



Seabrook Nuclear Power Station

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

Exercise Date: **October 23, 2002**

Report Date: **January 30, 2003**

**FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION I
J.W. McCormack Post Office and Courthouse
Boston, Massachusetts 02109**

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I. EXECUTIVE SUMMARY

On October 23, 2002, 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 June 7-8, 2000. Previous exercises were conducted in February 1986, June 1988, December 1990, June 1992, December 1994, September 1996, and June 1998. 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, and June 2000, 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 thirty-one 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 October 23, 2002, 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
- FR Notice Evaluation Areas September 2001 and amended April 25, 2002.

Section III of this report, entitled “Exercise Overview,” presents basic information and data relevant to the exercise. This section of the report contains a description of the plume pathway EPZ, a listing of all participating jurisdictions and functional entities that were evaluated, and a tabular presentation of the time of actual occurrence of key exercise events and activities.

Section IV of this report, entitled “Exercise Evaluation and Results,” presents detailed information on the demonstration of applicable exercise objectives at each jurisdiction or functional entity evaluated in a jurisdiction-based, issues-only format. This section also contains: (1) descriptions of all Deficiencies and ARCAs assessed during this exercise, recommended corrective actions, and the State and local governments’ schedule of corrective actions for each identified exercise issue and (2) descriptions of unresolved ARCAs assessed during previous exercises and the status of the OROs’ efforts to resolve them.

III. EXERCISE OVERVIEW

Contained in this section are data and basic information relevant to the October 23, 2002, 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 230,900 within two counties: Rockingham County in New Hampshire and Essex County in Massachusetts. The land use is a mixture of 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 sub-areas: 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 October 23, 2002, various out of sequence exercises and drills.

STATE OF NEW HAMPSHIRE

STATE EMERGENCY OPERATIONS CENTER

- New Hampshire Department of Transportation
- New Hampshire Department of Resources and Economic Development
- New Hampshire Fish and Game
- New Hampshire Office of Community and Public Health
- New Hampshire Public Utilities Commission
- New Hampshire State Police
- RACES
- US Army National Guard
- US Coast Guard

EMERGENCY OPERATIONS FACILITY

- NH Office of Community and Public Health
- NH Office of Emergency Management

INCIDENT FIELD OFFICE

- Port City Amateur Radio Club
- NH State Police
- NH Fish and Game
- NH Dept of Transportation
- NH Dept of Resources and Economic Development
- NH Public Utilities
- NH Office of Community and Public Health
- U.S. Coast Guard
- Maine State Police
- Maine Emergency Management Agency
- U.S. Army National Guard

MEDIA CENTER

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

FIELD MONITORING TEAMS #1 and #2

New Hampshire Department of Public Health Services
New Hampshire Department of Safety
New Hampshire State Extension Service
New Hampshire State Office of Community and Public Health

ROCKINGHAM COUNTY DISPATCH CENTER

Rockingham County Sheriffs Department

RISK JURISDICTIONS (NEW HAMPSHIRE)

BRENTWOOD

Board of Selectmen
Emergency Management Agency
Fire Department
Police Department
Radio Amateurs in support of Civil Emergency Services (RACES)

EAST KINGSTON

East Kingston Fire Department
East Kingston Police Department
East Kingston Health department
East Kingston Board of Selectmen
Radio Amateur Civil Emergency Services
East Kingston Public Works
East Kingston School District
School Administrative Unit Regional School District
RACES

EXETER

RACES
American Red Cross
Hampshire Officer of Emergency Management
City Management
Department of Public Works
Police Department
School Administration Unit 16

GREENLAND

Greenland Emergency Management
Greenland Fire Department
Greenland Police
Greenland Town Office personnel
RACES
Town Selectman

HAMPTON

Hampton Fire Department
Hampton Police Department
Police Dispatch
Public Works Department
Town Manager
Town Finance Director
Town Selectman
Volunteers (3)
RACES

HAMPTON FALLS

Board Of Selectmen
Hampton Falls Fire Department
RACES

KENSINGTON

RACES /Radio Operator Volunteers
Board of Selectman
Kensington Police Department
Kensington Fire Department
Kensington Education Department

KINGSTON

Board of Selectmen
RACES
Kingston Fire Department
Kingston Emergency Management Department
New Hampshire Department of Public Health/Radiological Safety
New Hampshire Office of Emergency Management
Kingston Town Clerk

NEW CASTLE

New Castle Council
New Castle Department of Public Works
New Castle Fire Department
New Castle Police Department
RACES

NEWFIELDS

Amateur Radio Emergency Services
Emergency Management Director
Newfields EOC
Newfields Police Department
Newfields Town Board of Selectmen
Newfield Town Road Agent
Newfields Volunteer Fire Department

NEWTON

Board of Selectman
Department of Transportation
Newton Fire Department
Newton Police Department

NORTH HAMPTON

Emergency Management Director
Fire and Rescue
Highway Department
Police Department
Town Administrator
Town Clerk

