities.

Table 1. Exercise Timeline

DATE AND SITE: November 17, 2004, Seabrook Power Station, State of New Hampshire (Sheet 1 of 4)

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received or Action was Taken							
		EOC	RCDC	EOF	IFO	Media Center	Brentwood	East Kingston	Exeter
Unusual Event	0750	0758	0802	N/A	N/A	N/A	N/A	N/A	N/A
	0854	0902	0907	N/A	N/A	N/A	0910	0910	0911
Site Area Emergency	1008	1010	1015	1010	1008	1010	1016	1015	1018
General Emergency	1133	1137	1139	1137	1135	1037	1148	1147	1146
Simulated Radiation Release Started	0950	0954	1100	1000	1000	1000	1125	1038	1110
Simulated Radiation Release Terminated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Facility Declared Operational		0944	N/A 24hr	1010	0956	0945	0955	0830	0845
Declaration of State of Disaster Emergency		1028	NR	1035	1035	1046	NR	1200	NR
Exercise Terminated		1305	1305	1330	1330	1305	1315	1317	1315
Early Precautionary Actions: Precautionary school transfer; closed beaches; animals on stored feed; halted air/rail/ocean traffic		1033	1035	1056	1038	1042	1012	1043	N/A
1st Siren Activation		1043	1124*	N/A	N/A	N/A	N/A	N/A	N/A
1st EAS		1046	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2nd Siren Activation		1124	1124	N/A	N/A	N/A	N/A	N/A	N/A
2nd EAS		1127	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3rd Siren Activation		1218	1218	N/A	N/A	N/A	N/A	N/A	N/A
3rd EAS		1221	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1st Protective Action Decision - Evacuate A, C, & D all others shelter in place		1208	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4th Siren Activation		1234	1234	N/A	N/A	N/A	N/A	N/A	N/A
4th EAS		1237	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2nd Protective Action Decision - Emer Workers ingest KI, in ERPA A, C & D, ERPA A, C, & D Evacuate, EPRA F Shelter in Place		1224	N/A	N/A	N/A	N/A	N/A	N/A	N/A
KI Administration Decision: Emergency workers (entire EPZ):		1215	1219	1216	1225	N/A	1255	1230	1235

LEGEND:

NA – Not Applicable

NR – Not Received

* Sirens were sounded by the NH State Police, which is the backup for RCDC, at 1118.

TABLE 1. EXERCISE TIMELINE

DATE AND SITE: November 17, 2004, Seabrook Power Station, State of New Hampshire (Sheet 2 of 4)

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received or Action was Taken							
		SEOC	Greenland	Hampton Falls	Hampton	Kensington	Kingston	New Castle	Newfields
Unusual Event	0750	0758	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alert	0848	0902	0912	0914	0913	0910	0910	0910	0910
Site Area Emergency	1008	1010	1019	1020	1025	1027	1025	1026	1030
General Emergency	1133	1137	1142	1148	1158	1148	1142	1042	1142
Simulated Radiation Release Started	0950	0954	1130	1134	1025	1130	1100	1130	1130
Simulated Radiation Release Terminated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Facility Declared Operational		0944	0845	0927	0933	0956	0920	0917	0920
Declaration of State of Disaster Emergency		1028	1245	NR	1028	NR	NR	NR	1235
Exercise Terminated		1305	1215	1315	1318	1327	1315	1313	1316
Early Precautionary Actions: Precautionary school transfer; closed beaches; animals on stored feed; halted air/rail/ocean traffic		1033	1040	1120	1049	1100	1053	1048	1049
1st Siren Activation		1043	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1st EAS		1046	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2nd Siren Activation		1124	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2nd EAS		1127	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3rd Siren Activation		1218	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3rd EAS		1221	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1st Protective Action Decision - Evacuate A, C, & D all others shelter in place		1208	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4th Siren Activation		1234	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4th EAS		1237	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2nd Protective Action Decision - Emer Workers ingest KI, in ERPA A, C & D, ERPA A, C, & D Evacuate, EPRA F Shelter in Place		1224	N/A	N/A	N/A	N/A	N/A	N/A	N/A
KI Administration Decision: Emergency workers (entire EPZ):		1215	1240	1240	1235	1242	1248	1230	1248

LEGEND:

NA – Not Applicable

NR – Not Received

TABLE 1. EXERCISE TIMELINE

DATE AND SITE: November 17, 2004, Seabrook Power Station, State of New Hampshire (Sheet 3 of 4)

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received or Action was Taken							
		SEOC	Newton	North Hampton	Portsmouth	Rye	Seabrook	South Hampton	Stratham
Unusual Event	0750	0758	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alert	0854	0902	0911	0912	0915	0854	0913	0910	0908
Site Area Emergency	1008	1010	1031	1030	1030	1035	1016	1020	1027
General Emergency	1133	1137	1146	1145	1147	1125	1145	1145	1205
Simulated Radiation Release Started	0950	0954	1038	1003	1100	1008	1124	1138	1129
Simulated Radiation Release Terminated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Facility Declared Operational		0944	0900	1000	0945	0920	0915	0917	0912
Declaration of State of Disaster Emergency		1028	1239	NR	NR	1028	1229	1230	NR
Exercise Terminated		1305	1305	1325	1315	1316	1315	1317	1317
Early Precautionary Actions: Precautionary school transfer; closed beaches; animals on stored feed; halted air/rail/ocean traffic		1033	1038		1100	1038	1051	1200	1102
1 st Siren Activation		1043	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1 st EAS		1046	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2 nd Siren Activation		1124	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2 nd EAS		1127	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2 nd Protective Action Decision		1224	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3 rd Siren Activation		1218	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3 rd EAS		1221	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1 st Protective Action Decision - Evacuate A, C, & D all others shelter in place		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4 th Siren Activation		1234	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4 th EAS		1237	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2 nd Protective Action Decision - Emer Workers ingest KI, in ERPA A, C & D, ERPA A, C, & D Evacuate, EPRA F Shelter in Place		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
KI Administration Decision: Emergency workers:		1215	1237	1240	1235	1253	1237	1230	1230

LEGEND:

NA – Not Applicable

NR – Not Received

TABLE 1. EXERCISE TIMELINE

DATE AND SITE: November 17, 2004, Seabrook Power Station, Commonwealth of Massachusetts (Sheet 4 of 4)

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received or Action was Taken									
		SEOC	EOF	Region 1	Media Center	Amesbury	Merrimac	Newbury	Newburyport	Salisbury	West Newbury
Unusual Event Alert	0750	0805	N/A	0804	N/A	N/A	N/A	N/A	N/A	N/A	0801
Site Area Emergency	0854	0902	N/A	0914	N/A	0910	0912	0910	0909	0910	0915
General Emergency	1008	1009	1010	1022	1010	1020	1020	1018	1019	1020	1017
Simulated Radiation Release Started	1133	1140	1137	1147	1137	1146	1148	1147	1149	1150	1148
Simulated Radiation Release Terminated	0950	0953	1000	0954	1000	1035	1036	1032	1030	1043	1045
Facility Declared Operational	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Declaration of State of Disaster Emergency		0930	1010	0930	0945	0927	0845	0845	0915	0930	0830
Exercise Terminated		1005	1015	1005	1015	1017	1020	1018	1008	1025	1017
Early Precautionary Actions: Precautionary school transfer; closed beaches; animals on stored feed; halted air/rail/ocean traffic		1300	1300	1300	1305	1300	1300	1300	1300	1250	1300
1st Siren Activation		1033	N/A	N/A	N/A	1036	1043	1037	1008	1039	1034
1st EAS		1043	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2nd Siren Activation		1046	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2nd EAS		1124	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3rd Siren Activation		1127	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3rd EAS		1218	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1st Protective Action Decision - Evacuate all MA towns		1221	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4th Siren Activation		1208	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4th EAS		1234	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2nd Protective Action Decision – Evacuate all MA towns, Emergency Workers and public take KI		1237	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
KI Administration Decision: Emergency workers and general public:		1208	FTs 1135	1234	N/A	1233	1234	1233	1229	1236	1241

NA – Not Applicable

NR – Not Received

IV. EXERCISE EVALUATION AND RESULTS

Contained in this section are the results and findings of the evaluation of all jurisdictions and functional entities that participated in the November 17, 2004, exercise to test the offsite emergency response capabilities of State and local governments in the 50-mile EPZ surrounding the Seabrook Nuclear 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 and as amended April 25, 2002. 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 pages, presents the status of all exercise evaluation criteria from the September 12, 2001 Federal Register Notice, amended April 2002, that were scheduled for demonstration during this exercise by all participating jurisdictions and functional entities. The exercise evaluation criteria are listed by an alpha-numeric combination, and the demonstration status of those evaluation criteria is indicated by the use of the following letters:

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

Table 2. Summary Results of Exercise Evaluation

DATE AND SITE: November 17, 2004, Seabrook Nuclear Power Station (Sheet 1 of 4)

JURISDICTION/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 NEW HAMPSHIRE																																		
State EOC	M		A	A	M	M	M	M	U																		M			M				
EOF			M	M	M							M											M											
IFO	M		A	M	M							M	M	A																				
State Warning Point	M			M																														
Media Center					A																									M				
Field Monitoring Team #1	M		M									M	M									M	M											
Field Monitoring Team #2	M		M									M	M									M	M											
Rockingham Co. Dispatch Center - Siren Activation			M	M	M																						M							
RISK JURISDICTIONS – NEW HAMPSHIRE																																		
Brentwood	M		M	M	M				M			M	M	M	M	M	M										M		M					
East Kingston	M		M	M	M				M			M	M	M	M	M	M										M		M					
Exeter	M		M	M	M							M	M	M	M	M	M													M				
Greenland	M		M	M	M				M			M	M	M	M	M	M										M		M					
Hampton	M		M	M	M				M			M	M	M	M	M	M										M		M					
Hampton Falls	M		M	M	M				M			M	M	A	M	M	M										M		M					
Kensington	M		M	M	M				M			M	M	M	M	M	M										M		M					
Kingston	M		M	M	M				M			M	M	M	M	M	M										M		M					
New Castle	M		M	M	M				M			M	M	M	M	M	M										M		M					
Newfields	M		M	M	M							A	M	M	M	M	M										M		M					
Newton	M		M	M	M							M	M	M	A	M	M												M					
North Hampton	M		M	M	M				M			M	M	M	M	M	M										M		M					
Portsmouth	M	M	M	M	M				M			M	M	M	M	M	M										M		M					
Rye	M		M	M	M				M			M	M	M	M	M	M										M		M					

JURISDICTION/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

LEGEND:
M = Met (No Deficiency or ARCA(s) assessed)
Blank = Not scheduled for demonstration

D = Deficiency(ies) assessed
U = Unresolved ARCA(s) from prior exercise(s)

N = Not demonstrated as scheduled (Reason explained in Section IV.B.)
A = ARCA(s) assessed (Not affecting health and safety of public)

Table 2. Summary Results of Exercise Evaluation
DATE AND SITE: November 17, 2004, Seabrook Nuclear Power Station (Sheet 2 of 4)

JURISDICTION/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 - NEW HAMPSHIRE (Cont'd)																																		
Seabrook	M		M	M	M				M			M	M	M	M	M	M										M			M				
South Hampton	M		M	M	M				M			M	M	M	M	M	M										M			M				
Stratham	M		M	M	M				M			M	M	M	M	M	M										M			M				
Schools/Special Facilities/Day Cares					M										M	M																		
SUPPORT JURISDICTIONS - NEW HAMPSHIRE																																		
Dover Host EOC	M		M	M	M							M																						
Manchester Host EOC	M		M	M	M							M																						
Rochester Host EOC	M		M	M	M							M																						
Wentworth Douglass Hospital																																		M
State Transportation Staging Area – Epping	M		M	M	M							M	M	M																				
Rochester Reception Center																																M		
Southside Middle School Reception Center – Manchester																																A		

LEGEND:
M = Met (No Deficiency or ARCA(s) assessed) D = Deficiency(ies) assessed N = Not demonstrated as scheduled (Reason explained in Section IV.B.)
Blank = Not scheduled for demonstration U = Unresolved ARCA(s) from prior exercise(s) A = ARCA(s) assessed (Not affecting health and safety of public)

Table 2 Summary Results of Exercise Evaluation

DATE AND SITE: November 17, 2004, Seabrook Nuclear Power Station (Sheet 3 of 4)

JURISDICTION/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		
COMMONWEALTH OF MASSACHUSETTS																																			
State EOC	M		M	M	M	M		M	M																	A			M						
EOF			M	M	M		M						M										M												
MEMA Region I EOC – Tewksbury	M		M	M	M									M	M	M																			
Media Center				M	M																									M					
Nuclear Incident Advisory Team 12				M								M	M									A		M											
Nuclear Incident Advisory Team 15				A								M	M									M		A											
State Troop A, Danvers ACP/TCP				M	M							M	M			M	M																		
RISK JURISDICTIONS – MASSACHUSETTS																																			
Amesbury	M		M	M	M							M	M	M	M	M	M										M			M					
Merrimac	M		M	M	M							M	M	M	U	M	M										M			M					
Newbury	M		M	M	M							M	M	M	M	M	M										M			M					
Newburyport	M		M	M	M							M	M	A	M	M	M										M			M					
Salisbury	M		M	M	M							M	M	M	M	M	M										M			M					
West Newbury	M		M	M	M							M	M	M	M	M	M										M			M					

LEGEND:
M = Met (No Deficiency or ARCA(s) assessed)
Blank = Not scheduled for demonstration

D = Deficiency(ies) assessed
U = Unresolved ARCA(s) from prior exercise(s)

N = Not demonstrated as scheduled (Reason explained in Section IV.B.)
A = ARCA(s) assessed (Not affecting health and safety of public)

Table 2 Summary Results of Exercise Evaluation

DATE AND SITE: November 17, 2004, Seabrook Nuclear Power Station (Sheet 4 of 4)

JURISDICTION/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	
Schools, Special Facilities, and Day Cares																																		
Amesbury					M									M	A																			
Merrimac					M										M																			
Newbury					M										M																			
Newburyport					M									M	M																			
Salisbury					M									M	M																			
West Newbury					M										M																			
SUPPORT JURISDICTIONS - MASSACHUSETTS																																		
N. Essex Community College - STSA	M		M	M	M								M	M																				
Amesbury LTSA	M		M	M	M								M	M																				
Merrimac LTSA	M		M	M	M								M	M																				
Newbury LTSA	M		M	M	M								M	M																				
Newburyport LTSA	M		M	M	M								M	M																				
Salisbury LTSA	M		M	M	M								M	M																				
West Newbury LTSA	M		M	M	M								M	M																				
Masconomet Reception Center																																	M	

LEGEND:
M = Met (No Deficiency or ARCA(s) assessed)
Blank = Not scheduled for demonstration

D = Deficiency(ies) assessed
U = Unresolved ARCA(s) from prior exercise(s)

N = Not demonstrated as scheduled (Reason explained in Section IV.B.)
A = ARCA(s) assessed (Not affecting health and safety of public)

B. Status of Jurisdictions Evaluated

This subsection provides information on the evaluation of each participating jurisdiction and functional entity. Presented below are definitions of the terms used in this subsection relative to objective demonstration status.

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

The following are definitions of the two types of exercise issues, 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, amended April 2002.
- **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 NEW HAMPSHIRE

1.1 State Emergency Operations Center

The Bureau of Emergency Management Emergency Operations Center (EOC) staff was knowledgeable of their procedures and utilized them at all times. There was good communication between staff members at the EOC on all decisions. If the Emergency Management Director needed an answer to a question it was obtained in a timely manner. The Public Inquiry Staff knew their plans and relayed to the public the correct information in a confident manner.

The Accident Assessment staff consisted of personnel from the New Hampshire Division of Public Health Services (DPHS) and a liaison from Seabrook Station. The entire staff integrated well and worked diligently to characterize the release and make dose projections. They demonstrated excellent knowledge of their procedures.

- a. **MET: Evaluation Criteria** 1.a.1, e.1
2.a.1, b.1, b.2
5.a.1, b.1
- b. **DEFICIENCY:** None
- c. **AREAS REQUIRING CORRECTIVE ACTION:** 1.c.1

ISSUE: 57-04-1.c.1-A-01

CONDITION: The Operations Officer when briefing the Incident Field Office (IFO) of the precautionary actions that they were recommending stated that the schools were to evacuate. This caused a problem at the IFO because it was misinterpreted as evacuate the towns and schools in ERPA A, C, D, and F. Form 300B was completed informing the towns to evacuate. Local liaisons then directed designated towns to evacuate.

POSSIBLE CAUSE: The Operations Officer did not use the correct term. He used evacuate versus precautionary transfer.

REFERENCE: NUREG 0654; NH Volume 8, Rev 12, section 6

EFFECT: Towns in Emergency Response Planning Areas (ERPAs) A, C, D, and F were directed to evacuate at the same time as precautionary transfer of students. Emergency Management Directors (EMDs) called the IFO for verification due to the confusion this direction caused. The information was verified as correct because the 300B contained this information. Because an evacuation had not been ordered resources were not in place to support an evacuation.

RECOMMENDATION: Proper terminology should be used when directing a precautionary transfer to ensure there is no confusion.

SCHEDULE OF CORRECTIVE ACTION: More detailed planning to better facilitate the articulation and implementation of precautionary, as well as protective actions, will be conducted. Form 300B will be revised to better accommodate the implementation of precautionary actions. Use of terminology in the precautionary and protective action determination/recommendation process will be reviewed, followed by training as appropriate.

ISSUE #57-04-1.d.1-A-02

CONDITION: The Hampton, New Castle, Newfields and North Hampton Emergency Operations Center (EOC) backup radio systems were not functioning during the exercise. Although these are used for back-up communications there should be two ways to communicate with the NH BEM in the event the primary (telephone) ever became inoperable.

POSSIBLE CAUSE: Repairs to the radio communications equipment have not been made in a timely manner.

REFERENCE: NUREG-0654, F.1

EFFECT: Without RACES/ARES radio support the EOCs would not have had viable communication systems in place and may have encountered difficulty in communicating.

RECOMMENDATION: NHBEM should determine the problem and repair the radios. The radios should be repaired before the next communications test.

SCHEDULE OF CORRECTIVE ACTION: The NHBEM has been working on transmitter/receiver/repeater issues for the past six months to a year. NHBEM is formulating a communications taskforce to look at communications/notification issues within the EPZ.

d. **NOT DEMONSTRATED:** None

e. **PRIOR ARCAs - RESOLVED:**

Issue No: 57-02-2.a.1-A-01

Condition: The decision for authorization of ingestion of KI by emergency workers is assigned to the Director of the New Hampshire Division of Public Health Services (DPHS) in the current plan in the following citations; Vol. 1 page 1.2-6, Vol. 1 page 1.3-8, and Vol. 1 page 2.7-8. In addition, Vol. 1 page 2.7-8 states "If I-131 exposure is expected to exceed the PAG for thyroid dose (25 rem), the DPHS Director may authorize the use of KI for emergency workers who remain in the affected areas." Form 210D is used by the DPHS Health Physicist to request formal approval for the authorized use of KI tablets. At 1213 hours the Director of the DPHS signed Form 210D for any emergency worker entering or within 10 miles of the plant. He then took the form into the Accident Assessment Room of the State Emergency Operation Center (SEOC) and instructed the Health

Physicist (EOC RHTA) to sign the recommendation. The RHTA indicated that there was no dose projection that indicated that the 25-rem trigger level would be exceeded. The RHTA signed the form at 1215 hours indicating that there was an unknown thyroid dose at the time and that the decision was based on prerogative of the “medical director”. The authorization was not in accordance with the provisions of the plan or current US Food and Drug Administration guidance.

Corrective Action Demonstrated: Using Advance Change Notices (dated 08/24/04), the New Hampshire plan and procedures were modified so that authorization of the use of KI for emergency workers and special facilities is indicated at projected or actual doses exceeding 5 Rem to the thyroid. In response to a controller inject on the amount of radioiodine in the air at a point near the site, the State Radiation Safety Officer requested that KI be authorized for “any emergency worker entering or within 10 miles of the plant.” This request was signed at 1209 and received, by fax, at 1212 by the EOC Radiological Health Technical Advisor (EOC-RHTA). The EOC-RHTA immediately took it to the DPHS Director who signed the form (Form 210D) at 1213. The projected dose of >5 Rem was noted on the form.

Issue No.: 57-02-2.a.1-A-03

Condition: After the Director of the Office of Community and Public Health made the decision to authorize the ingestion of KI by emergency workers, the New Hampshire Office of Emergency Management (NHEOM) Operations Officer in the State Emergency Operations Center (EOC) completed a copy of Status Report (Seabrook Station), Form 300B, to document State EOC actions for transmission to other response locations including the local EOCs. On the form in item 11, block 5 is entitled “KI Issue for Emergency Workers.” Ultimately, this information was transmitted to the local EOCs. The use of the word “issue” in the block rather than “ingest” lead to confusion in some local EOCs and the failure to inform their workers to ingest KI since the local EOCs had previously issued KI to their emergency workers in accordance with their procedures.

Corrective Action Demonstrated: Form 300B is in the process of being revised (it will be included in Revision 13 to the State plan); however, it has not been fully implemented (it also did not have an Advance Change Notice). The State had requested and received approval to test the revised form that includes the statement “Emergency Workers Ingest KI.” The revised form was utilized correctly for emergency workers.

f. PRIOR ARCAs - UNRESOLVED:

Issue No.: 57-02-2.c.1-A-02

Condition: The Director of the New Hampshire Division of Public Health Services (DPHS) signed Form 210D when he made a decision to authorize the use of KI for specific personnel in a separate decision from that made for emergency workers. The emergency worker authorization was signed at 1213 hours and the specific personnel authorization was signed at 1243 hours. In cases where specific personnel are to be authorized the use of KI, the decision must indicate which personnel are subject to the order. The signed form 210D shows “institutions in affected EPRA.” This instruction

was unclear with respect to which ERPAs were intended. The New Hampshire Office of Emergency Management would not have been able to implement the order without considerable additional guidance. Considering the time dependence on the effectiveness of KI in blocking thyroid exposure, the 30 minutes between the emergency worker decision and the facility decision, additional time delays to obtain necessary details would have been detrimental.