PORTSMOUTH

Amateur Radio Emergency Services
City Manager
Department of Public Works
Emergency Communications
Emergency Management Agency
Fire Department
Health Department
Human Resources
Police Department
Superintendent of Schools

RYE

Amateur Radio Emergency Services
Community Volunteers
Rye Fire Department
Rye Police Department
Rye Public Works Department
Rye Town Board

SEABROOK

Department of Public Works
Fire Department
Office of Emergency Management
Office of the Town Clerk
Police Department
Town Manager's Office
Town Selectmen
Water Superintendent's Office

SOUTH HAMPTON

Amateur Radio Emergency Services
New Hampshire Emergency Management Agency
New Hampshire Highway Department
South Hampton Transportation Department
South Hampton Fire Department
South Hampton Police Department

STRATHAM

Board of Selectmen
Emergency Management Agency Director
Highway Department
Radiological Defense Officer
Stratham Fire Department
Stratham Police Department
Transportation Department

SUPPORT JURISDICTIONS (NEW HAMPSHIRE)

MANCHESTER EOC

Manchester Department of Police
Manchester Emergency Management Services (EMS)
Manchester Fire Department
Manchester Health Department
Manchester Mayor's Office
Manchester Schools
New Hampshire Highway Department

DOVER EOC

Dover Fire Department

ROCHESTER EOC

Rochester Police Department
Rochester Fire Department
Rochester City Manager

STATE TRANSPORTATION STAGING AREA

Rockingham County Sheriffs Department
University of New Hampshire Volunteers

COMMONWEALTH OF MASSACHUSETTS

STATE EMERGENCY OPERATIONS CENTER

Massachusetts Secretary of State Citizens Information Line
Massachusetts Emergency Management Agency
Massachusetts State Police
Massachusetts Department of Public Health
Massachusetts Department of Mental Health
Massachusetts Highway Department
Massachusetts National Guard
American Red Cross
Federal Emergency Management Agency
Department of Food and Agriculture
Seabrook Nuclear Power Station

EMERGENCY OPERATIONS FACILITIES

Massachusetts Emergency Management Agency
Massachusetts Department of Public Health

MEDIA CENTER

Massachusetts Emergency Management Agency
New Hampshire Office of Emergency Management
Florida Power and Light Energy (FPL)

REGION I (Tewksbury)

Massachusetts Emergency Management Agency
American Red Cross
Massachusetts State Police
Massachusetts Highway Department
National Guard
RACES
C-Med
Volunteer Personnel

MASSACHUSETTS NUCLEAR INCIDENT ADVISORY TEAMS #8 and #14

Massachusetts Department of Public Health

STATE POLICE TROOP A, DANVERS

Massachusetts State Police Troop A

TEWKSBURY RECEPTION CENTER

Tewksbury Fire Department
Tewksbury Police Department
Tewksbury Hospital Staff
District 6 Hazmat Team
Animal Rescue League
American Red Cross
MA Department of Mental Health

STATE TRANSPORTATION STAGING AREA

Volunteer Personnel

RADIOLOGICAL MONITORING AND DECONTAMINATION STATION

District 3 Hazmat Team
Volunteer Personnel

RISK JURISDICTIONS (MASSACHUSETTS)

AMESBURY

Amesbury Emergency Management Agency
Amesbury Fire Department
Amesbury Health Department
Amesbury Municipal Office
Amesbury Police Department
Amesbury Public Works
Amesbury School Department
Amesbury Senior Center
Amesbury Town Council President

MERRIMAC

Merrimac Emergency Management Agency
Merrimac Fire Department
Merrimac Police Department

NEWBURY

Town of Newbury Emergency Management
Town of Newbury Fire Department
Town of Newbury Highway Department
Town of Newbury Police Department
Town of Newbury Selectmen

NEWBURYPORT

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

SALISBURY

Board of Selectman
Emergency Management
Salisbury Department of Public Works
Salisbury Fire Department
Salisbury Harbor Master
Salisbury Police Department

WEST NEWBURY

West Newbury Emergency Operations Center
West Newbury Fire Department
West Newbury Police Department
Municipal Officer

SCHOOL DISTRICTS

Amesbury School District
Merrimac School District
Newbury School District
Newburyport School District
Salisbury School District
West Newbury School District

SPECIAL FACILITIES AND DAY CARE

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 October 23, 2002 (plume exposure). Also included are times notifications were made to the participating jurisdictions/functional entities.

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Table 1. Exercise Timeline

DATE AND SITE: October 23, 2002, Seabrook Nuclear 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 | | | | | | | | | |
|--|-----------------------|---|------|------|------|--------------|-----------|---------------|--------|--|--|
| | | SEOC | RCDC | EOF | IFO | Media Center | Brentwood | East Kingston | Exeter | | |
| Unusual Event | | | | | | | | | | | |
| Alert | 0814 | 0830 | 1011 | 0903 | 0814 | 0850 | 0842 | 0842 | | | |
| Site Area Emergency | 1010 | 1017 | 1011 | 1016 | 1016 | 1018 | 1035 | 1021 | | | |
| General Emergency | 1128 | 1134 | 1128 | 1133 | 1128 | 1140 | 1146 | 1142 | | | |
| Simulated Rad. Release Started | | | 1106 | 1106 | 1106 | 1132 | 1151 | 1148 | | | |
| Simulated Rad. Release Terminated | | | | | | | | | | | |
| Facility Declared Operational | | 24-hours | 1011 | 0955 | 0911 | 0845 | 0928 | 0910 | | | |
| Declaration of State of Emergency | | 1027 | | 1024 | 1010 | | 1100 | 1052 | | | |
| Exercise Terminated | | 1303 | 1255 | 1256 | 1305 | 1302 | 1305 | 1305 | | | |
| 1 st Siren Activation Sequence: | | | | | | | | | | | |
| | D 1040 | | | | | | | | | | |
| | A 1050 | | | | | | | | | | |
| | B 1053 | | | | | | | | | | |
| 2 nd Siren Activation Sequence: | | | | | | | | | | | |
| | D 1157 | | | | | | | | | | |
| | A 1207 | | | | | | | | | | |
| | B 1210 | | | | | | | | | | |
| 3 rd Siren Activation Sequence: | | | | | | | | | | | |
| KI Administration Decision: | | 1236 | 1213 | 1232 | | 1232 | 1240 | | | | |

LEGEND: D - Decision Time A - Activation of Alert Signal (Activated by RCDC) B - EAS Broadcast

1 Note: Alert signals and EAS messages are not initiated by EPZ communities.

2 Note: NHOEM requested sirens to be activated at 0936, 1055, and 1232.

* Low level release – no fuel damage

** Scenario release termination time

Table 1. Exercise Timeline

DATE AND SITE: October 23, 2002, Seabrook Nuclear 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 | | | | | | | | | | |
| Alert | 0814 | 0834 | 0839 | 0848 | 0837 | 0841 | 0836 | 0845 | 0940 | |
| Site Area Emergency | 1010 | 1016 | 1018 | 1020 | 1024 | 1017 | 1015 | 1017 | 1017 | |
| General Emergency | 1128 | 1138 | 1135 | 1138 | 1137 | 1136 | 1136 | 1141 | 1132 | |
| Simulated Rad. Release Started | | 1105 | 1150 | 1155 | 1206 | 1145 | 1150 | 1146 | 1157 | |
| Simulated Rad. Release Terminated | | | | | | | | | | |
| Facility Declared Operational | | 0926 | 0901 | 0924 | 0915 | 0900 | 0920 | 0900 | 1015 | |
| Declaration of State of Emergency | | 1021 | 1100 | 1110 | 1050 | 1052 | 1050 | 1059 | 1040 | |
| Exercise Terminated | | 1255 | 1300 | 1255 | 1303 | 1303 | 1303 | 1315 | 1303 | |
| 1 st Siren Activation Sequence: | | | | | | | | | | |
| | D | 1040 | | | | | | | | |
| | A | 1050 | | | | | | | | |
| | B | 1053 | | | | | | | | |
| 2 nd Siren Activation Sequence: | | | | | | | | | | |
| | D | 1157 | | | | | | | | |
| | A | 1207 | | | | | | | | |
| | B | 1210 | | | | | | | | |
| 3 rd Siren Activation Sequence: | | | | | | | | | | |
| KI Administration Decision: | | 1213 | 1238 | 1240 | 1232 | 1240 | 1238 | 1232 | 1232 | |

LEGEND: D - Decision Time A - Activation of Alert Signal (Activated by RCDC) B - EAS Broadcast

1 Note: Alert signals and EAS messages are not initiated by EPZ communities.

2 Note: NHOEM requested sirens to be activated at

Table 1. Exercise Timeline

DATE AND SITE: October 23, 2002, Seabrook Nuclear 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 | | | | | | | | | |
| Alert | 0814 | 0834 | 0843 | 0839 | 0842 | 0842 | 0839 | 0842 | 0842 |
| Site Area Emergency | 1010 | 1016 | 1028 | 1020 | 1025 | 1017 | 1019 | 1018 | 1030 |
| General Emergency | 1128 | 1138 | 1155 | 1144 | 1144 | 1140 | 1134 | 1136 | 1145 |
| Simulated Rad. Release Started | | 1105 | 1155 | 1146 | 1144 | 1143 | 1132 | 1150 | 1145 |
| Simulated Rad. Release Terminated | | | | | | | | | |
| Facility Declared Operational | | 0926 | 0935 | 0927 | 0915 | 0906 | 0918 | 0905 | 0900 |
| Declaration of State of Emergency | | 1021 | 1040 | 1023 | 1023 | | 1050 | 1100 | 1023 |
| Exercise Terminated | | 1255 | 1300 | 1251 | 1303 | 1251 | 1255 | 1305 | 1255 |
| 1 st Siren Activation Sequence: | D A B | 1040 1050 1053 | | | | | | | |
| 2nd Siren Activation Sequence: | D A B | 1157 1207 1210 | | | | | | | |
| 3rd Siren Activation Sequence: | | | | | | | | | |
| KI Administration Decision: | | 1213 | 1234 | 1232 | 1232 | 1232 | 1232 | 1213 | 1239 |