Reason Issue Unresolved: Using Advance Change Notices (dated 08/24/04), the New Hampshire plan and procedures were modified so that authorization of the use of KI for emergency workers and special facilities is indicated at projected or actual doses exceeding 5 Rem to the thyroid. In response to a controller inject on the amount of radioiodine in the air at a point near the site, the State Radiation Safety Officer requested that KI be authorized for “any emergency worker entering or within 10 miles of the plant.” Special facilities were not included on this form. This request was signed at 1209 and received, by fax, at 1212 by the EOC Radiological Health Technical Advisor (EOC-RHTA). The EOC-RHTA immediately took it to the DPHS Director who signed the form (Form 210D) at 1213. The projected dose of >5 Rem was noted on the form.

Before giving the form to OEM who provide it to the IFO for transmission to the local EOCs, state emergency worker dispatch points, staging areas, and institutions, the inclusion of special facilities was discussed between the DPHS Director, EOC-RHTA, and OEM Director. It was agreed that special facilities should be included in the authorization to ingest KI; however, this was not noted on the form (there is not a particular place on the form for this information). Instructions for special facilities were not included in the EAS nor the EPI. Additional “Actions Recommended for Health Care” were not included on Form 300B, Status Report (Seabrook Station). Because of the Emergency Response Planning Area (ERPA) boundaries following town lines, the ERPA designation may be much larger than “within 10 miles of the plant” and there would still be confusion as to exactly where the KI area would be. Instructions for special facilities were not included in the EAS nor the EPI and the special facilities (i.e., those not evacuated, but within the EPZ) were not contacted by the IFO nor the SEOC.

Recommendation: Modify Form 210D to include information explicit to special facilities.

Schedule of Corrective Action: The New Hampshire Bureau of Emergency Management will continue to work with the Bureau of Radiological Health to optimize the forms and procedures used in determining the process for making a recommendation to emergency workers and special facilities to ingest KI. Forms 210D and 300B will be reviewed and modified to address this issue.

1.2 Emergency Operations Facility

Demonstration of the Radiological Health Technical Advisor (RHTA) function in the EOF was very effective. A proactive approach was observed to direction and control of staff, and communications with other state and license personnel. During the early stages of exercise at EOF activation prior to full EOF staffing, time management was particularly noteworthy.

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

1.3 Incident Field Office (IFO)

The dedication and knowledge of the IFO staff was apparent and they performed assigned duties in an efficient and professional manner. The Local Liaison Facilitator had a good rapport with his staff. He would answer any questions that they had and if he did not know the answer he would find one in a timely manner. All local liaisons had a positive attitude were prepared for their assignments with procedures, forms, and all other materials available to them. The local liaisons were a good team that took what they were doing seriously and also were very professional in the process.

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

ISSUE #57-04-1.c.1-A-03

CONDITION: Status Report Form 300B, which contained erroneous information, (at 1028) was not reviewed for accuracy and was authorized for release by Assistant IFO Coordinator or IFO Coordinator.

POSSIBLE CAUSE: Failure to follow written procedures to review form for accuracy.

REFERENCE: NUREG-0654, A.1.d; A.2.a, b, RERP Vol 5/Rev 12, pages 13.0-3, 4, and 5

EFFECT: The 300B with erroneous information, was furnished to the Local Liaisons and the message to evacuate schools and public in communities within ERPAs A, C, D, and F was passed to the communities. This message was confusing to the affected communities, and resulted in the towns issuing an incorrect evacuation recommendation to the public. The improper recommendation on the 300B was corrected at 1145 and the communities were told to evacuate schools only, NOT to evacuate the public.

RECOMMENDATION: Additional training must be accomplished to ensure that the assistant IFO Coordinator follows the Emergency Operations Procedures (RERP Vol 5/Rev 12, pages 13.0-3, 4, and 5) to ensure incoming messages are logged correctly prior to routing to the appropriate persons.

SCHEDULE OF CORRECTIVE ACTION: More detailed planning to better facilitate the articulation and implementation of precautionary, as well as protective actions, will be conducted. Form 300B will be revised to better accommodate the implementation of precautionary actions. Use of terminology in the precautionary and protective action determination/recommendation process will be reviewed, followed by training, as appropriate.

ISSUE #57-04-3.c.1-A-04

CONDITION: The Special Needs Liaison at the Incident Field Office (IFO) in Newington, New Hampshire could not perform the demonstration of the TDD/TTY capability, in a timely manner. After several attempts, over a time span of thirty to forty- five minutes, the Special Needs Liaison did finally established communication over the TDD phone, with the State Emergency Operations Center.

POSSIBLE CAUSE: The possible cause of this inadequacy is lack of training, procedures and instructions for this particular method of notification.

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

EFFECT: If this demonstration had have been performed during the exercise, there would have been a delay in delivering information on protective action decisions to the hearing impaired individuals within that town.

RECOMMENDATION: The recommended corrective actions for this inadequacy is to have the Special Needs Liaison and other emergency workers (who may need to provide back-up) participate in additional training on alert and notification of special populations. An SOP also should be created for the TDD/TTY phone, so that in the future, whomever is responsible for this area can have clear and concise instructions on operating this device.

SCHEDULE OF CORRECTIVE ACTION: Training on TDD/TTY for personnel assigned to special needs will be conducted. In addition, the plan will be reviewed and provisions for relay operators to provide TDD/TTY support, per the instructions in the local telephone books, will be investigated.

d. **NOT DEMONSTRATED:** None

e. **PRIOR ARCAs - RESOLVED:**

Issue No.: 57-02-3.b.1-A-04

Condition: When the decision was made by the Director of the New Hampshire Division of Public Health Services (DPHS), at the State EOC in Concord, to issue KI to emergency workers within the EPZ towns, some towns were confused by this decision. This confusion was highlighted when several towns called the IFO for clarification of the “issue directive.”

The IFO staff was not proactive in ensuring that all EPZ communities understood and complied with the intended direction. When the town of Kingston notified the IFO that they had ordered its emergency workers to ingest KI more than 20-minutes prior to the protective action decision the IFO responded not to worry about it.

Corrective Action Demonstrated: At 1225, the IFO received a message from the State EOC that the Director, DPHS instructed that emergency workers throughout the 10-mile EPZ take KI. The message also stated that the public within ERPAs A, C, and D may choose to take their KI. That instruction was immediately passed to the EPZ towns by telephone, radio communications and the Community Liaison staff. All staff was proactive in ensuring that towns in the recommended areas understood and complied with the KI instruction. This resolves previous ARCA 57-02-3.b3-a-04.

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

1.4 State Warning Point

The New Hampshire State Police at the Warning Point presented and demonstrated an outstanding professional appearance, personal discipline and communication skills. This facility was modern, well kept and secure. Their officers were pleasant and professional.

a. **MET:** Evaluation Criteria 1.a.1, d.1

b. **DEFICIENCY:** None

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

d. **NOT DEMONSTRATED:** None

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

1.5 Media Center

The Media Center is arranged for maximum efficiency and productivity. There was excellent coordination by the State Public Information Officers with their EOCs. Following each media briefing, the round-robin discussion on session effectiveness was very good. A very complete actions-taken log was prepared.

- a. **MET:** Evaluation Criteria 5.b.1
- b. **DEFICIENCY:** None
- c. **AREAS REQUIRING CORRECTIVE ACTION:** 1.e.1

ISSUE #57-04-1.e.1-A-05

CONDITION: During some of the media briefings, various information was difficult to convey, e.g., evacuation of particular or specific evacuation areas, school precautionary transfers in those areas, depiction of the boundary between the two states, etc, due to a lack of graphics.

POSSIBLE CAUSE: The media center did not contain a display of an emergency response planning area (ERPA) chart, a chart with emergency classification levels (ECLs), a chart with traffic and access control points, or an evacuation route map. The map which was on display, inadequately depicted the boundary between the two States and it had a form of color-coding which could not be readily explained.

REFERENCE: NUREG-0654, J.10.a.

EFFECT: The conveyance of applicable emergency information to the media is critical, to have the public take appropriate actions in order to protect their health and safety. In this case, such conveyance was made more difficult as a result of limited and poor quality maps and displays. It is possible that some information could have been missed by some media members.

RECOMMENDATION: There is a need to improve the quality and quantity and type of maps, displays, and charts in the media center. Graphics for Towns must be developed or, alternatively make precautionary actions based on towns not ERPAs. Media Reps must realize the importance of responding to media inquiries.

SCHEDULE OF CORRECTIVE ACTION: Will coordinator with Massachusetts Emergency Management Agency and Florida Power and Light Energy to develop better graphics for the media center.

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

1.6 Field Teams

1.6.1 Field Monitoring Team #1

New Hampshire Field Monitoring Team #1 was well prepared with suitable equipment and supplies for radiological field monitoring and sampling. Communications capabilities were good. Team members engaged in the exercise in an active and participatory manner, and conducted themselves professionally.

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

1.6.2 Field Monitoring Team #2

New Hampshire (NH) Field Monitoring Team #2 (FMT#2) performed all of their assigned emergency response functions in a timely and professional manner. All of the teams survey instruments and dosimetry were calibrated and leak tested within the months noted and as indicated in the plan. No survey instrument failures were noted. The team effectively used provided radio systems available to maintain contact with the NH Field Team Coordinator (FTC) located in the Incident Field Office (IFO) in Newington, NH.

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

1.7 Rockingham County Dispatch Center (Siren Activation)

There was excellent teamwork at RCDC. The transition between real time emergency calls and notifying various offsite organizations by the four dispatchers was seamless. They were very dedicated and professional.

The Radiological Officer provided dosimeters and KI and a briefing to each staff member. The staff is commended for their creative use of a timer to ensure dosimeters are read as required.

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

2. RISK JURISDICTIONS (NEW HAMPSHIRE)

2.1 Brentwood

The Town of Brentwood should be proud of their emergency operations center staff. Throughout the exercise this team demonstrated a high degree of professionalism. They were proactive in ensuring proper operation of all equipment. Other proactive measures included performing needs assessments with schools and special needs individuals in case an evacuation was necessary. Where EOC staff positions were vacant, staff members performed double duty to ensure critical functions were performed. These exercise participants truly deserve high marks for a successful demonstration of the town's preparedness posture.

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

2.2 East Kingston EOC

The enthusiasm and job knowledge of all participants was most impressive. The entire EOC staff displayed dedication and professionalism during the activation of the EOC. Each staff member systematically occupied his or her position without delay and prepared the EOC for operation in minimum time.

The East Kingston volunteer RADEF Officer displayed exceptional job knowledge of all aspects of Emergency Worker Exposure Control. It was evident that he had extensive training on the operational aspects of all personal dosimetry, administrative dose limits and record keeping procedures. His briefing to the EOC staff and Emergency Workers was excellent. This functional area is a definite strength in the EOC and a valuable asset to the town of East Kingston.

- a. **MET: Evaluation Criteria** 1.a.1, c.1, d.1, e.1
2.c.1
3.a.1, b.1, c.1, c.2, d.1, d.2
5.a.1, b.1
- b. **DEFICIENCY:** None
- c. **AREAS REQUIRING CORRECTIVE ACTION:** None
- d. **NOT DEMONSTRATED:** None

e. PRIOR ARCAs - RESOLVED:

Issue No. 57-02-3a.1-A-05

Description: East Kingston Emergency Workers were not properly trained in dosimetry and operations.

Corrective Action Demonstrated: The Radiological Defense (RADEF) Officer briefed emergency workers on the use of dosimetry, Potassium Iodide (KI) and record keeping. The briefing was accurate and complete. During the briefing, the RADEF Officer referred to an enlarged, color coded copy of the Emergency Worker Personal Exposure Card that displayed administrative dose limits, the frequency of dosimeter readings, record keeping procedures and KI instructions. He demonstrated the correct way to wear and read a dosimeter and advised the emergency workers to contact him or the Emergency Management Director if there were any questions. During random interviews with emergency workers and members of the Emergency Operations Center staff, it was determined that extensive training in Emergency Worker Exposure Control had taken place and all interviewees answered questions promptly and correctly. This demonstration satisfactorily corrected the Prior Issue.

f. PRIOR ARCAs - UNRESOLVED: None

2.3 Exeter EOC

Management and Staff Volunteers exhibited professionalism and dedication to the Mission. Leadership was displayed at all times. Teamwork was demonstrated in the support of the local Town emergency response operations. The Town of Exeter had a friendly environment where volunteers (Ham Radio Operators) projected and displayed cooperation, participation, and contribution in the response efforts.

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

2.4 Greenland EOC

It is highly commendable that all Emergency Management Officials in the Town of Greenland assigned to the Emergency Operations Center are made up entirely (except for Police Department Officials) of volunteers. These well trained volunteers did an exceptionally professional job performing their duties throughout the exercise. Their dedication and devotion as demonstrated throughout the exercise, to perform this very important work in the event of a radiological emergency on behalf of the residents of the Town of Greenland on a volunteer basis is appreciated by all.

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

The Hampton Emergency Operations Center (EOC) staff is knowledgeable and experienced. The staff demonstrated a cooperative attitude and strong teamwork.

- a. **MET: Evaluation Criteria** 1.a.1, c.1, d.1, e.1
2.c.1
3.a.1, b.1, c.1, c.2, d.1, d.2
5.a.1, 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 Hampton Falls EOC

The Hampton Falls Emergency Operations Center (EOC) staff functioned in an effective and efficient manner, working closely together and setting in motion coordination between all facets of emergency management of the response to a radiological incident. The Fire Chief, acting as the Emergency Management Director, perpetuated the smooth operation of the staff. Of particular note was the performance of the Radiological Defense Officer who provided for the issuance of dosimetry and briefing of the EOC staff.

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

ISSUE #57-04-3.c.1-A-06

CONDITION: A bus to transport individuals from the general population requiring transportation, as outlined in the public information calendar, was not requested.

POSSIBLE CAUSE: The Transportation Coordinator did not realize the requirement.

REFERENCE: Page 3.5-12, Volume 26, New Hampshire Radiological Emergency Response Plan (NHRERP)

EFFECT: Individuals who did not have access to an auto or other transportation may not be able to leave Hampton Falls during an evacuation.

RECOMMENDATION: The persons serving as Transportation Coordinator for Hampton Falls should be reminded of all of the required vehicles needed for an evacuation, as specified in the NHRERP.

SCHEDULE OF CORRECTIVE ACTION: NH Bureau of Emergency Management will provide training to the Hampton Falls transportation Coordinator to address this issue.

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

2.7 Kensington EOC

The capabilities of the RACES organization to provide backup communications for the EOC played an important role during the exercise. When the primary radio link with the IFO was unusable due to noise, the RACES link was successfully used. Communication from and to the Kensington EOC continued uninterrupted thanks to the efforts of RACES.

The Emergency Management Director and the First Selectman worked together as a team to keep the EOC staff well informed of the current status. When questionable information was received both took the time to verify its accuracy.

The Radiation Officer consistently reminded all EOC staff to check their dosimetry. Every individual entering or leaving the building was checked to be sure they had the proper dosimetry. Logs were accurate and complete.

Each member of the Kensington did an excellent job of using the Emergency Response Procedures for their respective responsibilities. Times were noted for all relative activities. In addition chronological event logs were kept by each member of the EOC Staff. These logs are helpful in quickly determining timeline events.

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

2.8 Kingston EOC

The most positive aspect of this exercise was the demonstrated ability of the Emergency Management Director (EMD) and his staff to deal effectively with the difficult situation caused by incorrect and confusing information from the Incident Field Office related to required protective actions, including evacuation orders. They were able to keep their cool and make appropriate decisions.

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

ISSUE NO: 57-02-3.b.1-A-06

Condition: At 1200 hours, the Radiological Officer (RO) told all Kingston EWs to take potassium iodide (KI) prior to the State order directing the ingestion of KI to emergency workers at 1238 hours.

Corrective Action Demonstrated: Emergency Workers were not instructed to take potassium iodide (KI) until the order to take was passed to the Emergency Operations Center from the Incident Field Office at 1248 and verified.

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

2.9 New Castle EOC

The New Castle Emergency Management staff consisted of both paid employees and volunteers. They all worked well together and were conscientious. For such a small community they are well organized and very professional. They have made the most of very limited space and equipment.

- a. **MET: Evaluation Criteria** 1.a.1, c.1, d.1, e.1
2.c.1
3.a.1, b.1, c.1, c.2, d.1, d.2
5.a.1, b.1
- b. **DEFICIENCY:** None
- c. **AREAS REQUIRING CORRECTIVE ACTION:** None
- d. **NOT DEMONSTRATED:** None

e. PRIOR ARCAs - RESOLVED:

Issue No: 57-02-1.c.1-A-07

Condition: The multiple sources of incoming information created communication and coordination issues for the Town emergency workers. As a result the EMD did not receive information in a timely manner.

Documentation from the Communication Center reveals that at 1157 hours the Town was notified by the IFO of the second A&N sequence that the sirens would sound at 1207 hours and an EAS would air at 1210 hours. However, the EMD did not receive the information until 1220 hours, 10 minutes after the fact. The EMD was not able to execute the requirements of the Town's plan.

Corrective Action Demonstrated: New Castle Emergency Management has revised their procedures for message handling. Messages were received in the Communications Room, given an NCEOC number and recorded in Message Log, a runner was standing by to deliver message to EMD. The new procedures insure that the EMD receives incoming messages in a timely manner.

Issue No: 57-00-05-A-15 (3.a.1)

Condition: The evaluator conducted interviews with New Castle EOC staff concerning Emergency Worker Exposure Control. Personnel interviewed did not know their reporting levels or where the information was available (information on reverse side of EOC identification card and in the radiological kit received from the RO) (Objective 5/New Criterion 3.a.1) (NUREG-0654, K.3.b, K.4.b)

Corrective Action Demonstrated: Two emergency workers were interviewed. One EOC staff and one police officer who would man a traffic control point. Both workers were able to identify the maximum exposure limit of 175mR and every increment of 1R (e.g. 1, 2, 3 R). They indicated that the information was on the back of the blue card they wore as well as in their dosimetry packet. The police officer stated that after being dispatched to the TCP was aware that he would read his dosimetry every 30 or 15 minutes as instructed by the RADEF Officer. He also stated that he would report any changes to his supervisor who would be located in the EOC. In interview with the RADEF Officer she said that she advises the police officer in the EOC to contact the TCP officers at the same time she reminds the EOC staff to read their dosimeters.

f. PRIOR ARCAs - UNRESOLVED: None

2.10 Newfields EOC

The Newfields Emergency Management Director has volunteered in this position for over 20 years. He is very knowledgeable about overall EOC operations.

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

ISSUE #57-04-3.a.1-A-07

CONDITION: A radiological briefing was not adequately conducted for the simulated Emergency Worker dispatched into the field and the staff within the Newfields Emergency Operations Center.

POSSIBLE CAUSE: Briefing tools listing the topics to be covered were not utilized as identified in the plan.

REFERENCE: NUREG-0654, K.3.a, 3.b, New Hampshire Radiological Emergency Response Plan Volume 8 Section 10.7 Procedure for issuing Dosimetry and Potassium Iodide and as listed in Section 10.8 Emergency Worker Information of this plan.

EFFECT: Emergency Workers may have been exposed beyond administrative and/or maximum limits. Radiation exposure and KI ingestion records not correct.

RECOMMENDATION: Train the Radiological Officer to follow the appropriate procedures.

SCHEDULE OF CORRECTIVE ACTION: NH Bureau of Emergency Management will provide training to the Newfield's RDO.

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

2.11 Newton EOC

The Newton EOC staff was very familiar with their positions and the town plan. Most EOC personnel used checklists to define and assure that all areas of their positions would be covered. Because this is a small EOC, town employees knew each other and worked in a relaxed environment.

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

ISSUE #57-04-3.c.2-A-08

CONDITION: A precautionary action to transfer the schools in the town of Newton was received at the EOC at 1038. The Transportation Coordinator failed to inform the schools of this action.

POSSIBLE CAUSE: The Transportation Coordinator assumed that subsequent calls to the schools were to be simulated.

REFERENCE: NUREG-0654, J.10.c, d, g

EFFECT: Had there been a release of radiation, the children and staff at the school may have remained in the plume.

RECOMMENDATION: Train EOC personnel to understand the importance of precautionary transfer of students and ensure all calls to participating facilities are made.

SCHEDULE OF CORRECTIVE ACTION: This issue will be discussed in training with Newton responders.

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

2.12 North Hampton EOC

The North Hampton EOC personnel consistently demonstrated the results of training and the operation of the EOC during a nuclear plant event. The personnel obviously know the responsibilities associated with their positions and because of some “position swapping” they aware of the responsibilities of other EOC positions. Upon initial notification of the event staff “leaned forward” to get the EOC operational in a short time. Bottom Line – they have developed a well-trained enthusiastic team who make the town shine.

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

Issue No: 57-02-3.c.1-A-08

Condition: The North Hampton EOC was using an outdated list of special needs population.

Corrective Action Demonstrated: The Deputy Fire Chief is responsible for alerting and notifying special needs populations and determining their transportation needs.

At the Site Area Emergency ECL he utilized a current, accurate list of names and telephone numbers to contact special facilities to determine attendance and whether they require transportation and what types of vehicles are appropriate. In addition, he utilized an up-to-date list of special needs individuals to alert and notify them of the incident and to inquire about their transportation needs.