LEGEND: D - Decision Time A - Activation of Alert Signal (Activated by RCDC) B - EAS Broadcast

1 Note: Alert signals and EAS messages are not initiated by EPZ communities.
 2 Note: NHOEM requested sirens to be activated at

Table 1. Exercise Timeline

DATE AND SITE: October 23, 2002, Seabrook Nuclear 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 | Rgn I | Media Center | Amesbury | Merrimac | Newbury | Newburyport | Salisbury | West Newbury | | | |
| Unusual Event | | | | | | | | | | | | | | |
| Alert | 0814 | 0825 | | 0837 | 0814 | 0834 | 0828 | 0828 | 0835 | 0829 WP 0834 EOC | 0835 | | | 0835 |
| Site Area Emergency | 1010 | 1017 | | 1011 | 1016 | 1024 | 1035 | 1025 | 1025 | 1031 | 1025 | | | 1024 |
| General Emergency | 1128 | 1142 | | 1142 | 1128 | 1147 | 1140 | 1144 | 1150 | 1150 | 1150 | | | 1147 |
| Simulated Rad. Release Started | | 1107 | | | | 1108 | 1200 | 1207 | 1210 | 1148 | 1210 | | | 1148 |
| Simulated Rad. Release Terminated | | | | | | | | | | | | | | |
| Facility Declared Operational | | 0925 | | 0900 | 0911 | 0901 | 0845 | 0900 | 0847 | 0850 | 0847 | | | 0900 |
| Declaration of State of Emergency | | 0935 | | 0935 | 0947 | 0951 | 0945 | 0945 | 0948 | 0951 | 0948 | | | 0935 |
| Exercise Terminated | | 1303 | | 1310 | 1250 | 1305 | | | 1305 | 1305 | 1305 | | | 1305 |
| 1st Siren Activation Sequence: | | | | | | | | | | | | | | |
| | D | 1040 | | | | | | | | | | | | |
| | A | 1050 | | | | | | | | | | | | |
| | B | 1053 | | | | | | | | | | | | |
| 2nd Siren Activation Sequence: | | | | | | | | | | | | | | |
| | D | 1157 | | | | | | | | | | | | |
| | A | 1207 | | | | | | | | | | | | |
| | B | 1210 | | | | | | | | | | | | |
| 3rd Siren Activation Sequence: | | | | | | | | | | | | | | |
| KI Administration Decision: | | 1150 | | 1150 | | 1219 | 1148 | 1200 | 1210 | 1219 | 1210 | | | 1148 |

LEGEND: D - Decision Time A - Activation of Alert Signal (Activated by SEOC) B - EAS Broadcast
 1 Note: Alert signals and EAS messages are not initiated by EPZ communities.

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 October 23, 2002, 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. Detailed information on the exercise objectives and the extent-of-play agreement used in this exercise are found in Appendix 3, of this report.

A. Summary Results of Exercise Evaluation - Table 2

The matrix presented in Table 2, on the following page(s), presents the status of all exercise evaluation criteria from the September 12, 2001 Federal Register Notice 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)