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

2.13 Portsmouth EOC

The Emergency Management Director (EMD) and Portsmouth Emergency Operations Center (EOC) Staff clearly demonstrated their knowledge of the Portsmouth Radiological Emergency plans and procedures. The EMD frequently kept the staff abreast of the Seabrook Station incident and the staff members frequently updated the EMD of their Department operational status. The relocation of the EOC from the Central Fire Station to the Portsmouth City Hall proved to be beneficial to the emergency management process. The Conference room provided for a more business like atmosphere in which to operate and the facilities provided for amenities the Fire Station could not provide.

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

2.14 Rye EOC

A “positive strength” that was demonstrated during this exercise in the town of Rye, New Hampshire, was the outstanding town spirit, the pride of community, and the close knit relationships shared by the entire emergency management staff. It was very obvious that this group has grown up together, lived and worked together the majority of their adult lives. Their teamwork, and desire to serve their community is something the entire town, and the State of New Hampshire should be extremely proud of.

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

2.15 Seabrook EOC

The Town of Seabrook Emergency Operations Center personnel and volunteer staff demonstrated a commitment to the protection and well being of their community. Their detailed knowledge and understanding of their response functions, available resources and overall operations was clearly seen in the effectiveness and efficiency with which they met the challenges of a full-scale emergency preparedness exercise. Their patience, cooperation and willingness to communicate and share information were most notably reflected in their ability to direct, listen to as well as learn from one another.

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

2.16 South Hampton EOC

There was good use of procedures and checklists, by all staff members, throughout the exercise. The staff and radiological briefings were excellent. The Emergency Management Director took a very proactive approach to solving problems.

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

2.17 Stratham EOC

The Stratham EOC Organization operates as a closely-knit team and each staff member participating in the exercise performed his/her duties in a professional and thorough manner.

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

2.18 Schools/Day Care/Special Populations

2.18.1 Home Away From Home Day Care - Brentwood

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

2.18.2 Great Bay Kids Company Day Care - Exeter

- a. **MET: Evaluation Criteria** 1.e.1
3.c.2
- b. **DEFICIENCY:** None

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

2.18.6 Marston School - Hampton

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

2.18.7 Aslan Pride School - Hampton

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

2.18.8 Hampton Falls Child Care Center

- a. **MET:** Evaluation Criteria 1.e.1
3.c.2
- b. **DEFICIENCY:** None

3. SUPPORT JURISDICTIONS (NEW HAMPSHIRE)

3.1 Dover Host EOC

The ORO participants were prompt, professional, organized, diligent and serious about their duties. They also have good ideas to enhance emergency operations and are working towards implementing them. The layout and setup of the EOC itself was exceptionally organized, efficient, neat and orderly and well thought out. This emergency group really executed the drill well.

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

3.2 Manchester Host EOC

The most positive aspect of the emergency response demonstration was the relinquishing the command and control of the exercise by the Manchester Emergency Management Director (Fire Chief) to a Deputy Fire Chief for cross-training purposes. The Deputy handled the assignment in a professional manner. He maintained overall control of the EOC throughout the exercise and kept each staff member advised of the latest on-going events.

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

3.3 Rochester Host EOC

The Emergency Operations Center is located in the City of Rochester, Fire Department, and the Emergency Management Director (EMD) is the City of Rochester, Fire Chief. He was particularly noteworthy and demonstrated outstanding leadership as he firmly but quietly guided the EOC staff in a pro-active manner through the challenges of the exercise. The Deputy Fire Chief also did an outstanding job in setting up and preparing the EOC for activation upon notification of an Alert Emergency Classification Level (ECL) at the Seabrook Station (SS). Additionally, he functioned as the Host Facility Coordinator and at the Site Area Emergency (SAE) ECL, performed outstandingly in gathering and dispatching (simulated) the resources necessary to prepare the Rochester Middle School to serve as the primary Reception Center for over six thousand potential evacuees.

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

3.4 Reception Centers

3.4.1 Rochester Middle School Reception Center

The personnel at the Rochester Reception Center were knowledgeable and were team-players in the center. Communications between personnel was outstanding.

- a. **MET: Evaluation Criteria** 6.a.1
- b. **DEFICIENCY:** None
- c. **AREAS REQUIRING CORRECTIVE ACTION:** None
- d. **NOT DEMONSTRATED:** None

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

3.4.2 Southside Middle School – Manchester Reception Center

- a. **MET:** Evaluation Criteria
- b. **DEFICIENCY:** None
- c. **AREAS REQUIRING CORRECTIVE ACTION:** 6.a.1

Issue No: 57-04-6.A.1-A-09

Condition: Vehicle Monitoring team members at the Manchester South Middle School Reception Center did not adequately demonstrate the procedures to determine if the Victoreen Survey Meters, Model 493 were correctly operating, utilizing the data on the range of reading calibration label.

Possible Cause: Lack of adequate training using the procedures and understanding why these tasks need to be accomplished.

Reference: NUREG-0654, J.10.h.; K.5.b; NH RERP, Vol. 8, Section 10.0 (Dosimetry Equipment and Procedures)

Effect: Not properly determining that the survey meters were working properly could result in obtaining wrong readings i.e. assuming that monitored equipment could be contaminated which really is not and vice versa.

Recommendation: Schedule and conduct in depth training about the operation of the Model 493 survey meter, to include determining background readings.

Schedule of Corrective Action: NHBEM will conduct more in-depth training for the vehicle monitoring personnel.

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

3.5 MS-1 Drill

3.5.1 Dover Fire Department

The Dover Fire Department Ambulance Personnel were well versed in cross contamination control procedures. They arrived on scene and were fully able to transport and care for the patient while also ensuring further contamination did not occur. The crew kept the hospital staff apprised of the victim's status throughout the drill and provided a smooth transition or 'hand off' to the Wentworth-Douglas hospital staff

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

Description: EMTs had not considered necessary precautions and procedures to prevent cross contamination of themselves or the injured worker. The EMTs were told of the potential contamination in the area where the injured worker was located. The EMTs were given a controller message and were told verbally that contamination was on the floor and all about the room but had not heeded the warning. The EMTs didn't seem to be aware of the requirement of establishing a hot or cold zone in a contamination area. Equipment was placed on the floor of the contaminated floor. The EMTs did not place a blanket on the backboard or on the floor to minimize contamination. This blanket could then be used to wrap the injured worker to minimize cross contamination in the ambulance.

Corrective Action Demonstrated: The Ambulance Crew was knowledgeable of cross-contamination control procedures. Upon arrival at the scene, they established a hot and cold zone and adhered to their procedures for preventative cross-contamination control measures. All contaminated items were placed in the hot zone to ensure no further contamination occurred. The crew instructed the Radiological Officer to take control of the contaminated items before they left the scene.

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

3.5.2 Wentworth Douglass Hospital

The Emergency Room Staff was well trained and worked exceptionally well together. They were fully aware of contamination levels and procedures to prevent cross-contamination.

- a. **MET:** Evaluation Criteria 6.d.1
- b. **AREAS REQUIRING CORRECTIVE ACTION:** None
- c. **NOT DEMONSTRATED:** None
- d. **PRIOR ARCAs - RESOLVED:** None
- f. **PRIOR ARCAs - UNRESOLVED:** None

3.6 State Transportation Staging Area – Epping

The staff at the State Transportation Staging Area (STSA) in Epping, New Hampshire clearly demonstrated their knowledge of the STSA plans. The STSA manager is a strong hands on manager and leader. Each of the operating STSA sections eagerly demonstrated their duties in a most professional manner. Particular note should be given to the dosimetry section. They provided the required dosimetry briefings in such a way that there were no questions raised by the vehicle drivers.

- a. **MET:** Evaluation Criteria 1.a.1, c.1, d.1, e.1
3.a.1, b.1, c.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. COMMONWEALTH OF MASSACHUSETTS

4.1 State Emergency Operations Center

The Massachusetts State EOC leadership and staff followed well-developed and comprehensive procedural checklists.

The MEMA Director, MDPH Coordinator, MEMA Operations Officer and the MEMA Public Affairs Officer were the nucleus of a strong senior leadership team. They welcomed staff input and recommendations and, in turn, promptly issued sound decisions and guidance that were invariably on target.

The EOC staff was serious and self-motivated. Their attitude and efficiency were apparent throughout the exercise. Actions were taken and accomplished quickly and correctly. Interaction among the staff elements was commendable.

The demonstrated enthusiasm of the entire Massachusetts State EOC staff was a refreshing experience to observe. The SEOC was undergoing a massive renovation, but the staff effectively worked without skipping a beat. A new computer operated monitoring system had been installed the day prior to the evaluation, no one was sure it would work as designed, but it worked flawlessly. A great effort was demonstrated by all EOC staff. The automated maps and logging system were a plus.

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

ISSUE #57-04-5.a.1-A-10

CONDITION: EAS messages number two was too lengthy (greater than 2 minutes) to be completely broadcast over the EAS system.

POSSIBLE CAUSE: There was an effort to put all information into the EAS message without consideration of the time restriction. The message contained information beyond the required EAS guidance for the affected site, authorizing official, Emergency Classification Level (ECL) and Potassium Iodide (KI) and stay tuned for further information.

REFERENCE: NUREG-0654 E.5., 6. 7.

EFFECT: Stations would not complete the EAS message and the general public would not have all of the information.

RECOMMENDATION: Put information required in EAS guidance in the EAS message and use follow-on news releases to provide essential detailed information to the public.

SCHEDULE OF CORRECTIVE ACTION: Massachusetts EAS Messages will be modified to include information required by the EAS guidance within the allotted timeframe. MEMA will use follow-on news releases to provide essential detailed information to the public. This will be demonstrated in the Vermont Yankee Exercise in 2005.

d. **NOT DEMONSTRATED:** None

e. **PRIOR ARCAs - RESOLVED:**

Issue No.: 57-0-1.d.1-A-21

Condition: The command and control radio systems at the Salisbury Police Department (24-hour warning point) and the Salisbury Emergency Operations Center (EOC) had difficulty communicating with Massachusetts Emergency Management Agency (MEMA) in Framingham. The beginning of every message was received with severe static and the receivers at each station had an extremely difficult time understanding the messages. The static was so bad that each operator in Salisbury had to request the MEMA operator to repeat the message several times

Corrective Action Demonstrated: The Primary communications system at the SEOC communications center is the Nuclear Alert System (NAS) microwave telephone network, which is also a dedicated system. Seabrook Station used NAS to communicate with SEOC, MEMA Region I, and State Police, successfully providing Emergency Classification Level changes. A second communications link is the Command and Control (C&C) Radio net between Seabrook Station, SEOC, MEMA Region I EOC, and the six Massachusetts Emergency Planning Zone communities. New digital radio equipment (General Electric Model RCT1GM) for the C&C net was demonstrated during the exercise. C&C message traffic was clear and understood easily by all the net users. This corrects ARCA # 57-0-1.d.1-A-21. Commercial telephone links were used to page SEOC personnel and was successful as all the people paged called in by telephone to acknowledge the pages.

Communications checks were done on both systems and along with exercise message traffic all performed well.

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

4.2 Emergency Operations Facility

The staff of the Massachusetts Department of Public Health performed very well as an integrated team. They were very knowledgeable concerning their response actions and while their plan and procedures were available there was no need to consult the plans. Their interactions with the New Hampshire staff and the licensee staff were very professional and the information exchange enhanced the response.

- a. **MET: Evaluation Criteria** 1.c.1, d.1, e.1
2.b.1
3.b.1
4.a.2
- 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 MEMA Region I EOC – Tewksbury

The Region I EOC in Tewksbury was a very impressive operation. The Region Director and staff had outstanding command and control of the operation. All staff in the EOC were very professional and knew their roles in the EOC extremely well. Outstanding team work.

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

Issue No.: 57-02-3.a.1-A-22

Condition: There was confusion at Massachusetts Local EOCs regarding the order to ingest KI by emergency workers. MEMA’s directive to ingest KI in the towns of Amesbury and Salisbury was not properly communicated. The towns, however, responded quite well to the conflicting information they received by calling MEMA Region I for clarification.

At 1201 hours the Merrimac Emergency Management Director was notified by MEMA Region I of an evacuation at Amesbury and Salisbury; Merrimac was recommended to “Shelter In Place and, if unable to leave, to ingest potassium iodide (KI).” At 1206 hours, the Merrimac EMD called MEMA, Region I to verify the Shelter In Place and KI recommendation for Merrimac. MEMA Region I stated KI was for emergency workers only. At 1226 hours, MEMA Region I called to state that only Amesbury and Salisbury emergency workers should take KI.

At 1207 hours Newbury Emergency Operations Center (EOC) was notified of the decision to have Emergency Workers in Newbury ingest potassium iodide (KI). The Newbury Emergency Management Director called the MEMA Region I to verify this information and was told the message was correct. At 1211 hours the NEMD instructed Emergency Workers to ingest KI. At 1218 hours a KI guidance form was faxed to the Newbury EOC from the Massachusetts State EOC, indicating that only Emergency Workers in Amesbury and Salisbury were to ingest KI. The NEMD called MEMA Region I to verify the KI information and was told that the original message for Newbury Emergency Workers to ingest KI was correct. At 1220 hours MEMA Region I called and stated Emergency Workers in Newbury were not to ingest KI. The NEMD told MEMA Region I that information and decisions regarding the ingestion of KI need to be coordinated in a timelier manner.

At 1210 hours, the Newburyport EMD received a call from MEMA Region I recommending ingestion of KI for emergency workers. The EMD announced the KI recommendation over the EOC public address system immediately after receiving the notice. The EMD called MEMA Region I and confirmed the original recommendation for Newburyport, and requested a follow-up fax to confirm the decision. This confirmation was received at the EOC at 1228 hours to include Newburyport in the KI recommendation for emergency workers.

Corrective Action Demonstrated: This prior issue (# 57-02-3.a.1-A-22) was resolved during training of six Local Liaisons and a Community Coordinator, ensuring that vital protective action decisions were implemented at the appropriate time and according to procedure and instructions. Florida Power and Light as well as the State of Massachusetts provided specialized radiological training conducted in 2004. At about 1234 a decision was made requiring all emergency workers to ingest KI. This decision was completed by all of the towns within the EPZ correcting this issue.

Issue No.: 57-02-3.d.1-A-23

Condition: The Massachusetts State Police (MSP) representative at Region I notified the MSP Area Assembly Commander that Salisbury and Amesbury were being evacuated. The Area Assembly Commander activated the Traffic Control Points (TCP) and Access Control Points (ACP) specified in the Traffic Management Manual for Seabrook Station (TMM) Table 2-1 for an evacuation of Region 5, including evacuation of Amesbury and Salisbury Emergency Response Planning Area (ERPA) B. The Area Assembly Commander stated that no action was being taken in ERPA E. The information provided to the Area Assembly Commander by the Region I EOC staff was incomplete, because sheltering-in-place was ordered for ERPA E. The evacuation in ERPA B and sheltering-in-place in ERPA E Protective Action Decision (PAD) triggers two guides in Table 4.1 that were not observed, namely, establishing internal ACPs at the border of ERPAs B and E and converting TCPs E-NP-02, E-NP-05, and E-ME-01 to ACPs and maintaining them until reentry. However, the MSP did not activate the ACPs in Region 5 as specified in Table 4.1.

Corrective Action Demonstrated: Letter from the Massachusetts State Police may be viewed in the Boston Office or faxed on request. Administratively corrected with RAC chair approval in 2003.

f. PRIOR ARCAs - UNRESOLVED: None

4.4 Media Center

The three participating groups were faced with the difficult task of coordinating the messages developed throughout the course of the exercise, but they made a concerted effort to make sure that the task was carried out in a successful manner. Dealing with two states, and different nuances between them, the Public Information officers (PIO) made sure that prior to any briefings that they would go over each others message, and coordinate the overall purpose and message of each briefing. The three PIOs would meet and discuss the times of each briefing. Just prior to conducting the briefing, the three PIOs would gather and do a final run through of the main topic, the order of the speakers, and confirm that everyone's requested graphics were present and ready for display. Following the briefings the group would meet to discuss the plusses and minuses of the briefing, and set the stage for additional briefings. The coordination between the three groups was a positive aspect of the Media Center.

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

Issue No.: 57-02-5.b.1-A-24

Condition: News Releases contained a disconnected telephone number that was provided in each release for members of the media to contact Massachusetts Media Center staff for questions. Also, News Release #2 contained conflicting information on the ten-mile marine safety zone in waters off Seabrook Station. In one sentence boaters were advised to relocate more than **five miles** from the plant and not to re-enter the safety zone until further notice.

Corrective Action Demonstrated: In the previous exercise, the MEMA PIO was issued an ARCA; #57-2-5.b.1-A-24, which dealt with a disconnected telephone number that was provided on news releases. This ARCA was corrected and all phone numbers referred to were operational and correct. Upon arrival, the MEMA PIO called all of the phone numbers listed as contacts for the Media Center and the State EOC. He also did a check to make sure the fax machine worked. During the exercise, the referred numbers were checked by an evaluator and found to be operational. All news releases also contained correct information and there was no confusion related to the subject of the previous ARCA. The previous ARCA was demonstrated to be corrected.

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

4.5 Field Teams

4.5.1 Nuclear Incident Advisory Team 12

Both members of Nuclear Incident Advisory Team (NIAT) #12 were experienced field team members who were very familiar with their equipment. They performed their assigned duties in an efficient and professional manner.

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

ISSUE #57-04-4.a.1-A-11

CONDITION: Nuclear Incident Advisory Team (NIAT) #12 did not conduct a proper source check of their instruments in that they did not compare the readings obtained with the source to an acceptable range of readings for the source. Also, an acceptable range of readings was not provided on a label on the instrument.

POSSIBLE CAUSE: Section D.4, Attachment 9, the Monitoring and Sampling Predeployment Checklist, has items to be checked off to indicate whether the instrument source check was satisfactory. However, the procedure does not describe how the source check is to be conducted. In addition, the instrument labels do not contain a range of values to indicate a satisfactory source check.

REFERENCE: NUREG-0654, Section H.10; REP Manual, Section III.b.

EFFECT: Failure to insure that instrument response is accurate could result in underestimation or overestimation of exposure and does leading to confusion concerning the necessity for protective action recommendations and decisions.

RECOMMENDATION: Procedure D.4 and Attachment 9 should be rewritten to include specific procedure for checking instrument readings against a known source. Instruments should be provided with a label indicating the range of values to be obtained during the predeployment source check.

SCHEDULE OF CORRECTIVE ACTION: In response to this ARCA, MDPH, in conjunction with MEMA, is revising Procedure D4 and Attachment 9 to include a procedure for checking instrument readings against a known source. Additionally, the survey instruments are being replaced with instruments and check-sources, allowing the instruments to be properly source-checked with a range of values indicated for the sources.

d. **NOT DEMONSTRATED:** None

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

4.5.2 Nuclear Incident Advisory Team 15

The Massachusetts NIAT Field Team #15 worked well when faced with a challenge. Two of the radiation instruments they checked were not working properly. Using back-up instruments and cross checking, they were able to take a complete set of instruments into the field.

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

ISSUE #57-04-1.d.1-A-12

CONDITION: The 12-volt power supply duplex plug provided to the NIAT (Nuclear Incident Advisory Team) #15 was defective. As a result, when it became necessary to recharge the Nextel phone that is used as a primary means of communication by the team, they had to unplug the Motorola radio that was their backup communication device. This prevented them from being contacted or using the backup radio unless they wanted to let the main phone drain more quickly.

POSSIBLE CAUSE: The duplex 12-volt power supply cord was defective.

EFFECT: Inability to use both means of communication when necessary.

RECOMMENDATION: Provide a second duplex cord, or even better, provide at least one more 12-volt power outlet in each vehicle used by the NIAT teams. One power supply plug is just not sufficient with all of the electronics the team is expected to use.

SCHEDULE OF CORRECTIVE ACTION: In response to this ARCA, new duplex cords are being purchased to allow both the mobile Motorola radio and the Nextel cell phone to be charged and used simultaneously.

ISSUE #57-04-4.a.3-A-13

CONDITION: The team could not locate the area they needed when they were dispatched. In the kits supplied to the NIAT (Nuclear Incident Advisory Teams) from the Massachusetts Department of Health, are a set of maps. These maps are large scale and are of the area in which the team is located; however, they had to rely on an Arrow street atlas that happened to be in their vehicle

POSSIBLE CAUSE: The maps provided had no street index for ease of locating streets in areas unfamiliar to team members. The Field Team Controller (FTC) did not seem to have the same maps as the field teams, and could not, as a result, help them to find the area.

REFERENCE: NUREG – 0654, H.7, 10; J.10a,b,e; j.11; K.3.a

EFFECT: If left unchecked, this condition could cause even more confusion and even affect the ability of the team to gather sufficient samples for use by the FTC and the EOF

RECOMMENDATION: Supply better maps, with street indexes, to both the Field teams, and to the FTC. If the FTC was able to tell the field team to refer to a specific page and reference section, the entire process would be much more trouble free and *speedy*.

SCHEDULE OF CORRECTIVE ACTION: In response to this ARCA, the Field Team Coordinator and the NIAT Field Teams will be using the same set of map books. In addition to the large-scale maps supplied by the utility, MDPH has purchased a set of street maps that includes the entire Massachusetts emergency planning zone communities in support of Seabrook Station.

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

4.6 State Police Troop A, Danvers ACP/TCP

The Massachusetts State Police Radiological Officer did an outstanding job of providing the Dosimetry Briefing to two State Police Troopers as part of the exercise play.

Troop A Assembly Area Coordinator did an excellent job in direction and control of State Police staff and provided timely and updated briefings to all Troopers participating in the exercise. Coordinator was well organized and set up was done in a very professional manner.