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Table 2. Summary Results of Exercise Evaluation
 DATE AND SITE: October 23-24, 2002, 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.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 | | | | | | | | | | |
| Special Facilities/Day Cares | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SUPPORT JURISDICTIONS - NEW HAMPSHIRE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dover EOC | M | M | M | M | M | | | | | | | M | | | | | | | | | | | | | | | | | | | | | | |
| Manchester EOC | M | M | M | M | M | | | | | | | M | | | | | | | | | | | | | | | | | | | | | | |
| Rochester EOC | M | M | M | M | M | | | | | | | M | | | | | | | | | | | | | | | | | | | | | | |
| Memorial High School Reception Center, Manchester | | | M | | | | | | | | | M | | | | | | | | | | | | | | | | | | | | | | |
| Dover Middle School Reception Center | | | M | | | | | | | | | M | | | | | | | | | | | | | | | | | | | | | | |
| Wentworth Douglass Hospital | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| State Transportation Staging Area – Epping | 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: October 23-24, 2002, 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 | A | M | M | M | M | M | | | | | | M | | | | | | M | | | | | | | | M | | | | | | |
| EOF | | M | M | M | M | M | M | | | | | M | | | | | | | | | | M | | | | | | | | | | | | | |
| Region I EOC – Tewksbury | M | M | M | M | M | | | | M | A | | A | | M | M | A | | | | | | | | | | | | | | | | | | | |
| Media Center | | M | | | M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nuclear Incident Advisory Team 8 | | | | | M | | | | | | | M | | | | | | | | | | M | | | M | | | | | | | | | | |
| Nuclear Incident Advisory Team 14 | | | | | M | | | | | | | M | | | | | | | | | | M | | | M | | | | | | | | | | |
| State Troop A, Danvers P/TCP | | | | | M | | | | | | | M | M | | | U | M | | | | | | | | | | | | | | | | | | |
| RISK JURISDICTIONS – MASSACHUSETTS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Amesbury | A | M | M | M | M | | | | M | | | M | M | M | M | M | M | | | | | | | | | | M | | | | | | | | |
| Merrimac | A | M | M | M | M | | | | M | | | A | M | A | M | M | M | | | | | | | | | | M | | | | | | | | |
| Newbury | M | M | M | M | M | | | | M | | | M | M | M | M | M | M | | | | | | | | | | M | | | | | | | | |
| Newburyport | M | M | M | A | M | | | | M | | | M | M | A | M | M | M | | | | | | | | | | M | | | | | | | | |
| Salisbury | M | M | M | M | M | | | | M | | | M | M | M | M | M | M | | | | | | | | | | M | | | | | | | | |
| West Newbury | M | M | M | M | M | | | | M | | | M | M | A | M | M | M | | | | | | | | | | M | | | | | | | | |

LEGEND:
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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: October 23-24, 2002, Seabrook Nuclear Power Station (Sheet 4 of 4)

| JURISDICTION/LOCATION | 1a.1 | 1b.1 | 1c.1 | 1d.1 | 1e.1 | 2a.1 | 2b.1 | 2b.2 | 2c.1 | 2d.1 | 2e.1 | 3a.1 | 3b.1 | 3c.1 | 3c.2 | 3d.1 | 3d.2 | 3e.1 | 3e.2 | 3f.1 | 4a.1 | 4a.2 | 4a.3 | 4b.1 | 4c.1 | 5a.1 | 5a.2 | 5a.3 | 5b.1 | 6a.1 | 6b.1 | 6c.1 | 6d.1 | | |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|--|
| School Districts – Massachusetts | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Amesbury School District | | | | | M | | | | | | | | | M | | | | | | | | | | | | | | | | | | | | | |
| Newburyport School District | | | | | M | | | | | | | | | M | | | | | | | | | | | | | | | | | | | | | |
| Special Facilities/Day Cares – MASSACHUSETTS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SUPPORT JURISDICTIONS - MASSACHUSETTS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EWMSD – Haverhill | | M | | M | | | | | | | | M | | | | | | | | | | | | | | | | | | | | | | | |
| N. Essex Community College - STSA | M | M | M | M | | | | | | | | | | M | | | | | | | | | | | | | | | | | | | | | |
| Wakefield High School - Host School | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Minuteman Regional High School - Host School | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Methuen High School - Host School | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Marsh Grammar School - Host School | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tewksbury Reception Center | | 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)

B. Status of Jurisdictions Evaluated

This subsection provides information on the evaluation of each participating jurisdiction and functional entity, in a jurisdiction-based, issues-only format. Presented below 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.
- **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 Governor's Representative, the Acting Director and the Operations Officer made a solid team and provided effective leadership. 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 perpetuated an air of efficiency throughout the exercise. Tasks were accomplished quickly and correctly, and, the interaction/coordination among staff elements was commendable.

The New Hampshire (NH) Office of Community and Public Health (OCPH) Radiological Health Technical Advisor (RHTA) in the State Emergency Operations Center (EOC) demonstrated excellent command and control skills in the Accident Assessment area. He provided timely, clear, and concise accident assessment updates to the Director of the OCPH.

The communication supervisor noticed a problem with the radio, troubleshot the problem and fixed the radio in a matter of minutes. Because of his knowledge of radios the problem had no affect on the outcome of the exercise.

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

ISSUE # 57-02-2.a.1-A-01

The decision for authorization of ingestion of KI by emergency workers is assigned to the Director of the Office of Community and Public Health (OCPH) 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 OCPH Director may authorize the use of KI for emergency workers who remain in the affected areas." Form 210D is used by the OCPH Health Physicist to request formal approval for the authorized use of KI tablets. At 1213 hours the Director of the OCPH 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.

SCHEDULE OF CORRECTIVE ACTION

New Hampshire understands that the issue of when and how to issue KI has become of considerable interest to public health officials and the general public. New Hampshire has acquired KI from the U.S. NRC and is predistributing it to members of the general public who reside, work or attend school within Nuclear Power Plant Emergency Planning Zones who request it. New Hampshire is in the process of updating plans to reflect this addition to the process. New Hampshire views the ingestion of KI as an ancillary and supplemental protective action that members of the public may choose to take. Emergency workers are issued KI, trained in its use and effectiveness and an advisory authorizing its ingestion when deemed appropriate by the guidelines contained in the NHRERP is issued by the Director of the OCPH. It is however the personal decision of each emergency worker as to whether or when to ingest KI. The ingestion of KI is voluntary and its use is up to each emergency worker and each member of the public who has it available.