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

Issue No.: 57-00-17-A-41 (3.d.1)

Description: Although the MSP Troop A established Traffic Control Points (TCP) called for in the Traffic Management Manual (TMM), they neglected to establish Access Control Points (ACP) called for by the TMM. The TMM, Section 4, page 4.1-1, gives instructions for the PAD that was made in this exercise — evacuating ERPA B and sheltering-in-place ERPA E. Those instructions include establishing internal ACPs along the border between ERPA B and E. This section of the TMM was overlooked by the MSP. Further, upon being interviewed by the evaluator, a trooper incorrectly interpreted the TMM diagram regarding the placement of cones and the direction of movement of some traffic at a TCP. (Objective 17/New Criterion 3.d.1) (NUREG-0654, J.10.g, J.10.j, J.10.k)

When presented with the situation that resulted in the ARCA – evacuating ERPA B and sheltering ERPA E – MSP Troop A Headquarters staff again did not address the instruction in TMM, Section 4, page 4.1-1, to establish internal ACPs along the border between ERPA B and E. During discussion of this instruction, Troop A Headquarters staff requested clarification of the instruction, that is, whether the MSP should establish new ACPs on the bridges where the roads cross the Merrimac River that separates ERPA B and E. ACPs established by the MSP in accordance with the TMM are located a short distance north of the border on I-95 and I-495 at critical intersections. The TMM is also unclear on whether MSP should replace the local police who are stationed at ACPs on the border where Route 110 and Route 1A cross the ERPA B and ERPA E border. If the instructions require the establishment of new ACPs and reassignment of existing ACPs, the TMM provisions for prioritizing staffing of ACPs should be revised to address these ACPs.

The two troopers interviewed correctly described the placement of traffic control devices (barriers and cones) and the directions of traffic flow and traffic obstruction from a diagram of an ACP. While this was a correct response, it does not resolve the TCP issue.

Corrective action taken: It was determined through interview with the SEOC State Police (SP) representative and review of documentation that the correct information was received at the SEOC. The SP rep then relayed the proper information to the MEMA Region I SP rep, but due to commotion within the EOC and confusion on the part of the SP rep, the correct information was not passed on to the local police that were participating in the demonstration. It was thought by the Region I SP rep that the local police were only being simulated and that is why the information was not passed on. This issue was administratively corrected. This criterion was demonstrated correctly during the 2004 Seabrook Exercise.

f. PRIOR ARCAs - UNRESOLVED: None

5. RISK JURISDICTIONS (MASSACHUSETTS)

5.1 Amesbury

The Amesbury Emergency Operations Center worked extremely well together as a team. The Emergency Management Director (EMD) was very proactive in requesting information from the Massachusetts Emergency Management Agency (MEMA). Briefings were held frequently and everyone participated. The emergency staff in the EOC followed their procedures and kept good records.

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

Issue No.: 57-02-1.a.1-A-25

Condition: At 0923 hours, the Amesbury Fire Department Dispatcher misunderstood a telephone conversation from the Fire Chief who was located in the Emergency Operations Center. The Chief was describing the degrading emergency condition at Seabrook Station and the dispatcher understood that he was to immediately sound the Amesbury sirens. The Dispatcher promptly completed the Emergency Action Directive Form (401 Rev. 5) and simulated activation of the sirens at 0924 hours.

Corrective Action Demonstrated: This issue was resolved during the Seabrook Nuclear Power Plant exercise on November 17, 2004. At 1040 the Fire Department Representative, located in the Emergency Operations Center (EOC), contacted the Dispatcher over a landline. At this time the Fire Department Representative and the Dispatcher read through the procedure to activate the sirens step by step. At 1043 the Dispatcher simulated activating the sirens as directed by the Fire Department Representative.

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

5.2 Merrimac

The Merrimac Emergency Operations Center (EOC) was extremely well run. Several positions were staffed by more than one person and each participant showed knowledge in their positions. Briefings and tasks were rotated between players in these positions so that each had an opportunity to take part in the exercise. Additionally, checklists and communication logs were well utilized by the players. One smart practice that was demonstrated by the Merrimac Emergency Management Agency was the printing of the reporting requirements and exposure limits on the back of the position title badges worn around the neck of each participant. This practice ensured that this important information was always available to the EOC staff. Overall the communication, coordination and cooperation between the EOC staff in this exercise was commendable.

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

Issue No.: 57-02-1.A.1-A-27

Condition: The Merrimac group paging system did not work properly. The dispatcher performed a group page to the following Emergency Operations Center (EOC) staff to report to the EOC:

Municipal Official
Emergency Management Director
Police Department Representative
Fire Department Representative

The dispatcher did not receive confirmation from the above staff and began to notify staff via commercial phone. The dispatcher was able to notify them of the alert and to report to Merrimac EOC. The dispatcher proceeded to page/ call other EOC staff to report to the EOC.

Corrective Action Demonstrated: At notification of an Unusual Event, the Police Dispatcher paged the Emergency Management Director who returned the page with a phone call. The Emergency Management Director then paged all of the Emergency Operations Center (EOC) staff to report to the EOC. The paging system is web-based and can function from at least the Police Dispatch and the EOC. In this exercise, the paging system was used from both locations. The paging system functioned without any issues.

Issue No.: 57-02-3.A.1-A-28

Condition: The Radiological Officer did not properly brief emergency workers on the use of dosimetry. He did not inform the emergency workers of their reporting limit. During an interview with the FEMA evaluator, the emergency workers did not have knowledge of their reporting limit. Also, female emergency workers were not asked if they could be pregnant. Forms 506 and 507 were not given to the female emergency workers.

Corrective Action Demonstrated: Emergency workers in the Emergency Operations Center (EOC) were briefed on the use of dosimeters which included explanation of where to wear and how to read the thermoluminescent dosimeters (TLDs) and direct reading dosimeters (DRDs). Serial numbers and starting points were recorded for the DRDs on the Emergency Worker Exposure form. One packet simulating a potassium iodide (KI) tablet was issued with a warning not to ingest it if the recipient was allergic to shellfish. Instructions were given to record radiation levels on the DRDs every 15 minutes. When a woman was issued a dosimetry packet, she was asked to complete a Regulatory Guide 8.13 Acknowledgement Form regarding instruction concerning prenatal radiation exposure for female emergency workers.

The Radiological Officer also noted reporting requirements of 100mR, 175mR and at each 1R increment and explained the acceptable limits of exposure as described in the town's plan. Additionally, the reporting requirements and limits were listed on the back of each position tag worn around the neck of each EOC position and on the Dosimetry Briefing Sheet which was distributed as well at the time of the briefing. The Radiological Officer determined whether to replace an emergency worker who had reached the 1R mark, but was less than 5R. Dosimetry packets including TLDs and DRDs were issued to at least 6 people in the EOC complex. Loudspeaker announcements were made to remind EOC staff to read their dosimeters at the appropriate times. DRD readings were recorded for each of the staff with DRDs on the Worker Exposure forms. The equipment and Emergency Worker Exposure forms were collected by the Radiological Officer at the conclusion of the exercise.

f. PRIOR ARCAs - UNRESOLVED:

Issue No.: 57-02-3.c.2-A-26

Condition: The Little People's Day Care plans state that the provider should contact parents at the Alert phase. Merrimac EOC Special Facilities representative thought parents were not to be notified to pick up children until children were transported to a host facility.

Reason Issue Unresolved: Little People's Day Care was not participating actively in the exercise held 11/17/2004 so this issue could not be evaluated.

5.3 Newbury

The Emergency Management Director provided low-key but highly effective leadership of the exercise. He was completely familiar with the forms and procedures and guided the participants in using their procedures to effectively serve the response. All staff participated with a degree of seriousness and competence that would be called for in an actual emergency. The Transportation Representative was especially prompt and thorough in his interactions with the schools and special needs and the Radiological Officer provided a thorough and informative briefing.

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

5.4 Newburyport

Staff was conscientious in maintaining records of actions conducted at the Newburyport EOC.

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

Issue No.: 57-02-3.c.1-A-14

CONDITION: The Anna Jacques Hospital, Port Healthcare Center, Dare Family Services, and Newburyport Residence, all in Newburyport, Massachusetts were not properly informed of the State's decision to have the population of Newburyport evacuate. The Special Needs Notifier (SNN) made the following calls to the above special needs facilities and times are based on logs obtained at the special facilities:

The Precautionary Transfer was for schools and day cares, not special facilities. None of the above special facilities were advised to evacuate when that Protective Action Decision was made by the State. The SNN's logs substantiate that no calls were made to these locations to provide the evacuation PAD.

POSSIBLE CAUSE: The SNN may have believed that when sirens were sounded at 1218 the special facilities would tune to their EAS Station and hear the PAD on the 1221 EAS message. However, the SNN procedures clearly state that he is to call the special facilities and in the event of a PAD, read a statement describing, in detail, the actions that are to be taken.

REFERENCE: (NUREG-0654, E.7., J.9., 10.c.d.e.g.) (Newburyport RERP, NP-08, Attachment 1 of the SNN Procedure)

EFFECT: The implementation of the protective action decision by the state, i.e., the simulated evacuation was not demonstrated.

RECOMMENDATION: Retraining of the SNN to ensure the procedure is followed to ensure follow up communications are made so that the protective actions can be properly carried out by the facility director and staff. Additionally, the SNN should ensure that all calls (incoming/outgoing) are recorded on the log.

NOTE: THIS ISSUE WAS IDENTIFIED DURING DAY TWO OUT OF SEQUENCE EVALUATIONS WHEN THERE WAS NO EVIDENCE OF PAD NOTIFICATION BY THE SNN.

SCHEDULE OF CORRECTIVE ACTION: Training will be provided to ensure SNN follows procedures and are familiar with Form 301, Emergency Worker Log.

d. NOT DEMONSTRATED: None

e. PRIOR ARCAs - RESOLVED:

Issue No.: 57-02-1.d.1-A-30

Condition: The TTY did not operate correctly. Per the SNN procedure, Region I was contacted, as a backup, to make the notification. This was performed successfully.

Corrective Action Demonstrated: The TTY was satisfactorily demonstrated during the exercise, November 17, 2004.

f. PRIOR ARCAs - UNRESOLVED:

Issue No.: 57-02-3.c.1-A-29

Condition: There was evidence of only one subsequent update of emergency information from the Newburyport Emergency Management Agency (NEMA) Special Needs Notifier (SNN) for special facilities to the Kinder Care Learning Center, the Knoll Edge Nursery at the Towle Building, and the Knoll Edge Nursery at 38 Hale Street. These facilities were participating in the exercise and, according to the extent of play, should have received initial and subsequent contacts. In particular, the notification of precautionary evacuation of schools was not transmitted. Potassium iodide (KI) notification, which applied only to emergency workers and not to the day care centers, was provided in the only subsequent update made. In addition, this update was listed at the same time for all locations, as indicated in the SNN log, but could not have been made at the same time.

Reason Issue Unresolved: The Governor of Massachusetts declared a State of Emergency at the Site Area Emergency at 1008 hours. All schools and day care centers were issued a precautionary transfer (evacuation). Busses (simulated) arrived at 1050 and began the transfer.

Potassium iodide was not discussed prior to the evacuation of schools, day care centers, and elderly care facilities.

Recommendation: Due to non-participation by these facilities in the 2004 exercise it should be completed in the 2006 exercise.

5.5 Salisbury

The Salisbury EOC staff demonstrated exemplary performance in responding to the Seabrook Nuclear Power Station event. Staff members demonstrated that they took their jobs seriously, were well trained and understood their responsibilities, coordinated their efforts, and made every effort to be assured that all of their procedures were followed without omission. One observed strength is personnel had their procedures open at all times and did not assume that they were able to remember every action required. The EMD exhibited direction and control of all activities. Personnel also demonstrated that they were willing to improve their operation, for example, the Special Needs Notifier rewrote the personnel special needs list to allow more effective use of the data base.

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

5.6 West Newbury

West Newbury has a new EOC; this was the first exercise that has been held there. The layout was so that it provided great communications between agencies and the EMD. It was comfortable, well secured, well lit and convenient for operations. The staff preformed great together and held a continued line of communications between themselves.

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

Issue No: 57-02-3.c.1-A-31

Condition: There was evidence of only one subsequent update of emergency information from the West Newbury Emergency Operations Center (EOC) Special Needs Notifier (SNN) for special facilities to the Children’s Castle Day Care and the Koinona Day Care Facilities as required in the extent of play and described on a controller inject. Both facilities were participating in the exercise and, according to the extent of play, should have received initial and subsequent contacts.

Corrective Action Demonstrated: Initial contact was at 0930 by the Special Needs Notifier to all the special needs individuals and facilities located in the community, with complete details of the incident. Children’s Castle Day and Koinona Day Care facilities received the initial notification but did not play in the remaining of this exercise.

- f. **PRIOR ARCAs – UNRESOLVED:** None

5.7 Schools, Special Facilities and Day Cares

5.7.1 Amesbury

Amesbury Elementary School
Amesbury Middle School
Sparhawk School
Academy for Strategic Learning
Amesbury Residence
Elizabeth Calsey House
Elizabeth Calsey House 2
Highland Program
Leaps and Bounds Pre-School – Elm Street
Leaps and Bounds Pre-school – Haverhill Road

The faculty from all schools was very knowledgeable. Plans and procedures were readily available at each school. Logs had been properly kept during the exercise on November 17, 2004.

The owner of Leaps and Bounds school and Lead Teacher were extremely familiar with the Amesbury emergency procedures. They have an excellent working relationship with the Emergency Management Director. In addition to being extremely well-prepared, they were interested in the exercise results.

The staff members interviewed at Amesbury Residence, Elizabeth Calsey House #1 and #2, and Highland Project demonstrated an interest in their emergency response activities, and a real caring attitude toward doing anything they could to protect their clients and staff during an emergency at Seabrook.

- a. **MET:** Evaluation Criteria 1.e.1
3.c.1
- b. **DEFICIENCY:** None
- c. **AREAS REQUIRING CORRECTIVE ACTION:** 3.c.2

ISSUE #57-04-3.c.2-A-15

CONDITION: As soon as the School Superintendent, or designee, is available all calls from the Transportation officer to the schools go directly to him. The School Superintendent then radios the schools to relay information. At 1035 the Amesbury EOC was notified that MEMA made the decision for a precautionary transfer of students. At 1041 the Transportation Officer in the Amesbury EOC notified the School Superintendent's Office of the precautionary transfer. At 1042 the Superintendent's designee noted in his log the precautionary transfer. This information was never radioed to the schools by the Superintendent to the designee (as required by the plan).

POSSIBLE CAUSE: The Superintendent’s designee was relatively new and this was his first exercise.

REFERENCE: NUREG-0654, J.10.c, d, g

EFFECT: Due to a lack of communications from the superintendents to the schools, the schools were not kept up-to-date on the status of the precautionary transfer.

RECOMMENDATION: The Superintendent’s designee needs to be more proactive in requesting information from the Amesbury Emergency Operations Center (EOC) and in relaying information to the schools. Training should be provided. This should be re-demonstrated during the next exercise.

SCHEDULE OF CORRECTIVE ACTION: Training will be provided to ensure School Superintendent and staff follow procedures and are familiar with Emergency Action Directives.

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

5.7.2 Merrimac

Donaghue School

The Principal of the Donaghue School was able to describe comprehensively and in detail the actions taken for a precautionary transfer of school children. He demonstrated knowledge of the plans and procedures without referencing those plans. Additionally, the school pre-fabricated signs to place on the doors of the school informing parents of the host school location. These pre-fabricated signs saved time and energy in the event of an actual emergency. The school also designated two staff members to facilitate the process of reuniting parents with students at the host facility. This practice would help ensure that parents and children are reunited quickly and smoothly.

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

5.7.3 Newbury

Newbury Elementary

The Assistant Superintendent of Triton Regional Schools and the Principal and School Nurse at Newbury Elementary School gave an impressive display of knowledge of the procedures and care for their students.

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

5.7.4 Newburyport

Bresnahan School
Newburyport High School
Rupert A. Nock Middle School
Country Rehabilitation
Heritage House
Newburyport Residence
Port Healthcare Center
Residence Options
Turning Point, Inc.
Anna Jacques Hospital
DARE Family Services
Community Actions, Inc.
Mrs. Murray's Nursery
Mulberry Child Care and Pre-School

The Bresnahan School, Newburyport High School, and Rupert A. Nock Middle School secretaries maintained a log of all exercise related telephone calls from the Transportation Officer at the Newburyport Emergency Operations Center. All Newburyport school secretaries were well versed in the requirements for the use of potassium iodide (KI) and the evacuation process. Each school office was equipped with a “Grab-and-Go Kit” which contained the classroom roster (updated daily) and the KI authorization list and an envelope with one tablet of KI for each student and faculty member. The staff members interviewed indicated that they were pleased to be involved with the program and the exercise.

The Day Care Center Directors at Community Action Inc., Mrs. Murray’s Nursery, and Mulberry Child Care and Pre-School demonstrated enthusiasm and willingness to participate in the Seabrook Station off-site radiological emergency preparedness program. Each Director displayed a caring attitude for the children entrusted to their care and were adamant about insuring their safety.

Each of the directors, administrators, and program managers at Anna Jacques Hospital, Dare Family Services, Newburyport Residence, and Port Healthcare Center responsible for emergency response were able to recall important parts of their plans from memory. This familiarity with the plans promoted quick and accurate responses to emergency situations.

The Country Rehabilitation and Heritage House Senior Retirement facility administrators received the calls from the EOC and reviewed the evacuation procedure to ensure a good understanding of the actions required. The staff members interviewed indicated that they were pleased to be involved with the program and the exercise.

- a. **MET:** Evaluation Criterion 1.e.1
3.c.1, c.2
- b. **DEFICIENCY:** None
- c. **AREAS REQUIRING CORRECTIVE ACTION:** None
- d. **NOT DEMONSTRATED:** None
- e. **PRIOR ARCAs – RESOLVED:** None
- f. **PRIOR ARCAs - UNRESOLVED:** None

5.7.5 Salisbury

Sparhawk School @ North Campus
Assisted Living Center of Salisbury
Greater Newburyport

Staff at the Sparhawk School @ North Campus were knowledgeable of evacuation procedures and were fully prepared to initiate evacuation activity.

Staff at the Assisted Living Center of Salisbury were familiar with evacuation requirements and were prepared to evacuate the residents.

Staff at the Greater Newburyport Education Collaborative had an extremely comprehensive and complete emergency plan, were fully prepared to conduct an evacuation, were knowledgeable in possible contingencies to assist in evacuation, had informed parents and guardians of evacuation procedures, and had available go-kits including release forms, and KI.

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

5.7.6 West Newbury

Pentucket Regional High School
Pentucket Regional Middle School

Although West Newbury is part of the EPZ for Seabrook, West Newbury Schools are beyond 10 miles. Schools do not have KI, but are included in precautionary transfers when directed by the State. Officials were aware of all transportation needs.

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

6. SUPPORT JURISDICTIONS (MASSACHUSETTS)

6.1 State Transportation Staging Area – No. Essex Community College

All staff worked well together assisting in set-up and communicating with everyone on important information.

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

6.2 Local Transportation Staging Areas

6.2.1 Amesbury

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

6.2.2 Merrimac

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

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

6.2.3 Newbury

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

6.2.4 Newburyport

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

6.2.5 Salisbury

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

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

6.2.6 West Newbury

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

6.3 Masconomet Reception Center

All staff kept the Reception Center Manager informed of any problems within the Reception Center area and worked as a team throughout the exercise.