New Hampshire is in the process of orienting and training decision makers and emergency workers with respect to the updated policies and guidelines with respect to KI as prescribed by the NHRERP. Practice exercises, tabletop exercises, and training will be provided in order to assure a clear understanding and appropriate execution of the NHRERP and its procedures.

ISSUE # 57-02-2.a.1-A-02

The Director of the Office of Community and Public Health (OCPH) 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.

SCHEDULE OF CORRECTIVE ACTION

See response to ARCA #57-02-2.a.1-A-01

ISSUE # 57-02-2.a.1-A-03

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” led 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.

SCHEDULE OF CORRECTIVE ACTION

See response to ARCA #57-02-2.a.1-A-01

d. NOT DEMONSTRATED: None.

e. PRIOR ARCAs - RESOLVED:

Issue No.: 57-00-03-A-01 (1.c.1)

Description: The Office of Health Management and other technical advisors recommended to the Director the closing of beaches at the Alert. However, the Director chose not to accept their recommendation without a mitigating reason. Therefore, the decision to close the beaches took a long time. At 0956, Public Health briefed the “Governor,” Director, and Operations Officer to close the beaches, as it was early in the day and there would be fewer people to evacuate. At 1009 the discussion focused on closing the beaches, but again no decision was made. At 1012 in a discussion with Massachusetts, it was learned that their beaches were being closed and that the state was doing a precautionary evacuation of school children. A decision was made at 1054 during the Site Area Emergency (SAE) Emergency Classification Level (ECL) to close the beaches. (NH plan, Vol. 8, Section 6, and Figure 6.1) (Objective 3/New Criteria 1.c.1, 2.b.2) (NUREG-0654, A.1.d, A.2.a, A.2.b)

Corrective Action Demonstrated: There were two decision sequences demonstrated during the response. The first sequence was for the announcement of the Site Area Emergency declaration and for precautionary actions that included cancellation of afternoon classes in twelve of the seventeen towns in the New Hampshire EPZ and for the closure of all State parks and beaches in the EPZ. This decision occurred at 1030 hours. The precautionary closing of the beaches and State parks at this emergency classification level was appropriate considering the time of year and weather conditions on the exercise day. These factors resulted in very low populations on the beaches and in the parks.

Issue No.: 57-00-11-A-02 (5.b.1)

Description: Emergency Alert System (EAS) message #1 contained contradictory statements concerning the ordering of protective actions. In addition, EAS message #2 failed to include the shelter protective action recommendation for Emergency Response Planning Areas (ERPA) F and G. These shortcomings resulted from incomplete or insufficient attention to the review and modification of pre-scripted messages contained in the State EOC WEB system, (Objective 11/New Criterion 5.b.1) (NUREG-0654, E.7)

Corrective Action Demonstrated: During this exercise, the results of several corrective actions were observed. Both EAS messages generated were reviewed by the Media Relations Liaison, Operations Officer, EOC Director, and the Governor for consistency, accuracy, and completeness to ensure the content was clear and understandable. Similar reviews were made of each EPI. For those developed to amplify an EAS, special attention was given to ensuring that the EAS content was fully and accurately contained in the EPI.

Issue No.: 57-00-11-A-03 (5.b.1)

Description: At 1028 the Office of Community and Public Health (OCPH) recommended that the decision-makers consider a marine safety zone to 5 miles. It was explained that this was a precautionary action and only to 5 miles due to the wind coming inland rather than blowing seaward. At 1041 the OC&PH again recommended a 5-mile marine safety zone be established. A marine safety zone out to 5 miles was established at 1045. At 1112 Emergency Public Information (EPI) message #2 stated there was a marine safety zone out to 5 miles. Later, the Director reviewed their procedures and determined that a marine safety zone should be out to 10 miles and instructed the Public Information Officer (PIO) and EOC to “do everything to 10 miles.” However, the new EPI was sent indicating only 5 miles. (NH plan, Vol. 8, Section 6, and Figure 6.1) (Objective 11) (NUREG-0654, A.1.b, E.5, E.7, G.4.a)

Corrective Action Demonstrated: When the establishment of a maritime safety zone was being discussed, all appropriate agencies responded that they had sufficient resources to support the 10-mile safety zone in the New Hampshire waters. The decision was made to establish a 10-mile safety zone in accordance with the current plans and procedures. The decision was communicated to the IFO and Massachusetts and was given to the public via an Emergency Public Information (EPI) release.