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

APPENDIX 1

ACRONYMS AND ABBREVIATIONS

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

A&N	Alert and Notification
ACP	Access Control Point
ARC	American Red Cross
ARCA	Area Requiring Corrective Action
ARES	Amateur Radio Emergency Service
CD-V	Civil Defense – Victoreen
cfm	Cubic Feet Per Minute
CFR	Code of Federal Regulations
CPM	Counts Per Minute
DEM	Massachusetts Department of Environmental Management
DHS	Department of Homeland Security
DMH	Massachusetts Department of Mental Health
DOT	U.S. Department of Transportation
DPHS	Department of Public Health Services
DPW	Department of Public Works
DRD	Direct Reading Dosimeter
EAC	Evaluation Area Criteria
EAL	Emergency Action Level
EAS	Emergency Alert System
EBS	Emergency Broadcast System
ECL	Emergency Classification Level
EEM	Exercise Evaluation Methodology
EMD	Emergency Management Director
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EPA	U.S. Environmental Protection Agency
EPI	Emergency Public Information
EPZ	Emergency Planning Zone
ERDS	Emergency Response Data System
ERPA	Emergency Response Planning Area
ETA	Estimated Time of Arrival
ETE	Evacuation Time Estimate
EWMDS	Emergency Worker Monitoring and Decontamination Station

FDA	U.S. Food and Drug Administration
FEMA	Federal Emergency Management Agency
FR	Federal Register
FRMAC	Federal Radiological Monitoring and Assessment Center
FTC	Field Team Coordinator
ft/min	feet per minute
ft ³ /min	cubic feet per minute
GE	General Emergency
GM	Geiger-Mueller
gpm	gallons per minute
IFO	Incident Field Office
IP	Implementing Procedure
JIC	Joint Information Center
JPIC	Joint Public Information Center
JTIC	Joint Telephone Information Center
KI	Potassium Iodide
LTSA	Local Transportation Staging Area
MARERP	Massachusetts Radiological Emergency Response Plan
MCP	Mobile Command Post
MDFA	Massachusetts Department of Food and Agriculture
MDPH	Massachusetts Department of Public Health
MEMA	Massachusetts Emergency Management Agency
METPAC	Meteorological Plume Assessment Computer
mR	milliroentgen
mR/h	milliroentgen per hour
MSP	Massachusetts State Police
NAS	Nuclear Alert System
NAWAS	National Warning System
NHDPHS	New Hampshire Department of Public Health Services
NHOEM	New Hampshire Office of Emergency Management
NHRERP	New Hampshire Radiological Emergency Response Plan
NHSP	New Hampshire State Police
NIAT	Nuclear Incident Advisory Team
NOAA	National Oceanic and Atmospheric Administration
NOUE	Notification of Unusual Event
NPS	Nuclear Power Station
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*

OEM	Office of Emergency Management
ORO	Offsite Response Organization
PAD	Protective Action Decision
PAG	Protective Action Guide
PANS	Public Alert and Notification System
PAO	Public Affairs Official
PAR	Protective Action Recommendation
PHAAP	Public Health Accident Assessment Program
PIBS	Public Information Briefing Sheet
PIO	Public Information Officer
R	Roentgen
RAC	Regional Assistance Committee
RACES	Radio Amateur Civil Emergency Service
RADEF	Radiological Defense
RC	Reception Center
RCDC	Rockingham County Dispatch Center
RCS	Reactor Coolant System
REA	Radioactive Emergency Area
REM	Roentgen Equivalent Man
REP	Radiological Emergency Preparedness
RERP	Radiological Emergency Response Plan
RHTA	Radiological Health Technical Advisor
R/h	Roentgen(s) per hour
RO	Radiological Officer
SAE	Site Area Emergency
SAU	School Administrative Unit
SEOC	State Emergency Operations Center
SPS	Seabrook Nuclear Power Station
STSA	State Transportation Staging Area
TCP	Traffic Control Point
TDD/TTY	Telecommunications Device for the Deaf/Teletypewriter
TEDE	Total Effective Dose Equivalent
TL	Team Leader
TLD	Thermoluminescent Dosimeter
WP	Warning Point

APPENDIX 2

EXERCISE EVALUATORS AND TEAM LEADERS

The following is a list of the personnel who evaluated the Seabrook Nuclear Power Station exercise on October 23-24, 2002, as well as other out-of-sequence demonstrations. Team Leaders are denoted by (TL). The organization that each evaluator represents is indicated by one of the following abbreviations:

- DOT - U.S. Department of Transportation
- FEMA - Federal Emergency Management Agency
- ICF - ICF Consulting
- EPA - U.S. Environmental Protection Agency
- FDA - U.S. Food and Drug Administration
- NRC - U.S. Nuclear Regulatory Commission

<u>LOCATION</u>	<u>EVALUATOR</u>	<u>ORGANIZATION</u>
<u>STATE OF NEW HAMPSHIRE</u>		
State EOC	Wanda Gaudet - TL Melody Geer Angela Hough Tina Lai Christopher Lynch	FEMA, Region I ICF FEMA, Region III FEMA, Region III FEMA, Region I
EOF	Joseph Keller Craig Gordon	ICF NRC
IFO	Roy Smith - TL Taneeka Hollins	ICF FEMA, Region I
State Warning Point	Christopher Lynch	FEMA, Region I
Media Center	Deborah Bell	FEMA, Region I
Field Monitoring Team #1	Ed Wojnas	ICF
Field Monitoring Team #2	Carol Herzenberg	ICF
Rockingham County Dispatch Center	Jane Young	FEMA, Region VII

RISK JURISDICTIONS

Brentwood EOC	Timothy McCoy	FEMA, Region I
East Kingston EOC	Robert Duggleby	ICF
Exeter EOC	Pat Tenorio	FEMA, Headquarters
Greenland EOC	Brian Hasemann	FEMA, Region II
Hampton EOC	Tracey Green	ICF
Hampton Falls EOC	Robert Fernandez	ICF
Kensington EOC	William Cullen	FEMA, Region II
Kingston EOC	David Moffet	ICF
New Castle EOC	Rosemary Samsel	ICF
Newfields EOC	William Neidermeyer	ICF
Newton EOC	Michael Brazel	FEMA, Region I
North Hampton EOC	Carol McCoy William Kennedy	ICF FEMA, Region I
Portsmouth EOC	Robert Swartz	FEMA, Region I
Rye EOC	Harold Spedding	ICF
Seabrook EOC	Lauren DeMarco - TL James Purvis	FEMA, Region I FEMA, Headquarters
South Hampton EOC	Patrick Taylor	ICF
Stratham	Ron Van	ICF

SCHOOLS-DAY CARE-SPECIAL FACILITIES

Home Away from Home	Timothy McCoy	FEMA, Region I
Great Bay Kids Company	Patricia Tenorio	FEMA, Headquarters
Exeter High School	Patricia Tenorio	FEMA, Headquarters
Mary Ann Day Care	Timothy McCoy	FEMA, Region I
Greenland Central School	Timothy McCoy	FEMA, Region I
Asian Price School	Brian Hasemann	FEMA, Region II
Marston School	Brian Hasemann	FEMA, Region II
Hampton Falls Child Care Center	Robert Fernandez	ICF
Offspring Kids Education and Enrichment Center	David Moffet	ICF
Nature and Nature Children's Center	William Neidermeyer	ICF
Newton Memorial Elementary School	Michael Brazel	FEMA, Region I
Imprints Day School	Carl McCoy William Kennedy	ICF FEMA, Region I
Little Harbour Elementary School	Robert Swartz	FEMA, Region I
Webster at Rye	Harold Spedding	ICF
Seabrook Middle School	Lauren DeMarco James Purvis	FEMA, Region I FEMA, Headquarters
Four Pines Child Care	Ronald Van	ICF

SUPPORT JURISDICTIONS

Dover Host	Norma Costa	FEMA, Region I
Manchester Host	Charles Zeppenfeld	ICF
Rochester Host	Lawrence Visniesky	ICF

Wentworth Douglass Hospital / Seabrook Fire Department	Wanda Gaudet Lauren DeMarco	FEMA, Region 1 FEMA, Region I
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State/Local Transportation Staging Area	Wanda Gaudet Lauren DeMarco Robert Poole Robert Swartz James Gibbons Richard Quinlan	FEMA, Region I FEMA, Region I FEMA, Region I FEMA, Region I FEMA, Region I FEMA, Region I
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RECEPTION CENTERS

Rochester Reception Center	Wanda Gaudet Lauren DeMarco Robert Poole Robert Swartz James Gibbons Taneeka Hollins	FEMA, Region I FEMA, Region I FEMA, Region I FEMA, Region I FEMA, Region I FEMA, Region I
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South Side Middle School – Manchester	Wanda Gaudet Lauren DeMarco Robert Poole Robert Swartz James Gibbons Taneeka Hollins	FEMA, Region I FEMA, Region I FEMA, Region I FEMA, Region I FEMA, Region I FEMA, Region I
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**STATE OF
MASSACHUSETTS**

State EOC	Robert Poole - TL James Gibbons Mabel Santiago David Petta	FEMA, Region I FEMA, Region I FEMA, Region II DOT
EOF	Joseph Keller - TL Craig Gordon	ICF NRC
Region 1 (Tewksbury)	Roman Helo Kathleen Sweeney	FEMA, Region III FEMA, Region I
Media Center	Henry Christiansen Marty Bahamonde	ICF FEMA, Region I
Field Monitoring Teams	Michael Hammond James Hickey	FEMA, Region X ICF
State Police Troop A, Danvers	Richard Quinlan	FEMA, Region I

RISK JURISDICTIONS

Amesbury EOC	Wendy Swygert	ICF
Merrimac EOC	Lauren McLane	FEMA, Region I
Newbury EOC	Walter Gawlak	ICF
Newburyport DOT for ACP/TCP	William McCance	ICF
Salisbury EOC	Gary Goldberg	ICF
West Newbury EOC	Carl Wentzell	ICF
Amesbury Schools	Wendy Swygert	ICF
Merrimac Schools	Lauren McLane	FEMA, Region I
Newbury Schools	Walter Gawlak	ICF
Newburyport Schools	William Cullen	FEMA, Region II

Salisbury Schools	Gary Goldberg	ICF
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West Newbury	Carl Wentzell	ICF
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SUPPORT JURISDICTIONS

Northern Essex Community College - STSA	Wanda Gaudet	FEMA, Region I
	Lauren DeMarco	FEMA, Region I
	Robert Poole	FEMA, Region I
	Robert Swartz	FEMA, Region I
	James Gibbons	FEMA, Region I
	Taneeka Hollins	FEMA, Region I

Masconomet Reception Center	Wanda Gaudet	FEMA, Region I
	Lauren DeMarco	FEMA, Region I
	Robert Poole	FEMA, Region I
	Robert Swartz	FEMA, Region I
	James Gibbons	FEMA, Region I
	Taneeka Hollins	FEMA, Region I

APPENDIX 3

EVALUATION CRITERIA AND EXTENT-OF-PLAY AGREEMENT

This appendix lists the evaluation criteria, which were scheduled for demonstration in the Seabrook Nuclear Power Station exercise on October 23-24, 2002, and the extent-of-play agreement approved by the Federal Emergency Management Agency (FEMA) Region I on April 25, 2000, for the Commonwealth of Massachusetts and on May 12, 2000, for the State of New Hampshire.

The evaluation criteria, outlined in the Federal Register on September 12, 2001, 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.

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.)

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.)

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.)

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.)

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.)

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 agreements on the following pages were submitted by the State of New Hampshire and the Commonwealth of Massachusetts, and they were approved by FEMA Region I on October 25, 2004, respectively, in preparation for the Seabrook Nuclear Power Station exercise on November 17, 2004. The extent-of-play agreement includes any significant modification or change in the level of demonstration of each evaluation criterion listed in Subsection A of this appendix.

NEW HAMPSHIRE

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. At each facility, 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, should be provided to the evaluator (**demonstration of a shift change is not required**). 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 out-of-sequence demonstrations is appropriate in accordance with the extent of play agreement.

NEW HAMPSHIRE EXTENT OF PLAY

Emergency facilities will be alerted in accordance with the NHRERP. Those facilities that are to participate in the exercise will mobilize accordingly. Rosters for relief shifts will be available in each participating facility. Those facilities that are not participating will acknowledge receipt of notification, but will take no further action. Controllers will simulate facilities not participating.

Each participating facility will demonstrate its capabilities in accordance with this Evaluation Area. Facilities participating are the: STATE EOC, EOF, IFO, MEDIA CENTER, Municipal EOCs: BRENTWOOD, EAST KINGSTON, EXETER, GREENLAND, HAMPTON, HAMPTON FALLS, KENSINGTON, KINGSTON, NEW CASTLE, NEWFIELDS, NEWTON, NORTH HAMPTON, PORTSMOUTH, RYE, SEABROOK, SOUTH HAMPTON, STRATHAM, ROCHESTER (host EOC) DOVER (host EOC) and MANCHESTER (host EOC). The State Transportation Staging area and Reception Centers in Manchester and Rochester will participate out of sequence DPHS Monitoring Teams will participate real time out of sequence.

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

N/Av

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 completed, as they would be in an actual emergency, unless otherwise indicated in the extent of play agreement.

NEW HAMPSHIRE EXTENT OF PLAY

N/A

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

N/A

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

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 otherwise indicated in the extent of play agreement.

NEW HAMPSHIRE EXTENT OF PLAY

Participating state and local facilities will demonstrate their ability to direct and control emergency operations in accordance with the NHRERP.

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

57-02-1.c.1-A-07 NEW CASTLE MULTIPLE SOURCES OF INFORMATION CREATED COMMUNICATIONS AND COORDINATION ISSUES FOR TOWN EMERGENCY WORKERS.

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 at least two reliable 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

Communications systems will only be evaluated for this criterion if there have been substantial changes in equipment or mission, unless a communications breakdown adversely impacts the exercise.

Communications equipment and procedures for facilities and field units should be used as needed for the transmission and receipt of exercise messages. All facilities

NEW HAMPSHIRE EXTENT OF PLAY

Pursuant to the NHRERP, facilities participating in this exercise will demonstrate their primary and a back up communications systems. Other communications systems and capabilities may also be used.

DPHS Field Monitoring Teams will demonstrate a primary and a back up communications system.

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

N/A

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.

Sufficient quantities of appropriate direct-reading and permanent record dosimetry 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 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 replace if necessary.** This leakage testing will be verified during the exercise, through the documentation submitted in the Annual Letter of Certification, 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 location(s) will be confirmed by physical inspection at storage location(s) or through documentation of current inventory submitted during the exercise or provided in the Annual Letter of Certification submission. Available supplies of KI should be within the expiration date indicated on KI bottles or blister packs. As an alternative, a letter from the drug manufacturer should be available that documents a formal extension of the KI expiration date.

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.

NEW HAMPSHIRE EXTENT OF PLAY

Pursuant to the NHRERP, facilities participating in this exercise will demonstrate that their equipment, maps, displays, dosimetry, potassium iodide (KI) and other supplies are adequate and sufficient to support the emergency response.

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

N/A

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

Sub-element 2.a. – Emergency Worker Exposure Control

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

NEW HAMPSHIRE EXTENT OF PLAY

This Evaluation Area will be demonstrated in accordance with the NHRERP by appropriate facilities that participate in the exercise. Protective action decision-making occurs at the New Hampshire EOC. The state decision making team coordinates their activity with Massachusetts. Recommended protective actions are transmitted to each municipal EOC from the state EOC.

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

57-02-2a.1-A-01 STATE EOC ISSUE: DECISION TO AUTHORIZE KI FOR EMERGENCY WORKERS WAS NOT IN ACCORDANCE WITH THE PLAN OR FDA GUIDANCE.

5702-2.a.1-A-02 STATE EOC DPHS AUTHORIZED KI FOR SPECIFIC PERSONNEL IN A SEPARATE DECISION FROM EMERGENCY WORKERS

5702-2.a.1-A-03 STATE EOC CONFUSION OVER THE WORD ISSUE V. INGEST USED ON FORM 300 B

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

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

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 the licensee provides release and meteorological data, the ORO also considers these data. The ORO should demonstrate a reliable capability to independently 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.

NEW HAMPSHIRE EXTENT OF PLAY

This Evaluation Area will be demonstrated in accordance with the NHRERP at the State EOC in the context of the exercise scenario. METPAC and other accident assessment models will be used.

The state decision-making team will evaluate the recommendations of the accident assessment team and develop appropriate protective action decisions. Municipal organizations will be notified and respond in accordance with their plans and procedures according to the recommended protective action. The New Hampshire decision making team will discuss its decisions with the Massachusetts decision making team and coordinate the joint public notification process. The decision to use or not to use KI for emergency workers , institutionalized individuals and the public will be demonstrated at the State EOC.

Protective action decisions will be made in accordance with the NHRERP. Field monitoring data will be provided to state accident assessment personnel by Field teams via the EOF. This activity will occur out of sequence. The data will be available for consideration by the assessors and used to formulate appropriate strategic decisions with respect to the subsequent deployment and coordination of field monitoring resources at their disposal.

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

N/A

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

OROs should have the capability to make both initial and subsequent PADs. They should demonstrate the capability to make initial PADs in 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 monitoring 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.

NEW HAMPSHIRE EXTENT OF PLAY

This activity will be demonstrated by the accident assessment team in coordination with DPHS and NHBEM decision makers at the State EOC.

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

N/A

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

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

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, Evacuation Time Estimates, availability of transportation assets, risk of evacuation vs. risk from the avoided dose, and precautionary school evacuations. In situations where an institutionalized population cannot be evacuated, the administration of KI should be considered by the OROs.

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.

NEW HAMPSHIRE EXTENT OF PLAY

The ability and resources to implement protective actions for special populations will be demonstrated in accordance with the NHRERP at the state and municipal EOCs. Each municipal EOC will simulate calls to special needs populations per their special needs call lists and arrange for appropriate resources to meet the special needs. Controller messages will simulate requests for assistance from the general public beyond the special needs call list. The dispatch of resources and response to requests for assistance will be simulated.

Calls will be made to each School Administrative Unit (SAU) and each school to verify transportation resource requirements. Calls will be made to transportation providers to verify resource capabilities. Default values will be used in determining resource requirements. The dispatch of transportation resources to schools will be simulated.

School Administrative Units located within the Seabrook Station EPZ are: SAU 16; Brentwood, East Kingston, Exeter, Stratham, Newfields Kensington. SAU 17; Newton, Kingston. SAU 21; Hampton, Hampton Falls, North Hampton, South Hampton, Seabrook. SAU 50; Greenland, Rye, New Castle. SAU 52; Portsmouth

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

N/A

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 surround 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

It is expected 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.

ORO 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.

NEW HAMPSHIRE EXTENT OF PLAY

This exercise is limited to plume exposure pathway activity.

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

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

Relocation: OROs 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 temporarily 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 time frames; 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 policies 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.

NEW HAMPSHIRE EXTENT OF PLAY

This exercise is limited to plume exposure pathway activity.

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; 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

ORO's 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 ORO's 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.

NEW HAMPSHIRE EXTENT OF PLAY

The RADEF Officer in each facility will issue appropriate dosimetry in accordance with the NHRERP. The following facilities will demonstrate their ability to meet this criteria: LOCAL EOCs: BRENTWOOD, EAST KINGSTON, EXETER, GREENLAND, HAMPTON, HAMPTON FALLS, KENSINGTON, KINGSTON, NEW CASTLE, NEWFIELDS, NEWTON, NORTH HAMPTON, PORTSMOUTH, RYE, SEABROOK, SOUTH HAMPTON, STRATHAM, DPHS Field Team, Troop A, NH DOT, and the State Transportation Staging Area (out of sequence).

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

57-02-3a.1-A-05 EAST KINGSTON EMERGENCY WORKERS WERE NOT PROPERLY TRAINED IN DOSIMETRY OPERATION AND PROCEDURES.

57-00-05-A-15 NEW CASTLE (PRIOR ARCA UNRESOLVED) EMERGENCY WORKERS DID NOT KNOW EXPOSURE CONTROL REPORTING LEVELS OR WHERE TO GET INFORMATION

Sub-element 3.b – Implementation of KI Decision

Criterion 3.b.1: KI and appropriate instructions are available should a decision to recommend use of KI be made. Appropriate record keeping of the administration of KI for emergency workers and institutionalized individuals (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

ORO 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.

NEW HAMPSHIRE EXTENT OF PLAY

The capability to issue KI to emergency workers will be demonstrated at appropriate state and local facilities. The RADEF officer at each facility (including RCDC, Troop A, DPHS Field Teams, and the State Transportation Staging Area out of sequence) will talk through the issuing process. No KI will be ingested. Quantities of KI are stored at local EOCs, EPZ nursing homes and hospitals and the IFO. Calls to institutions will be simulated.

A decision that the public should be notified of a recommendation that emergency workers ingest KI will be demonstrated at the State EOC; with the subsequent development, distribution, and simulated broadcast of an appropriate EPI message.

These activities will occur at the State EOC.

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

57-02-3b.3-A-04 IFO WHEN THE DECISION WAS MADE TO ISSUE KI TO EMERGENCY WORKERS IN EPZ TOWNS SOME TOWNS WERE CONFUSED BY THE DECISION. IFO STAFF WAS NOT PROACTIVE IN ENSURING ALL EPZ TOWNS UNDERSTOOD AND COMPLIED WITH INTENDED DIRECTION.

57-02-3b.1-A-06 KINGSTON .RO INSTRUCTED EMERGENCY WORKERS TO TAKE KI PRIOR TO STATE ORDER

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

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

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.

NEW HAMPSHIRE EXTENT OF PLAY

The response of transportation resources will be simulated. State EOC, IFO and local transportation resource personnel will demonstrate their capability to coordinate and dispatch appropriate transportation resources with the support of a control cell during the plume phase exercise. The State EOC will make the initial call to transportation providers as well as subsequent calls to a control cell. Calls to special facilities are demonstrated in the local EOCs. A TDD/Relay Operator capability will be demonstrated at the IFO in Newington.

An out-of-sequence demonstration of transportation routes and route maps will be combined with school and special facility interviews. Bus drivers will not respond. Evaluators will use support materials issued to them by controllers. Evaluators will receive instructions from controllers and follow route maps to designated facilities and on to reception centers.

The State Transportation Staging Area will demonstrate the ability to set up and process vehicles out of sequence.

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

57-02-3.c.1-A-08 NORTH HAMPTON EOC SPECIAL NEED LIST WAS OUT OF DATE.

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

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.

NEW HAMPSHIRE EXTENT OF PLAY

Notification of schools and special facilities will be demonstrated at the State EOC and IFO and at each municipal EOC.

Protective Action Decisions for schools are made at the State EOC. A selected school or special facility in each municipality will be interviewed out of sequence, regarding the implementation of local emergency procedures.

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

N/A

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

ORO 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.

NEW HAMPSHIRE EXTENT OF PLAY

Municipal police will be asked to describe their traffic control plan for their jurisdiction at the municipal EOC. New Hampshire State Police Troop A will describe the state access control plan at the IFO in Newington.

These demonstrations will occur during plume exposure pathway phase of the exercise at times to be coordinated between facility controllers and FEMA evaluators.

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

N/A

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/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

ORO 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, all contacts, actual or simulated should be logged.

NEW HAMPSHIRE EXTENT OF PLAY

NH Department of Transportation and State Police personnel at the IFO will discuss the resources to remove impediments as part of the traffic and access control briefing.

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

N/A

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.

NEW HAMPSHIRE EXTENT OF PLAY

This exercise is limited to plume exposure pathway activity.

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 ingestion pathway zone (IPZ) protective actions should be demonstrated by formulation of protective action information for the general public and food producers and processors. This includes the capability for the rapid reproduction and distribution of appropriate reproduction-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. However, 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.