Issue No.: 57-00-16-A-04

Description: The Seabrook Station Local Radiological Emergency Response Plan (Vol. 20/Rev. 11, Section 2.1.1.3 (P. 2.11-3 to 5) discusses emergency response activities during a sheltering-in-place protective action. The plan states that EAS messages will continue to keep the public informed during sheltering. However, it does not provide for information on sheltering-in-place of school children. Information on school sheltering-in-place is also not included in the “2000 Emergency Public Information Brochure for Seabrook Station.” However, the Seabrook Station Implementing procedures clearly state that the New Hampshire Department of Education representative should periodically confer with

Superintendents of Plume Exposure Pathway EPZ schools as to the status of any precautionary actions under implementation. In addition, this information should be relayed to the EOC Media Liaison for input into the EAS messages and EPI. During this exercise, no EAS messages and news releases included information on the status of sheltering-in-place for the schools. (Objective 16) (NUREG-0654, J.10.c, J.10.d, J.10.g; E.5, E.7)

Corrective Action Demonstrated: During this exercise, the results of several corrective actions were observed. Page 2.6-11, Volume 1/Rev.12 of the NH Radiological Emergency Response Plan states, in part, that "...New Hampshire employs the 'Shelter-in-Place' concept...those at work or school are to be sheltered at the workplace or school building..." This statement reiterates that the State of New Hampshire considers all populations to be part of the general population. Additionally, the following information pertaining to school sheltering-in-place on page 29 of the 2002 Emergency Public Information Calendar: "If sheltering-in-place is recommended during school hours, children will be sheltered right in the school building and cared for by school personnel." EPI messages referred the public to their EPI Calendar.

Issue No.: 57-96-11-A-01 (5.b.1)

Description: Emergency Broadcast System (EBS) messages #1 and #2 contained confusing information. At one point it was stated that a release of radioactive material had not occurred, while at another point it was indicated that the State was "reviewing the consequences of existing and potential releases of radioactive material from the plant." At the time these EBS messages were issued a radioactive release had not yet occurred. (Objective 11) (NUREG-0654, E.7)

Corrective Action Demonstrated: During this exercise, the results of several corrective actions were observed. Both EAS messages generated were reviewed by the Media Relations Liaison, Operations Officer, EOC Director, and the Governor for consistency, accuracy, and completeness to ensure the content was clear and understandable. Similar reviews were made of each EPI. For those developed to amplify an EAS, special attention was given to ensuring that the EAS content was fully and accurately contained in the EPI.

f. PRIOR ARCAs - UNRESOLVED: None

1.2 Emergency Operations Facility

The NH Emergency Operations Facility (EOF) staff responded in a professional manner. The NH staff responded in real time, which did not hinder accomplishment of their tasks.

a. MET: Evaluation Criteria 1.b.1, d.1, e.1
4.b.1, 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.

1.3 Incident Field Office

The Staff at the New Hampshire Incident Field Office (IFO) was kept very well informed by the IFO Coordinator. Briefings included all staff and any confusing information or decisions were discussed and clarified prior to any initiation of actions. The New Hampshire State Police and Department of Transportation worked well together to establish the Traffic Control Points throughout the Emergency Planning Zone with personnel and barrier materials once the evacuation order was given. The participation of the Maine Public Health, York County and Maine State Police Representatives was beneficial to all participants.

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

ISSUE: 57-02-3.B.1-A-04

When the decision was made by the Director of the Office of Community and Public Health (OCPH), 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.

SCHEDULE OF CORRECTIVE ACTION

Orientation and training with regards to the policies on the use of KI will take place for state and municipal emergency workers. Workers will be provided drills, updated training and extensive practice on the procedures for the issue and ingestion of KI.

- d. **NOT DEMONSTRATED:** None.

e. PRIOR ARCAs - RESOLVED:

Issue No.: 57-00-01-A-05 (1.a.1)

Description: The initial and succeeding notifications from the New Hampshire Office of Emergency Management (NHOEM) and/or the Newington IFO to the Rochester and Manchester EOCs failed. (Objective 1/New Objective 1.a.1) (NUREG-0654, D.3, D.4, E.1, E.2)

Corrective Action Demonstrated: Initial and succeeding notifications from the Newington IFO to both the Rochester and Manchester EOCs were successful and timely, using both telephone and radio contact as per established procedures.

Issue No.: 57-00-03-A-06 (1.c.1)

Description: The Radio Dispatcher at the IFO made several attempts to contact the Rochester EOC by radio but was unsuccessful. The Dispatcher should have advised the IFO Coordinator that he was unable to make contact so that other means to communicate with the Rochester EOC could be established. Also the local liaison in the IFO did not have the correct phone number for the Rochester Public Safety Dispatch. The local liaison did get the correct phone number and made contact with the Rochester EOC at 1121. (Objective 3/New Criterion 1.c.1) (NUREG-0654, A.1.d, A.2.a, A.2.b)

Corrective Action Demonstrated: At 1024 hours, the Emergency Management (EM) radio operator did establish contact with the Rochester EOC during the initial and subsequent roll calls. An accurate telephone number for the Rochester EOC was available to the EM radio operator and was in use by the Rochester liaison.