NEW HAMPSHIRE EXTENT OF PLAY

This exercise is limited to plume exposure pathway activity.

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

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

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

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 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.

ORO 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.

NEW HAMPSHIRE EXTENT OF PLAY

This exercise is limited to plume exposure pathway activity.

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.)

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

Field teams should be equipped with all instruments and supplies necessary to accomplish their mission. 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.

NEW HAMPSHIRE EXTENT OF PLAY

For the purposes of this exercise, two NH DPHS radiological monitoring teams will be dispatched real time out of sequence. The teams will arrive at the DPHS office at 08:00 to obtain kits. The kits will be sealed with dated custody tape. If the custody tape is intact, the teams will take the kits as is without need to inventory. Each team will source check their instruments and do a radio check, then deploy to the EOF.

Upon arrival at the EOF the teams will join the scenario in real time if teams arrive prior to an alert declaration they will wait for the declaration at the EOF, otherwise they will be deployed by the New Hampshire field team coordinator per the scenario. The New Hampshire field team controllers will have to control this activity carefully.

A FEMA evaluator will observe the teams activities at the DPHS office and return to the State EOC after the teams have departed for the EOF. FEMA field team evaluators will meet up with the field teams at the EOF. Charcoal filter cartridges will simulate use of Silver Zeolite filter media. Simulated cartridges will be prepared for transportation to the EOF for analysis. The monitoring data will be collected by Accident Assessment Team.

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

N/A

PRIOR ARCA'S – RESOLVED:

57-00-06-A-08 2000 EXERCISE REPORT PG.43 EVALUATION AREA 4.A.1 MONITORING TEAM #2 ISSUE: FIELD TEAM NOT BRIEFED.

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

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.

NEW HAMPSHIRE EXTENT OF PLAY

In accordance with the NHRRP, field monitoring teams pick up y their equipment and are dispatched from DPHS Headquarters in Concord by the DPHS Accident Assessment Team. Upon their arrival at the EOF, or while en-route, monitoring teams may receive assignments from the joint state/utility monitoring team dispatcher, who is located in the EOF. The joint state/utility monitoring team dispatcher coordinates the activity of state and utility monitoring teams. The DPHS EOF RHTA, in coordination with the joint monitoring team dispatcher, is responsible for coordinating the monitoring teams' strategy. This coordination occurs at the EOF in Newington. This activity will occur real time out of sequence.

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

N/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.)

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

EXTENT OF PLAY

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.

NEW HAMPSHIRE EXTENT OF PLAY

Each of the deployed monitoring teams will demonstrate the implementation of their procedures for taking measurements and collecting particulate samples at three locations selected by accident assessment team via the joint monitoring team dispatcher. This activity will take place real time out-of-sequence .

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

N/A

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.

NEW HAMPSHIRE EXTENT OF PLAY

This exercise is limited to plume exposure pathway activity.

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 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 is 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.

NEW HAMPSHIRE EXTENT OF PLAY

This exercise is limited to plume exposure pathway activity.

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

57-00-25-A-09 2000 EXERCISE REPORT PG.45 EVALUATION AREA 4.C
STATE LAB ISSUE: MONITORING EQUIPMENT MISSING CALIBRATION TAGS.

EVALUATION AREA 5: EMERGENCY NOTIFICATION & PUBLIC INFORMATION

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

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

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.

NEW HAMPSHIRE EXTENT OF PLAY

Emergency notification and public information will be disseminated to the public in accordance with the NHRERP.

*The sounding of sirens and broadcast of EAS/EPI messages will be simulated. EAS/EPI messages will be formulated and distributed by the New Hampshire EOC. Activation of the EAS system will be coordinated with Massachusetts' officials. WOKQ will receive EAS/EPI messages but will not broadcast them. **Broadcast will be simulated.** EPZ communities will demonstrate this objective through the receipt of siren and EAS activation times from their local liaisons in the IFO and will demonstrate their capability to monitor EAS stations and EPI outlets.*

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

N/A

Criterion 5.a.2: RESERVED

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

ORO 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.

NEW HAMPSHIRE EXTENT OF PLAY

There are no populated FEMA approved exception areas in the Seabrook Station Emergency Planning Zone. This criterion is not applicable.

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 when evacuating, information concerning pets, shelter-in-place instructions, 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 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.

ORO's 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.

ORO's 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.

ORO's 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.

NEW HAMPSHIRE EXTENT OF PLAY

The primary responsibility for briefing the media with respect to off site activities in New Hampshire lies with the state. The State EOC and the Media Center are the facilities where this process takes place. The Media Center facility is jointly operated among the states the utility and federal response agencies. Controllers at these facilities will simulate media inquiries.

New Hampshire will coordinate its' media information with Massachusetts and Seabrook Station personnel at the Media Center, which is co-located with the EOF/IFO facility in Newington, N.H.

New Hampshire EPZ municipalities do not have representatives at the Media Center. EPZ municipal officials may respond to questions about local emergency response but are encouraged to refer press inquiries to the Media Center. A controller message will be generated for each community to initiate a response and referral to media inquiries made to local officials.

A Public Inquiry line is established to provide members of the public with a supplemental source of accurate emergency information. A control cell will provide incoming calls. Calls to the public inquiry call center will occur when a Site Area Emergency and/or General Emergency emergency classification level (ECL) is reached during the course of the exercise.

*Public Inquiry personnel will provide callers with accurate information and screen calls for trends. Communities will refer calls that address issues beyond local jurisdiction to the Public Inquiry center. A controller message will be generated for each community to initiate a response and referral of to the public inquiry call center. WOKQ repeats New Hampshire Emergency Public Information Messages every fifteen minutes until they are changed by the state. **The repetition or broadcast of any exercise messages will be simulated for the purposes of this exercise***

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

N/A

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.)

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. Prior to 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 met. 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.

NEW HAMPSHIRE EXTENT OF PLAY

Manchester South Side Middle School and Rochester Middle School will demonstrate their ability to operate reception/monitoring/decontamination center facilities for the general public and emergency workers. This demonstration will take place independently and out of sequence. Portal monitors for all location will be demonstrated. Seven simulated evacuees (one male and one female "contaminated") at each facility will be processed during the demonstration. The seven evacuees may be processed sequentially.

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

N/A

PRIOR ARCA'S – RESOLVED:

**57-00-18-A-21 2000 EXERCISE REPORT PG.73 EVALUATION AREA 6.A.1
MANCHESTER RECEPTION CENTER SOUTH SIDE MIDDLE SCHOOL ISSUE: PORTAL
MONITOR OPERATORS INEXPERIENCED.**

**57-00-18-A-22 2000 EXERCISE REPORT PG.73 EVALUATION AREA 6.A.1
MANCHESTER RECEPTION CENTER SOUTH SIDE MIDDLE SCHOOL ISSUE: PORTAL
MONITOR RATE OF OPERATION INCORRECT.**

**57-00-18-A-23 2000 EXERCISE REPORT PG.73 EVALUATION AREA 6.A.1
MANCHESTER RECEPTION CENTER SOUTH SIDE MIDDLE SCHOOL ISSUE: SECONDARY
MONITOR FAILED TO MONITOR SOLES OF FEET.**

**57-00-18-A-24 2000 EXERCISE REPORT PG.74 EVALUATION AREA 6.A.1
MANCHESTER RECEPTION CENTER SOUTH SIDE MIDDLE SCHOOL ISSUE:
DECONTAMINATION MONITORS ALLOWED CROSS CONTAMINATION.**

**57-00-18-A-25 2000 EXERCISE REPORT PG.74 EVALUATION AREA 6.A.1
MANCHESTER RECEPTION CENTER SOUTH SIDE MIDDLE SCHOOL ISSUE: SECONDARY
MONITORS CONTAMINATED AREA MISMARKED.**

**57-00-18-A-26 2000 EXERCISE REPORT PG.75 EVALUATION AREA 6.A.1
MANCHESTER RECEPTION CENTER SOUTH SIDE MIDDLE SCHOOL ISSUE: AVAILABILITY
OF TRAINED PERSONNEL NOT APPARENT.**

**57-00-18-A-27 2000 EXERCISE REPORT PG.75 EVALUATION AREA 6.A.1
MANCHESTER RECEPTION CENTER SOUTH SIDE MIDDLE SCHOOL ISSUE: REVISION 12
MATERIAL USED WHEN REVISION 11 WAS IN EFFECT.**

**57-00-18-A-28 2000 EXERCISE REPORT PG.77 EVALUATION AREA 6.A.1
MANCHESTER RECEPTION CENTER MEMORIAL HIGH SCHOOL ISSUE: VEHICLE
MONITORING TEAM HAD INSUFFICIENT NUMBERS OF PERSONNEL.**

**57-00-18-A-29 2000 EXERCISE REPORT PG.77 EVALUATION AREA 6.A.1
MANCHESTER RECEPTION CENTER MEMORIAL HIGH SCHOOL ISSUE: PORTAL MONITOR
OPERATORS INEXPERIENCED; CONDUCTED OPERATIONAL CHECK INCORRECTLY.**

**57-00-18-A-30 2000 EXERCISE REPORT PG.78 EVALUATION AREA 6.A.1
MANCHESTER RECEPTION CENTER MEMORIAL HIGH SCHOOL ISSUE: PORTAL MONITOR
OPERATORS INEXPERIENCED CONDUCTED OPERATIONAL CHECK INCORRECTLY.**

57-00-18-A-33 2000 EXERCISE REPORT PG.78 EVALUATION AREA 6.A.1
MANCHESTER RECEPTION CENTER MEMORIAL HIGH SCHOOL ISSUE: MANPOWER AVAILABILITY.

57-00-18-A-34 2000 EXERCISE REPORT PG.78 EVALUATION AREA 6.A.1
MANCHESTER RECEPTION CENTER MEMORIAL HIGH SCHOOL ISSUE: REV 12 INSTEAD OF 11.

57-00-18-A-35 2000 EXERCISE REPORT PG.79 EVALUATION AREA 6.A.1
MANCHESTER EMERGENCY WORKER DECON FACILITY HILL SIDE MIDDLE SCHOOL ISSUE: SECONDARY MONITORS DID NOT OPERATIONALLY CHECK MONITORING EQUIPMENT.

57-00-18-A-36 2000 EXERCISE REPORT PG.80 EVALUATION AREA 6.A.1
MANCHESTER EMERGENCY WORKER DECON FACILITY HILL SIDE MIDDLE SCHOOL ISSUE: SECONDARY MONITORS MOVED PROBES TOO FAST NO THYROID CHECK WAS CONDUCTED.

57-00-18-A-37 2000 EXERCISE REPORT PG.80 EVALUATION AREA 6.A.1
MANCHESTER EMERGENCY WORKER DECON FACILITY HILL SIDE MIDDLE SCHOOL ISSUE: SECONDARY MONITORS DID NOT TAKE PRECAUTIONS TO PREVENT CROSS CONTAMINATION.

57-00-18-A-38 2000 EXERCISE REPORT PG.80 EVALUATION AREA 6.A.1
MANCHESTER EMERGENCY WORKER DECON FACILITY HILL SIDE MIDDLE SCHOOL ISSUE: SECONDARY MONITORS DID NOT PERFORM A BACKGROUND CHECK PER PROCEDURES.

57-00-18-A-39 2000 EXERCISE REPORT PG.80 EVALUATION AREA 6.A.1
MANCHESTER EMERGENCY WORKER DECON FACILITY HILL SIDE MIDDLE SCHOOL ISSUE: SECONDARY MONITORS MOVED PROBE TOO FAST AND TOO CLOSE TO EVACUEES.

57-00-18-A-40 2000 EXERCISE REPORT PG.80 EVALUATION AREA 6.A.1
MANCHESTER EMERGENCY WORKER DECON FACILITY HILL SIDE MIDDLE SCHOOL ISSUE: ADEQUATE NUMBERS OF TRAINED PERSONNEL WERE NOT AVAILABLE.

57-00-18-A-32 2000 EXERCISE REPORT PG.78 EVALUATION AREA 6.A.1
MANCHESTER RECEPTION CENTER MEMORIAL HIGH SCHOOL ISSUE: COMPUTER SYSTEM NEEDED TO REGISTER EVACUEES WAS NOT AVAILABLE.

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)

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 air intake systems, 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.

NEW HAMPSHIRE EXTENT OF PLAY

Manchester South Side Middle School and Rochester Middle School will demonstrate their ability to operate reception/monitoring/decontamination center facilities for the general public and emergency workers. This demonstration will take place independently and out of sequence. Seven simulated evacuees (one male and one female "contaminated") at each facility will be processed during the demonstration.

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

N/A

PRIOR ARCA'S – RESOLVED:

**57-00-18-A-30 2000 EXERCISE REPORT PG.77 EVALUATION AREA 6.B.1
MANCHESTER RECEPTION CENTER MEMORIAL HIGH SCHOOL ISSUE: ONE PORTAL
MONITOR WAS OUT FOR REPAIR.**

PRIOR ARCA'S – UNRESOLVED:

**57-02-6b.1-A-09 DOVER RECEPTION CENTER MONITORING PREFORMANCE LACK OF
CROSS CONTAMINATION CONTROL.**

57-02-6b.1-A-10 DOVER RECEPTION CENTER **IMPROPER CONTAMINATION CONTROL BY EW**

57-02-6b.1-A-11 DOVER RECEPTION CENTER **SUPERVISOR DID NOT UNDERSTAND PROPER PROCEDURES FOR SEPERATING CONTAMINATED EVACUEES FROM CLEAN EVACUEES.**

57-02-6b.1-A-12 DOVER RECEPTION CENTER **FEMALE DECON STAFF PARTICIPATED IN MANCHESTER DRILL.**

Sub-element 6.c - Temporary Care of Evacuees

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

INTENT

This sub-element is derived from NUREG-0654, which provides that OROs demonstrate the capability to establish relocation centers in host areas. Congregate care is normally provided in support of OROs by the American Red Cross under existing letters of agreement.

EXTENT OF PLAY

Under this criterion, demonstration of congregate care centers may be conducted out of sequence with the exercise scenario. The evaluator should conduct a walk-through of the center to determine, through observation and inquiries, that the services and accommodations are consistent with ARC 3031 **In this simulation, it is not necessary to set up operations, as they would be in an actual emergency.** Alternatively, capabilities may be demonstrated by setting up stations for various services and providing those services to simulated evacuees. Given the substantial differences between demonstration and simulation of this criterion, exercise demonstration expectations should be clearly specified in extent-of-play agreements.

Congregate care staff should also demonstrate the capability to ensure that evacuees have been monitored for contamination, have been decontaminated as appropriate, and have been registered before entering the facility. This capability may be determined through an interview process. If operations at the center are demonstrated, material that would be difficult or expensive to transport (e.g., cots, blankets, sundries, and large-scale food supplies) need not be physically available at the facility(ies). However, availability of such items should be verified by providing the evaluator a list of sources with locations and estimates of quantities.

NEW HAMPSHIRE EXTENT OF PLAY

Congregate care centers will not be activated. Current shelter surveys will be provided to FEMA for review in August 2004. Based on FEMA's survey review, a tour of selected (some, all, or none) congregate care facilities that support the Manchester and Rochester reception centers will be conducted with a controller and an American Red Cross representative independently and out of sequence

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

N/A

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

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

INTENT

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to transport contaminated injured individuals to medical facilities with the capability to provide medical services.

EXTENT OF PLAY

Monitoring, decontamination, and contamination control efforts will not delay urgent medical care for the simulated victim.

ORO should demonstrate the capability to transport contaminated injured individuals to medical facilities. An ambulance should be used for the response to the victim. However, to avoid taking an ambulance out of service, any vehicle (e.g., car, truck, or ambulance) may be utilized to transport a simulated victim to the medical facility. Normal communications between the ambulance/ dispatcher and the receiving medical facility should be demonstrated. If a substitute vehicle is used for transport to the medical facility, this communication must occur prior to releasing the ambulance from the drill. This would include reporting radiation monitoring results, if available.

Additionally, the ambulance crew should demonstrate, by interview, knowledge of where the ambulance and crew would be monitored and decontaminated, if required, or whom to contact for such information.

Monitoring of the simulated victim may be performed prior to transport, done enroute, or deferred to the medical facility. Prior to using a monitoring instrument(s), the monitor(s) should demonstrate the process of checking the instrument(s) for proper operation. All monitoring activities should be completed, as they would be in an actual emergency.

Appropriate contamination control measures should be demonstrated prior to and during transport and at the receiving medical facility.

The medical facility should demonstrate the capability to activate and set up a radiological emergency area for treatment. Equipment and supplies should be available for the treatment of contaminated injured individuals.

The medical facility should demonstrate the capability to activate and set up a radiological emergency area for treatment. Equipment and supplies should be available for the treatment of contaminated injured individuals. The medical facility should demonstrate the capability to make decisions on the need for decontamination of the individual, to follow appropriate decontamination procedures, and to maintain records of all survey measurements and samples taken. All procedures for the collection and analysis of samples and the decontamination of the individual should be demonstrated or described to the evaluator.

NEW HAMPSHIRE EXTENT OF PLAY

This Evaluation Area will be demonstrated during the September 2004 MS-1 Drill at the Wentworth-Douglas Hospital located in Dover, N.H.

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

N/A

PRIOR ARCA'S – RESOLVED:

57-02-6.d.1-A-13 WD HOSPITAL RAD TECH ATTEMPTED TO MONITOR PATIENT W/ PROBE COVER STILL ON

57-02-6.d.1-A-14 WD HOSPITAL INITIAL MONITORING WAS CONDUCTED WITH WRONG INSTRUMENT

57-02-6.d.1-A-15 WD HOSPITAL FOLLOW UP MONITORING WAS CONDUCTED POORLY.

57-02-6.d.1-A-16 WD HOSPITAL BACKGROUND READING FOR REA WAS NOT CONDUCTED.

57-02-6.d.1-A-17 WD HOSPITAL INSTRUMENTS WERE NOT CHECKED FOR PROPER OPERATION.

57-02-6.d.1-A-18 WD HOSPITAL EMTs HAD NOT CONSIDERED NECESSARY PRECAUTIONS/PROCEDURES TO PREVENT CROSS CONTAMINATION OF THEMSELVES OR THE INJURED WORKER.

57-02-6.d.1-A-19 WD HOSPITAL RAD TECH USED WRONG TYPE OF SURVEY INSTRUMENT.

57-20-6.d.1-A-20 WD HOSPITAL RAD TECH DID NOT DEMONSTRATE KNOWLEDGE OF THE HOSPITAL PLAN TO DETERMINE AN ACTION LEVEL FOR CONTAMINATION.

ALL WD HOSPITAL ARCAS LISTED ABOVE WERE CLOSED FOLLOWING THE REMEDIAL TRAINING CONDUCTED 12/11/02

WENTWORTH DOUGLASS EXTENT OF PLAY

FEMA Evaluation Criteria sub-element 6.d

Transportation and Treatment of Contaminated Injured Individuals

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

FEMA Expected Extent of Play

Monitoring, decontamination, and contamination control efforts will not delay urgent medical care for the simulated victim.

The response organization should demonstrate the capability to transport contaminated injured individuals to medical facilities. An ambulance should be used for the response to the victim. However, to avoid taking an ambulance out of service, any vehicle (e.g., car, truck, or ambulance) may be utilized to transport a simulated victim to the medical facility.

Normal communications between the ambulance/ dispatcher and the receiving medical facility should be demonstrated. If a substitute vehicle is used for transport to the medical facility, this communication must occur prior to releasing the ambulance from the drill. This would include reporting contamination results, if available.

Additionally, the ambulance crew should demonstrate, by interview, knowledge of where the ambulance and crew would be monitored and decontaminated, if required, or whom to contact for such information.

Monitoring of the simulated victim may be performed prior to transport, done enroute, or deferred to the medical facility. Prior to using a monitoring instrument(s), the monitor(s) should demonstrate the process of checking the instrument(s) for proper operation. All monitoring activities should be completed, as they would be in an actual emergency. Appropriate contamination control measures should be demonstrated prior to and during transport and at the receiving medical facility.

The medical facility should demonstrate the capability to activate and set up a radiological emergency area for treatment. Equipment and supplies should be available for the treatment of contaminated injured individuals.

The medical facility should demonstrate the capability to activate and set up a radiological emergency area for treatment. Equipment and supplies should be available for the treatment of contaminated injured individuals. The medical facility should demonstrate the capability to make decisions on the need for decontamination of the individual, to follow appropriate decontamination procedures, and to maintain records of all survey measurements and samples taken. All procedures for the collection and analysis of samples and the decontamination of the individual should be demonstrated or described to the evaluator.

Dover Fire Department Ambulance Staff Extent of Play

EMERGENCY MEDICAL PERSONNEL WHO ARE RESPONSIBLE FOR TRANSPORTING THE VICTIM FROM THE

Accident site to the MS-1 Hospital will perform as follows:

The ambulance will be requested to respond to the Dover South End Fire Station. Here a moulaged patient will be awaiting transport to the Wentworth-Douglass hospital.

The responding ambulance staff will be wearing gloves but no shoe covers when responding to the accident scene. A controller, simulating a Reception Center secondary monitor, will brief the ambulance staff on the emergency worker's medical and radiological condition, and advise them concerning contamination control measures. A controller, simulating the Reception Center RADEF Officer, will provide the ambulance staff with self-reading pocket dosimeters and TLDs prior to entering the accident scene area.

The ambulance staff **will not** demonstrate a capability to monitor individuals for external contamination. The ambulance staff will evaluate and treat any immediate medical problems utilizing appropriate contamination control techniques. Radiological monitoring and contamination control measures may become secondary in an effort to provide immediate medical attention to the injured patient. The ambulance staff will drape the ambulance gurney with plastic as a means of containing contamination within the vehicle. The ambulance staff will demonstrate contamination control measures by wearing gloves when handling the patient. The patient may be wrapped in a blanket or sheet to prevent the spread of contamination and loaded into the ambulance for transport. If patient care is provided to the patient while in transit, the attending ambulance attendant will change his gloves and dispose of any waste in a dedicated contaminated waste bag.

CONTROLLER NOTE: A controller will accompany the ambulance to the hospital providing patient vitals. The controller will direct the ambulance staff to notify Wentworth-Douglass hospital of the patient's condition and estimated time of arrival. The controller will monitor care being provided the patient while in transit, establishing contamination levels for the interior of the ambulance and the ambulance attendant providing patient care. These contamination levels will be reported to the Hospital staff, when the hospital staff conducts appropriate contamination surveys.

(**Note:** The hospital can decide to impound the vehicle based on contamination survey results. Controller inject will request that this action not be implemented.

Wentworth-Douglass MS-1 Hospital Extent of Play

Hospital initial and follow-up notification

The exercise will commence when a controller simulating Dover Reception Center will notify Wentworth-Douglass Hospital of the intent to transfer a contaminated patient. The Hospital will be provided details of the victim's medical and contamination condition.

The actual transport will be initiated from the South End Fire Station. Transport will take approximately 15 minutes. The use of flashing lights and sirens will not be allowed.

The ambulance staff will provide the emergency medical communications to the hospital during transport. The ambulance staff will provide a complete report of the individual's physical condition, vital signs, and any radiation monitoring information upon transfer of the patient to the hospital staff.

Monitoring of the ambulance and its occupants to detect the nature and extent of radiological contamination and decontaminated, if necessary.

The Hospital monitoring staff will monitor the ambulance staff and the interior of the ambulance to determine if any contamination levels exist. If the ambulance staff's clothing is contaminated, the hospital staff would ask them to remove and discard it in a contaminated waste receptacle. Alternate clothing would be provided. If skin contamination is detected then the staff would attempt to decontaminate the area using a washcloth with warm water and soap. If the vehicle is contaminated, the hospital monitoring staff will attempt to decontaminate it using masslin cloth to wipe over the contaminated area. If this technique fails then the vehicle will be impounded until DPHS decontaminate it and authorize its release. The actual decontamination process may be evaluated by interview. The ambulance will be released from the exercise as soon as possible

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

CONTROLLER NOTES: Hospital staff members designated in the plan should be present or available on short notice following a hospital announcement of a code "R" response.

The Hospital will setup an ambulance reception area outside the emergency room entrance. The Hospital will activate and set up the radiological emergency area (REA) for Level 2 patient treatment.

The Hospital will use dedicated emergency equipment and supplies available for treatment of contaminated, injured, or exposed individuals.

The Hospital monitoring staff will demonstrate the availability of an operable survey instrument(s) for monitoring the patient, the treatment area and equipment, and the ambulance for radioactive contamination. The monitoring probes will be covered with plastic. Prior to using an instrument(s) for monitoring, the monitoring staff will demonstrate the process of checking the instrument(s) for proper operation. This involves checking the battery status and measuring the radiation using a check source. Once the operability of the survey instrument is confirmed, background radiation levels should be determined in the immediate vicinity where individuals will be monitored.

Hospital facility staff will demonstrate the capability to monitor the individual for external contamination by taking readings directly over the patient. Medical facility staff will carry out radiological monitoring of the individual unless the individual has an urgent medical condition. Monitoring will be performed in the REA of the medical facility to determine the need for decontamination.

Records will be maintained of all survey results, using forms required by the plan and information provided to the treating physician.

The Hospital monitor(s) will demonstrate the capability to make decisions on the need for decontamination of individuals based on guidance levels and procedures stated in the facility plan. Hospital staff will demonstrate the capability to follow decontamination procedures for cleansing areas with warm water and/or saline solutions. Procedures for appropriate disposal or decontamination of instruments, clothing, and medical equipment also will be demonstrated.

Decision making regarding the setting of priorities between addressing radioactive contamination and an urgent medical condition will be evaluated based on an evaluator's interview with the medical facility personnel.

Hospital staff will demonstrate the capability to minimize the spread of contamination within the REA, to other parts of the medical facility, to non-contaminated areas of the patient, and to themselves. The staff will discuss the method of transferring contaminated, injured individual, after decontamination, to a clean area within the facility in a way that precludes or minimizes the spread of contamination from the REA into other areas of the medical facility.

The Hospital staff will demonstrate the use of monitoring instruments and contamination containment procedures to ensure that contamination is not carried from the REA to other parts of the medical facility. **The Trauma Room will be set-up as part of the Level 2 response. Normally, setup of this area depends on the severity of the patient's medical status. Actual transfer of the patient to this room depends on the doctor's decision.** The staff will demonstrate procedures sufficient to ensure that all protective clothing is removed within the REA and that staff members and equipment are monitored for contamination prior to entering buffer zones.

**MASSACHUSETTS
EVALUATION AREAS AND EXTENT OF PLAY
SEABROOK NUCLEAR POWER STATION EXERCISE
NOVEMBER 17, 2004**

Overview

The following organizations/locations will demonstrate in 2004:

State Emergency Operations Center

Massachusetts Emergency Management Agency
Massachusetts Department of Public Health
Massachusetts State Police
Massachusetts Highway Department
Massachusetts National Guard
Massachusetts Department of Mental Health
Department of Agricultural Resources
Secretary of the Commonwealth Staff
American Red Cross
Federal Emergency Management Agency
Florida Power and Light Energy

Region I Emergency Operations Center

Massachusetts Emergency Management Agency – Region I
Massachusetts State Police
Massachusetts Highway Department
American Red Cross
Northeast Emergency Medical Services

Emergency Operations Facility

Seabrook Nuclear Power Station
Massachusetts Emergency Management Agency
Massachusetts Department of Public Health

Radiological Field Monitoring and Sampling Teams

Seabrook Nuclear Power Station
Massachusetts Department of Public Health

Media Center

Seabrook Nuclear Power Station
Massachusetts Emergency Management Agency

Risk Jurisdictions

Amesbury EOC
Merrimac EOC
Newbury EOC
Newburyport EOC
Salisbury EOC
West Newbury EOC

School Districts

Amesbury School District
Pentucket School District
Newburyport School District
Triton Regional School District

Schools

Amesbury
Amesbury Elementary
Amesbury Middle School
Sparhawk School

Merrimac
Donaghue School

Newbury
Newbury Elementary

Newburyport
Bresnahan School
Newburyport High School
Rupert A. Nock Middle School

Salisbury
Sparhawk School @ North Campus

West Newbury
Pentucket Regional High School
Pentucket Regional Middle School

Special Facilities

Amesbury
Academy for Strategic Learning
Amesbury Residence
Elizabeth Calsey House
Elizabeth Calsey House 2
Highland Program

Newburyport
Country Rehabilitation
Heritage House
Newburyport Residence
Port Healthcare Center
Residence Options
Turning Point, Inc.
Anna Jacques Hospital
DARE Family Services

Salisbury
Assisted Living Center of Salisbury
Greater Newburyport

Day Cares

Amesbury
Leaps and Bounds Pre-School (Elm Street)
Leaps and Bounds Pre-School (Haverhill Road)

Newburyport
Bright Horizons of Newburyport
Community Actions, Inc.
Mrs. Murray's Nursery
Mulberry Child Care and Pre-School
YMCA- School's Out Program

State Transportation Staging Area – will demonstrate on August 21, 2004

Local Transportation Staging Areas – will demonstrate on August 21, 2004

Masconomet Reception Centers – will demonstrate on October 23, 2004

Danvers KI Dispensing Site (Danvers Fire Station at 430 Maple Street) – will demonstrate on October 23, 2004

MEMA would also like to request implementation of “on the spot” corrections of issues as outlined in Recommendation Initiative 1.5 – Correct Issues Immediately.

EVALUATION AREA 1: Emergency Operations Management

Sub-element 1.a – Mobilization

Intent

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

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)

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 otherwise indicated in the extent of play agreement.

Massachusetts Extent of Play

State EOC—Emergency staff who normally work at the State EOC and who fill emergency positions at the State EOC will report at the times they normally report for work unless they are paged/called and directed to report for duty at an earlier time. Emergency staff who normally work at other locations who fill emergency positions at the State EOC will be in the area awaiting notification. Upon notification, these players will simulate a compressed travel time, roughly equivalent to ten minutes per one hour of normal travel time (i.e., if the actual travel time from the player’s normal work location to the State EOC is one hour, the player should report ten minutes after notification; if the actual travel time is two hours, the player should report twenty minutes after notification). Operations/Communications staff will show rosters and call-down or computerized lists to the FEMA evaluator.

Region I EOC—Emergency staff who normally work at the Area I EOC and who fill emergency positions at the Area I EOC will report at the times they normally report for work unless they are paged/called and directed to report for duty at an earlier time. Emergency staff who normally work at other locations who fill emergency positions at the Area I EOC will be in the area awaiting notification. Upon notification, these players will simulate a compressed travel time, roughly equivalent to ten minutes per one hour of normal travel time (i.e., if the actual travel time from the player’s normal work location to the Area I EOC is one hour, the player should report ten minutes after notification; if the actual travel time is two hours, the player should report twenty minutes after notification). Operations/Communications staff will show rosters and call-down or computerized lists to the FEMA evaluator.

STSA staff will be notified of the emergency and will call in with ETAs. No mobilization of STSA staff will occur. The STSA has demonstrated on August 21, 2004.

Masconomet Reception Staff will be notified of the emergency and will call in with ETAs. No mobilization of MRC personnel will occur. MRC has demonstrated on October 23, 2004.

EOF—MEMA and MDPH personnel will be in the area awaiting notification. Upon notification to report to the facility, these players will wait one hour prior to responding to the EOF.

Media Center—MEMA personnel will be in the area awaiting notification. Upon notification to report to the facility, these players will wait one hour prior to responding to the Media Center.

NIAT Field Monitoring Team Personnel—Will be in the area awaiting notification. Upon notification to report, these players will wait one hour prior to responding to the NIAT Field Monitoring Team reporting location.

State Police Troop A, Danvers—Will develop rosters for state traffic/access control point personnel and State Police Assembly Area personnel. No control point personnel will actually be mobilized, as traffic and access control will be demonstrated through an interview with the FEMA evaluator.

Transportation Providers: Initial calls will be made to all transportation providers to verify the number of vehicles. A Controller inject will provide the number of vehicles and drivers available. No mobilization of vehicles or personnel will occur.

Danvers KI Dispensing Site: Call down of staff to confirm their availability and ETA will be demonstrated through the MDPH Coordinator at the SEOC in sequence on November 17, 2004.

The following Danvers KI Dispensing Site staff will be pre-staged on October 23, 2004 at the dispensing site, 430 Maple Street, at the time the demonstration is scheduled to begin:

MDPH Dispensing Site manager
Site Staff (10)
Police Representatives (2)

AREAS REQUIRING CORRECTIVE ACTION: 1.a.1

AMESBURY - ISSUE # 57-02-1.a.1-A-25

At 0923 hours, the Amesbury Fire Department Dispatcher misunderstood a telephone conversation from the Fire Chief who was located in the Emergency Operations Center. The Chief was describing the degrading emergency condition at Seabrook Station and the dispatcher understood that he was to immediately sound the Amesbury sirens. The Dispatcher promptly completed the Emergency Action Directive Form (401 Rev. 5) and simulated activation of the sirens at 0924 hours.

Schedule of Corrective Actions:

Training will be provided to ensure all dispatchers follow procedures and are familiar with siren activation procedures.

MERRIMAC - ISSUE # 57-02-1.a.1-A-27

The Merrimac group paging system did not work properly. The dispatcher performed a group page to the following Emergency Operations Center (EOC) staff to report to the EOC:

Municipal Official
Emergency Management Director
Police Department Representative
Fire Department Representative

The dispatcher did not receive confirmation from the above staff and began to notify staff via commercial phone. The dispatcher was able to notify them of the alert and to report to Merrimac EOC. The dispatcher proceeded to page/ call other EOC staff to report to the EOC.

Schedule of Corrective Action:

The Merrimac group paging system will be assessed and, if necessary, repaired. If FEMA would like to see a re-demonstration of this equipment, MEMA will coordinate a date.

NOTE:

Although the notification process was not as efficient, per procedure the backup system (telephone) was demonstrated successfully; therefore, public safety was not jeopardized.

Sub-element 1.b – Facilities

Intent

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) have facilities to support the emergency response.

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

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 used in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Massachusetts Extent of Play

Due to recent structural changes at the Masconomet Regional High School, the layout for processing of evacuee was revised. The Masconomet Reception Center will receive a baseline evaluation under this new criterion.

The Danvers KI Dispensing Site located the Danvers Fire Station at 430 Water Street will receive their baseline evaluation. An MOU regarding a provider of bottled water will be provided to FEMA. The transportation of KI and bottled water to the dispensing site will be simulated. Two traffic lanes will be set up.

Sub-element 1.c - Direction and Control

Intent

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

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

Extent of Play

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 otherwise noted above or indicated in the extent of play agreement.

Massachusetts Extent of Play

EPZ EOCs: If any towns are directed to evacuate, EOC personnel will demonstrate continuity of government through a discussion of logistics. Closing of the local EOC and relocation to a facility outside the EPZ will be simulated through discussion. All appropriate communications with the State EOC and MEMA Region I will be fully demonstrated.

SUB-ELEMENT 1.D – COMMUNICATIONS EQUIPMENT

Intent

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) 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.

Criterion 1.d.1: At least two communication systems are available, at least one operates properly, and communication links are established and maintained with appropriate locations.

Communications capabilities are managed in support of emergency operations. (NUREG-0654, F.1, 2)

Extent of Play

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 exists. 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 otherwise noted above or in the extent of play agreement.

Massachusetts Extent of Play

State EOC: Backup communications between the State EOC and the Region I EOC will be demonstrated once. Contact with locations/organizations not playing will be simulated.

Region I EOC: Contact with locations/organizations not playing will be simulated.

EPZ Local EOCs: Contact with locations/organizations not playing will be simulated.

Danvers KI Dispensing Site: Both primary and secondary communications capability through the KI Dispensing Site Manger will be demonstrated between the MDPH Lead to the SEOC Dispatcher and logged. Contact with locations not playing will be simulated.

AREAS REQUIRING CORRECTIVE ACTION: 1.d.1

SEOC - ISSUE # 57-0-2-1.d.1-A-21

The command and control radio systems at the Salisbury Police Department (24-hour warning point) and the Salisbury Emergency Operations Center (EOC) had difficulty communicating with Massachusetts Emergency Management Agency (MEMA) in Framingham. The beginning of every message was received with severe static and the receivers at each station had an extremely difficult time understanding the messages. The static was so bad that each operator in Salisbury had to request the MEMA operator to repeat the message several times.

Schedule of Corrective Actions:

Replacement radios have been purchased and are scheduled to be installed at all current Command & Control system locations. Once the replacement radios have been installed and training completed, MEMA will schedule a test of the new radios from MEMA SEOC to all EPZ locations. Installation of the replacement radios is scheduled for completion on or about March 1st. FEMA is welcome to observe the testing of the new equipment.

NOTE:

Both the MEMA and Salisbury dispatchers followed procedures and confirmed the messages via the backup equipment (telephone); therefore, public safety was not jeopardized and there was no risk to the general public.

NEWBURYPORT - ISSUE #57-02-1.d.1-A-30

The TTY did not operate correctly. Per the SNN procedure, Region I was contacted, as a backup, to make the notification. This was performed successfully.

Schedule of Corrective Action:

Procedures will be revised and training provided to ensure TTY notifications will be made in accordance with procedures.

NOTE:

Although the TTY did not work properly, procedures were followed to utilize Region I to make the TTY notification. This was successfully demonstrated; therefore, MEMA feels this is not an issue.

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

Intent

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) have emergency equipment and supplies adequate to support the emergency response.

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

Extent of Play

Equipment within the facility (facilities) 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 dosimetry 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 FEMA indicating that the KI supply remains potent, in accordance with Food and Drug Administration (FDA) guidance.

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.

Massachusetts Extent of Play

Documentation of dosimetry inspection, dosimetry inventory and KI inventory will be available for review at the Region I office. Note: FEMA will provide copies of the Annual Letter of Certification to evaluators as appropriate.

Available supplies of KI should be within the expiration date indicated on KI bottles. As an alternative where appropriate, MEMA will produce a letter from the manufacturer indicating that the KI supply remains potent beyond the expiration date.

Danvers KI Dispensing Site: Documentation of KI inventory will be available for review at the MDPH NIAT Office.

EVALUATION AREA 2: Protective Action Decision-Making

Sub-element 2.a - Emergency Worker Exposure Control

Intent

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (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.

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, J.10. e, f)

Extent of Play

ORO's 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.

Massachusetts Extent of Play

There will be no exceptions to this sub-element in the Massachusetts Extent of Play.

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

Intent

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) 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 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.

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

Extent of Play

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 (PAR) 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 independently 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 PAG 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.

Massachusetts Extent of Play

There will be no exceptions to this sub-element in the Massachusetts Extent of Play.

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

Extent of Play

Offsite Response Organizations (ORO) should have the capability to make both initial and subsequent PADs. They should demonstrate the capability to make initial PADs in 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 monitoring 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 offsite 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 sheltering and evacuation. 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.

Massachusetts Extent of Play

There will be no exceptions to this sub-element in the Massachusetts Extent of Play. The State's decision-making process for distribution of KI for the general public will be tested for the first time during this exercise.

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

Intent

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) 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.

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

Extent of Play

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 where an institutionalized population cannot be evacuated, the administration of KI should be considered by the OROs.

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.

Massachusetts Extent of Play

There will be no exceptions to this sub-element in the Massachusetts Extent of Play.

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

Intent

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) have the means to assess the radiological consequences for the ingestion exposure pathway, relate them to the appropriate 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.

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

Extent of Play

It is expected that the Offsite Response Organizations (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 actions 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's 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 (FRRERP), 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.

Massachusetts Extent of Play

This sub-element will not be evaluated in 2004.

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

Intent

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) 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 nuclear power plant.

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

Extent of Play

Relocation: OROs 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 temporarily 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 dosimetry for emergency workers; questions regarding the individual's objectives and locations expected to be visited and associated time frames; 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 dosimetry 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 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

policies 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.

Massachusetts Extent of Play

This sub-element will not be evaluated in 2004.

EVALUATION AREA 3: Protective Action Implementation

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

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 dosimetry and permanent record dosimetry; 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.

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

Extent of Play

ORO's should demonstrate the capability to provide appropriate direct-reading and permanent record dosimetry, dosimeter 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 ORO's 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 affected 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 dosimetry.

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.

Massachusetts Extent of Play

State Police Troop, Danvers: *Dosimetry packets will be issued to two State Police traffic control personnel, who will demonstrate knowledge of the use of dosimetry and Massachusetts policies on dosimetry through a discussion with the FEMA evaluator.*

EPZ EOCs: *Dosimetry packets will be issued to field staff that will be working outdoors within the EPZ and to a minimum of two individuals who will be working inside each EPZ EOC.*

Danvers KI Dispensing Site – Located at the Danvers Fire Station at 430 Maple Street will demonstrate out of sequence on October 23, 2004. Two traffic lanes will be set up. Seven vehicles containing an evacuee(s) will be processed through the KI Dispensing Site.

AREAS REQUIRING CORRECTIVE ACTION: 3.a.1

REGION I - ISSUE # 57-02-3.a.1-A-22

There was confusion at Massachusetts Local EOCs regarding the order to ingest KI by emergency workers. MEMA's directive to ingest KI in the towns of Amesbury and Salisbury was not properly communicated. The towns, however, responded quite well to the conflicting information they received by calling MEMA Region I for clarification.

At 1201 hours the Merrimac Emergency Management Director was notified by MEMA Region I of an evacuation at Amesbury and Salisbury; Merrimac was recommended to "Shelter In Place and, if unable to leave, to ingest potassium iodide (KI)." At 1206 hours, the Merrimac EMD called MEMA, Region I to verify the Shelter In Place and KI recommendation for Merrimac. MEMA Region I stated KI was for emergency workers only. At 1226 hours, MEMA Region I called to state that only Amesbury and Salisbury emergency workers should take KI.

At 1207 hours Newbury Emergency Operations Center (EOC) was notified of the decision to have Emergency Workers in Newbury ingest potassium iodide (KI). The Newbury Emergency Management Director called the MEMA Region I to verify this information and was told the message was correct. At 1211 hours the NEMD instructed Emergency Workers to ingest KI. At 1218 hours a KI guidance form was faxed to the Newbury EOC from the Massachusetts State EOC, indicating that only Emergency Workers in Amesbury and Salisbury were to ingest KI. The NEMD called MEMA Region I to verify the KI information and was told that the original message for Newbury Emergency Workers to ingest KI was correct. At 1220 hours MEMA Region I called and stated Emergency Workers in Newbury were not to ingest KI. The NEMD told MEMA Region I that information and decisions regarding the ingestion of KI need to be coordinated in a timelier manner.

At 1210 hours, the Newburyport EMD received a call from MEMA Region I recommending ingestion of KI for emergency workers. The EMD announced the KI recommendation over the EOC public address system immediately after receiving the notice. The EMD called MEMA Region I and confirmed the original recommendation for Newburyport, and requested a follow-up fax to confirm the decision. This confirmation was received at the EOC at 1228 hours to include Newburyport in the KI recommendation for emergency workers.

Schedule of Corrective Actions:

The Region I EOC will be reconfigured to include the Community Coordinator and Local Liaison staff within the main EOC to ensure a more efficient flow of information. Training will be provided to ensure Local Liaisons have a clear understanding of protective action decisions.

NOTE:

Inaccurate information was provided, but corrected within twenty minutes of identification; therefore, public safety was not jeopardized and there was no risk to the general public.

MERRIMAC - ISSUE # 57-02-3.a.1-A-28

The Radiological Officer did not properly brief emergency workers on the use of dosimetry. He did not inform the emergency workers of their reporting limit. During an interview with the FEMA evaluator, the emergency workers did not have knowledge of their reporting limit. Also, female emergency workers were not asked if they could be pregnant. Forms 506 and 507 were not given to the female emergency workers.

Schedule of Corrective Action:

The Radiological Officer and EOC staff training will stress the proper procedures in the use of dosimetry and proper radiation exposure control procedures.

Sub-element 3.b – Implementation of KI Decision

Intent

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) 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 and is reflected in ORO's plans and procedures. Provisions should include the availability of adequate quantities, storage, and means of the distribution of radioprotective drugs.

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, J. 10. e)

Extent of Play

Offsite Response Organizations (ORO) 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.

Massachusetts Extent of Play

Actual distribution and ingestion of KI will not occur. Empty KI tablet containers (small zip-lock bags) will be included in the dosimetry packets for emergency workers and institutionalized persons.

School and Day Care staff, including the school nurse and/or teacher who administer KI, will be interviewed by the FEMA Evaluator, who will review logs from the previous day's activities. As part of the demonstration of KI distribution, the FEMA Evaluator should be briefed as if they were the recipient of the KI. The evaluator will check the availability of adequate quantities, storage, and means of KI distribution, to include forms and equipment to be used.

Danvers KI Dispensing Site – Located at the Danvers Fire Station at 430 Maple Street will demonstrate out of sequence on October 23, 2004. Actual distribution and ingestion of KI will not occur. Empty KI tablet envelopes will be distributed. The evaluator will check the availability of adequate quantities, storage and means of KI and bottle water distribution.

Intent

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) 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.

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

Extent of Play

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.

Massachusetts Extent of Play

Region I: Initial calls will be made to all transportation providers to verify the number of vehicles and drivers. A Controller message will provide the number of vehicles and drivers available. No vehicles or personnel will be mobilized.

Region I Special Needs Coordinator and staff will demonstrate all appropriate communications with EPZ community EOC staff and coordination of bed space assignment for evacuating nursing home patients and hospital patients, although actual evacuation of special facilities will not occur. A Controller message will provide the number of estimated bed spaces in host hospitals.

EPZ EOCs: All special facilities will receive initial contact; thereafter, only participating special facilities will continue to receive calls related to the exercise.

EPZ EOC Transportation Coordinators will report to Region I the number of additional beds needed to accommodate patients from each participating facility that may be directed to evacuate; however, no patients will actually be moved or be impacted in any way. Controller messages will provide this information for non-participating facilities.

EPZ EOC Special Needs Notifiers will simulate initial contact with persons with special needs, controllers will provide players with a simulated special needs list containing a minimum of five fictitious names and information and a control cell number. The list of special needs individuals will be shown to the FEMA evaluator; however, the information is confidential and copies will not be provided to the evaluator. The capability to correctly operate a TTY will be demonstrated in Amesbury, Newburyport and West Newbury sending and receiving one test message to and from Region I.

No vehicles for alerting persons with special needs or providing transportation to the transportation dependent will be mobilized.

The following special facilities will participate on November 17, 2004. Participating facilities will be visited on November 18, 2004, by a FEMA evaluator, who will interview key players and review the emergency log from November 17th.

Special Facilities (notation if KI distribution is part of their plan)*

Amesbury

**Academy for Strategic Learning*

Amesbury Residence

Elizabeth Calsey House

Elizabeth Calsey House 2

Highland Program

Newburyport

Country Rehabilitation

Heritage House

Newburyport Residence

Port Healthcare Center

Residence Options

Turning Point, Inc.

Anna Jacques Hospital

DARE Family Services

Salisbury

Assisted Living Center of Salisbury

Greater Newburyport

AREAS REQUIRING CORRECTIVE ACTION: 3.c.1

NEWBURYPORT - ISSUE # 57-02-3.c.1-A-29

There was evidence of only one subsequent update of emergency information from the Newburyport Emergency Management Agency (NEMA) Special Needs Notifier (SNN) for special facilities to the Kinder Care Learning Center, the Knoll Edge Nursery at the Towle Building, and the Knoll Edge Nursery at 38 Hale Street. These facilities were participating in the exercise and, according to the extent of play, should have received initial and subsequent contacts. In particular, the notification of precautionary evacuation of schools was not transmitted. Potassium iodide (KI) notification, which applied only to emergency workers and not to the day care centers, was provided in the only subsequent update made. In addition, this update was listed at the same time for all locations, as indicated in the SNN log, but could not have been made at the same time.

Schedule of Corrective Action:

A training session will be scheduled specifically for Special Needs Notifiers to ensure a thorough understanding of their procedures.

AREAS REQUIRING CORRECTIVE ACTION: 3.c.1

WEST NEWBURY - ISSUE # 57-02-3.c.1-A-31

There was evidence of only one subsequent update of emergency information from the West Newbury Emergency Operations Center (EOC) Special Needs Notifier (SNN) for special facilities to the Children's Castle Day Care and the Koinona Day Care Facilities as required in the extent of play and described on a controller inject. Both facilities were participating in the exercise and, according to the extent of play, should have received initial and subsequent contacts.

Schedule of Corrective Action:

A training session will be scheduled specifically for Special Needs Notifiers to ensure a thorough understanding of their procedures.

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

Extent of Play

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. Contacts with public school systems/districts must be actual.

In accordance with plans and/or procedures, OROs and/or officials of 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 (i.e., 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).

Public school systems/districts shall demonstrate the ability to implement protective action decisions for students. The demonstration shall be made as follows: At least one school in each affected school system or district, 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 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.

The provisions of this criterion also apply to any private schools, private kindergartens and day care centers that participate in REP exercises pursuant to the ORO's plans and procedures as negotiated in 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.

Massachusetts Extent of Play

Region I: Initial calls will be made to all transportation providers. Subsequent calls will be made to a control cell. Mobilization of bus/ambulance drivers and vehicles will not occur.

EPZ EOCs: Initial notification will be made to all school and day care centers (unless otherwise noted); thereafter, calls will be made only to those schools and day care centers that will participate in the exercise. Controller information will be provided for day care centers not scheduled for participation to enable verification of transportation needs. A listing of participating schools and day care centers is included below.

EPZ Schools: Participating schools in the EPZ communities will receive initial and subsequent contacts. Children will not be involved. Unless otherwise noted, participating facilities will be visited on 11/18/04 by a FEMA evaluator, who will interview key players (and if the site's plan calls for KI, responsible staff) and review the emergency log and student rosters from November 17th.

Schools (*notation if KI distribution is part of their plan)

Amesbury

*Amesbury Elementary

*Amesbury Middle School

Sparhawk School

Merrimac

Donaghue School

Newbury

*Newbury Elementary

Newburyport

- *Bresnahan School
- *Newburyport High School
- *Rupert A. Nock Middle School

Salisbury

Sparhawk School @ North Campus

West Newbury

- Pentucket Regional High School
- Pentucket Regional Middle School

Day Care Centers: Day Care Centers will participate on a voluntary basis. Participating day care centers in the EPZ communities will receive the initial and subsequent contacts. Children will not be involved. Participating facilities will be visited on 11/18/04 by a FEMA evaluator who will interview key players (and if the site's plan calls for KI, responsible staff) and review the Day Care Emergency Checklist.11/18/04.

Day Care Centers (*notation if KI distribution is part of their plan)

Amesbury

- Leaps and Bounds Pre-School (Elm Street)
- Leaps and Bounds Pre-School (Haverhill Road)

Newburyport

- Bright Horizons of Newburyport
- Community Actions, Inc.
- *Mrs. Murray's Nursery
- Mulberry Child Care and Pre-School
- YMCA- School's Out Program

AREAS REQUIRING CORRECTIVE ACTION: 3.c.2

MERRIMAC - ISSUE # 57-02-3.c.2-A-26

The Little People's Day Care plans state that the provider should contact parents at the Alert phase. Merrimac EOC Special Facilities representative thought parents were not to be notified to pick up children until children were transported to a host facility.

Schedule of Corrective Actions:

Training will be provided to ensure all dispatchers follow procedures and are familiar with siren activation procedures.

SUB-ELEMENT 3.D. – IMPLEMENTATION OF TRAFFIC AND ACCESS CONTROL

INTENT

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) 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.

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)

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 noted above or otherwise indicated in the extent of play agreement.

Massachusetts Extent of Play

Region I: Will demonstrate all appropriate communications with State Police, Troop A, Danvers and the Massachusetts Highway Department. Traffic control point personnel will not be mobilized.

State Police, Troop A, Danvers: Two personnel who might be assigned traffic and access control duties will be interviewed by the FEMA evaluator on the procedures for operating an access control point. These questions may include the following topics: purpose, kind and use of dosimetry, procedures for reading dosimetry, reporting levels, obtaining equipment for setting up an access control point, or procedures for opening an access control point. No deployment to TCP/ACP locations will occur.

MHD Scotland Road: A FEMA evaluator will visit (SAV the Massachusetts Highway Department facility on Scotland Road, Newbury to inspect equipment and supplies that would be used in support of traffic and access control operations. No deployment to TCP/ACP locations will occur.

EPZ EOCs: EPZ EOCs will demonstrate the ability to direct and monitor traffic control operations within their jurisdictions through discussions and communications with the evaluator. The EOC local highway representative will participate in a discussion of procedures and resources available for traffic control. No personnel or equipment will be deployed to field locations.

Danvers KI Dispensing Site – Located at the Danvers Fire Station at 430 Maple Street. Traffic control will be discussed through an interview with the FEMA evaluator on October 23, 2004.

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

EXTENT OF PLAY

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, all contacts, actual or simulated, 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 noted above or otherwise indicated in the extent of play agreement.

Massachusetts Extent of Play

Each EPZ Local EOC will demonstrate rerouting of traffic following a traffic impediment, in response to a controller message, through an interview with the FEMA Evaluator. No personnel or equipment will be dispatched to the accident scene.

SUB-ELEMENT 3.E – IMPLEMENTATION OF INGESTION PATHWAY DECISIONS

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 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.

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)

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.

Massachusetts Extent of Play

This sub-element will not be evaluated on 2004.

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

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 the capability for the rapid reproduction and distribution of appropriate reproduction-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. However, 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.

Massachusetts Extent of Play

This sub-element will not be evaluated in 2004.

SUB-ELEMENT 3.F – IMPLEMENTATION OF RELOCATION, RE-ENTRY, AND RETURN DECISIONS

Intent

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) 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.

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)

Extent of Play

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 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 dosimetry 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 dosimetry, 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.

ORO 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.

Massachusetts Extent of Play

This sub-element will not be evaluated in 2004.

EVALUATION AREA 4: Field Measurement And Analysis

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

Intent

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) 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.

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

EXTENT OF PLAY

Field teams should be equipped with all instrumentation and supplies necessary to accomplish their mission. 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 otherwise indicated in the extent of play agreement.

Massachusetts Extent of Play

For this exercise, two NIAT field teams consisting of two people will be playing. In accordance with The NIAT Handbook, the field teams will be dispatched from the North Andover Fire Department located at 124 Main Street in North Andover, MA. The NIAT Field Team Coordinator will be stationed at the Seabrook Station EOF in Newington, NH.

The NIAT field teams will collect a minimum of two complete sample sets as specified by the procedures in the NIAT Handbook Section D.4 and continue to collect additional samples at the request of the NIAT Field Team Coordinator.

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

EXTENT OF PLAY

Responsible Offsite Response Organizations (ORO) 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 licensee 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 licensee 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.

ORO's should use Federal resources as identified in the Federal Radiological Emergency Response Plan (FRRP), and other resources (e.g., compacts, utility, 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.

Massachusetts Extent of Play

Coordination concerning transfer of samples to a lab will be simulated and discussed in an interview with the FEMA evaluator.

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

Extent of Play

Field teams should demonstrate the capability to report measurements and field data pertaining to the measurement of airborne radioiodine and particulates and ambient radiation 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

ORO's. 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.

ORO's should use Federal resources as identified in the FRERP, and other resources (e.g., compacts, utility, 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.

Massachusetts Extent of Play

There are no exceptions to this sub-element in the Massachusetts Extent of Play.

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

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 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.

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)

EXTENT OF PLAY

The ORO's field team 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, utility, 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.

Massachusetts Extent of Play

This sub-element will not be evaluated in 2004.

Sub-element 4.c - Laboratory Operations

Intent

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

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

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 (laboratories) 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, utility, 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.

Massachusetts Extent of Play

This sub-element will not be exercised in 2004.

EVALUATION AREA 5: Emergency Notification and Public Information

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

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."

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

Extent of Play

Responsible Offsite Response Organizations (ORO) 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.

Massachusetts Extent of Play

State EOC: Actions to demonstrate performance of initial notification of the public will be performed up to the point of actual transmission of the Emergency Alert System (EAS) message. The EAS message will be prepared and the radio stations (WQSX (93.7FM) and WXRV (92.5FM) will be contacted. A standard test message will be faxed to the stations and broadcast once at the EAS stations' convenience. WBNP (1450 AM) will pick up the message from WQSX over the EAS

The Massachusetts State EOC will coordinate with the New Hampshire State EOC on activating the sirens and EAS.

AREAS REQUIRING CORRECTIVE ACTION: 5.A.1

SEOC – ISSUE# 48-04-5.a.1-A-02 (ASSESSED AT PILGRIM EXERCISE 2004)

During the Pilgrim graded exercise, Emergency Alert System (EAS) message #2 exceeded the 90 second limit the systems allows. The message took two minutes, 30 seconds (150 seconds) to read and include information not required by FEMA.

Schedule of Corrective Action:

EAS messages will be revised to meet 90-second requirement and will provide information as outlined in the FEMA Guidance. This will be demonstrated in the Seabrook graded exercise in November 2004.

Criterion 5.a.2: [RESERVED]

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

Extent of Play

Offsite Response Organizations (ORO) 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 route(s) 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 (that is, 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 only needs to 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 (that is, 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.

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.

Massachusetts Extent of Play

N/A

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

INTENT

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) 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 that 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 should be available for dealing with rumors. This system will hereafter be known as the public inquiry hotline.

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

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 ORO 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.

ORO 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.

ORO 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.

Massachusetts Extent of Play

Media Center: Controllers will act as media representatives.

Information generated as a result of incoming calls to the SEOC Public Information Line phones will be included in news briefings. At least two rumor trends will be handled.

State EOC: Control cell personnel will make calls simulating members of the public and media personnel. The public information staff will demonstrate the ability to handle calls on the public information line. Handling at least two rumor trends (three or more calls of the same nature) will be demonstrated. Two public information line operators each will respond to calls once the Public Alert and Notification System has been activated at Site Area Emergency or General Emergency.

EPZ Towns: Control cell personnel will make calls to the local EOCs simulating members of the public. Each local EOC will demonstrate the community's emergency response and to refer all other questions to the State Public Information Line.

AREAS REQUIRING CORRECTIVE ACTION: 5.b.1

MEDIA CENTER - ISSUE # 57-02-5.b.1-A-24

*News Releases contained a disconnected telephone number that was provided in each release for members of the media to contact Massachusetts Media Center staff for questions. Also, News Release #2 contained conflicting information on the ten-mile marine safety zone in waters off Seabrook Station. In one sentence boaters were advised to relocate more than **five miles** from the plant and not to re-enter the safety zone until further notice.*

Schedule of Corrective Actions:

News Release information will be revised to reflect accurate information.

EVALUATION AREA 6: Support Operation/Facilities

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

Intent

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) 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.

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

Extent of Play

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. Prior to using 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 met. 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 otherwise indicated in the extent of play agreement.

Massachusetts Extent of Play

Masconomet Reception Center will demonstrate out of sequence, October 23, 2004.

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

Intent

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

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

Extent of Play

The monitoring staff should demonstrate the capability to monitor equipment, including vehicles, for contamination in accordance with the Offsite Response Organizations (ORO) 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 air intake systems, 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.

Massachusetts Extent of Play

This sub-element will not be demonstrated in 2004.

Sub-element 6.c - Temporary Care of Evacuees

Intent

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) demonstrate the capability to establish relocation centers in host areas. Congregate care is normally provided in support of OROs by the American Red Cross (ARC) under existing letters of agreement.

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

Extent of Play

Under this criterion, demonstration of congregate care centers may be conducted out of sequence with the exercise scenario. The evaluator should conduct a walk-through of the center to determine, through observation and inquiries, that the services and accommodations are consistent with ARC 3031. In this simulation, it is not necessary to set up operations as they would be in an actual emergency. Alternatively, capabilities may be demonstrated by setting up stations for various services and providing those services to simulated evacuees. Given the substantial differences between demonstration and simulation of this objective, exercise demonstration expectations should be clearly specified in extent-of-play agreements.

Congregate care staff should also demonstrate the capability to ensure that evacuees have been monitored for contamination, have been decontaminated as appropriate, and have been registered before entering the facility. This capability may be determined through an interview process.

If operations at the center are demonstrated, material that would be difficult or expensive to transport (e.g., cots, blankets, sundries, and large-scale food supplies) need not be physically available at the facility (facilities). However, availability of such items should be verified by providing the evaluator a list of sources with locations and estimates of quantities.

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.

Massachusetts Extent of Play

This sub-element will not be evaluated in 2004. (No new facilities have been identified.) Red Cross Shelter Surveys for all locations will be provided to FEMA prior to the graded exercise.

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

Intent

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) should have the capability to transport contaminated injured individuals to medical facilities with the capability to provide medical services.

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

Extent of Play

Monitoring, decontamination, and contamination control efforts will not delay urgent medical care for the victim.

Offsite Response Organizations (ORO) should demonstrate the capability to transport contaminated injured individuals to medical facilities. An ambulance should be used for the response to the victim. However, to avoid taking an ambulance out of service for an extended time, any vehicle (e.g., car, truck, or van) may be utilized to transport the victim to the medical facility. Normal communications between the ambulance/dispatcher and the receiving medical facility should be demonstrated. If a substitute vehicle is used for transport to the medical facility, this communication must occur prior to releasing the ambulance from the drill. This communication would include reporting radiation monitoring results, if available. Additionally, the ambulance crew should demonstrate, by interview, knowledge of where the ambulance and crew would be monitored and decontaminated, if required, or whom to contact for such information.

Monitoring of the victim may be performed prior to transport, done enroute, or deferred to the medical facility. Prior to using a monitoring instrument(s), the monitor(s) should demonstrate the process of checking the instrument(s) for proper operation. All monitoring activities should be completed as they would be in an actual emergency. Appropriate contamination control measures should be demonstrated prior to and during transport and at the receiving medical facility.

The medical facility should demonstrate the capability to activate and set up a radiological emergency area for treatment. Equipment and supplies should be available for the treatment of contaminated injured individuals.

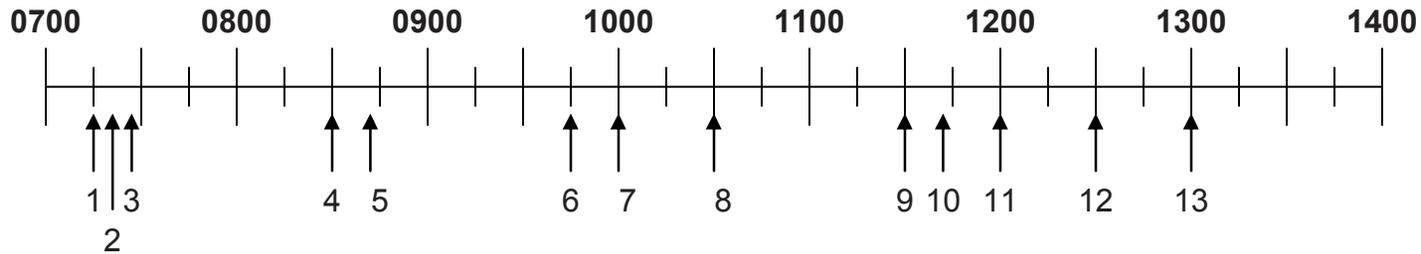
The medical facility should demonstrate the capability to make decisions on the need for decontamination of the individual, to follow appropriate decontamination procedures, and to maintain records of all survey measurements and samples taken. All procedures for the collection and analysis of samples and the decontamination of the individual should be demonstrated or described to the evaluator.

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.

Massachusetts Extent of Play

N/A

APPENDIX 4 – EXERCISE SCENARIO



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|--|---|---|
| <p>1. Initial Conditions set; exercise begins. 1-CBS-P-9-A OOS and COP system in operation.</p> | <p>6. Radiological release initiated through plant vent (WRGM alarm). Projected site boundary dose rate exceeds 50 mR/hr.</p> | <p>11. NRC player arrives at the EOF.</p> |
| <p>2. RCS leak in containment; leak rate ~30 gpm. Operators initiate actions to secure COP system operation.</p> | <p>7. Site Area Emergency declared.</p> | <p>12. Valve 1-CBS-V-17 opened; Containment Building Spray initiated.</p> |
| <p>3. Unusual Event declared. COP valve V-3 fails to close. Release path through COP valve V-10.</p> | <p>8. Centrifugal charging pump 1-CS-P-2-B trips.</p> | <p>13. Exercise play terminated.</p> |
| <p>4. Failure of pump impeller on 1-RC-P-1-A leading to reactor trip and fuel damage. RCS leak rate increases to 80 gpm.</p> | <p>9. Large break LOCA and coincident failure of 1-CBS-V-17. Containment dose rates exceed 4,000 R/hr.</p> | |
| <p>5. Alert declared.</p> | <p>10. General Emergency declared.</p> | |