Issue No.: 57-00-03-A-07 (1.c.1)

Description: The Greenland EOC did not receive the announcement of the Governor's Declaration of a State of Emergency nor the EAS message to shelter. (Objective 3/New Criterion 1.c.1) (NUREG-0654, A.1.d, A.2.a, A.2.b)

Corrective Action Demonstrated: The Greenland Emergency Operations Center did receive the announcement of the Governor's Declaration of a State of Emergency, and the EAS message to shelter, by telephone from the local liaison in the Incident Field Office, and by emergency management (EM) radio.

f. PRIOR ARCAs - UNRESOLVED: None.

1.4 State Warning Point

The teamwork displayed by the staff was outstanding. The dispatchers were busy responding to actual calls resulting from a snowstorm that was occurring. In spite of the increased workload from the storm and exercise participation the dispatchers answered all calls and assisted the supervisor in completing exercise activities.

- a. **MET:** Evaluation Criteria 1.a.1, b.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.

1.5 Media Center

There was an outstanding demonstration of teamwork at the media center for this exercise. Prior to each press briefing there was a thorough review of what participants would brief, including who would address rumors. Hot washes were conducted following each briefing.

The volunteer in the Media Center is to be commended for her professionalism and significant contributions to the overall operations of the media center.

There was excellent coordination and teamwork displayed among the staffs of New Hampshire, Massachusetts, and Seabrook.

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

1.6 Field Teams

1.6.1 Field Monitoring Team #1

The New Hampshire Field Radiological Monitoring Team #1 was trained and well-versed in monitoring procedures and practices and was very focused on all details in following them during the exercise. Their communication skills were especially good.

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

1.6.2 Field Monitoring Team #2

The field team members were well prepared, displayed a great attitude throughout the exercise, and performed their assignments in a competent and professional manner.

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

ISSUE NO.: 57-00-06-A-08 (4.a.2)

Description: The Field Monitoring Teams (FMT) were not briefed on exposure control procedures or survey procedures. (Objective 6/New Criterion 4.a.2) (NUREG-0654, I.11)

Corrective Action Demonstrated: The New Hampshire State Field Monitoring Teams received two briefings during the exercise. One briefing took place at the Office of Community and Public Health Laboratory in Concord, New Hampshire, and a second briefing was conducted by the Monitoring Team Coordinator at the Incident Field Office in Newington, New Hampshire. Each briefing covered use of dosimetry, use of potassium iodide, administrative reporting levels and turn-back levels, review of equipment procedures, and information on plant status and meteorological conditions.

f. PRIOR ARCAs - UNRESOLVED: None.

1.7 Rockingham County Dispatch Center (Siren Activation)

The supervisor was in charge of the center overall and provided direction and control but allowed the senior dispatcher to operate almost independently on the requirements of the exercise. He kept all the personnel within the center aware of all updated information and changes pertaining to the incident. When instructions were received from the State Emergency Operations Center (EOC) Operations Officer or the Incident Field Office Coordinator, the Rockingham County Dispatch Center (RCDC) activated the Alerting (sirens) portion of the PANS.

a. MET: Evaluation Criteria 1.b.1, c.1, d.1, e.1
5.a.1

b. DEFICIENCY: None.

c. AREAS REQUIRING CORRECTIVE ACTION: None

d. NOT DEMONSTRATED: None.

e. PRIOR ARCAs - RESOLVED: None.

f. PRIOR ARCAs - UNRESOLVED: None.

1.8 State Police, Troop A, Epping

a. MET: 1.e.1

b. DEFICIENCY: None.

c. AREAS REQUIRING CORRECTIVE ACTION: None

d. NOT DEMONSTRATED: None.

e. PRIOR ARCAs - RESOLVED:

Issue No.: 57-98-05-A-04 (1.e.1)

Description: During the exercise, there was no indication that the 0-200 mR dosimeters had been checked for electrical leakage on a quarterly basis. (Objective 5/New Criterion 1.e.1) (NUREG-0654, K.3.a, H.10)

Corrective Action Demonstrated: Administratively corrected. Documentation was provided by NH State Police Troop A personnel to verify that the 0-200mR and 0-20R dosimeters had been leak checked on a quarterly basis as required. This corrects this ARCA.

f. PRIOR ARCAs - UNRESOLVED: None.

2. RISK JURISDICTIONS (NEW HAMPSHIRE)

2.1 Brentwood

The Town of Brentwood recently underwent a “changing of the guard” at their Emergency Operations Center (EOC). Accordingly, many of the EOC staff members had limited experience in performing their emergency assignments. Despite this lack of experience, the EOC staff accomplished their tasks commendably. Their proactive nature, professionalism, and dedication were impressive.

- a. MET: Evaluation Criteria** 1.a.1, b.1, c.1, d.1, e.1
2.a.1, 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.: 57-00-03-A-11 (1.c.1)

Description: The selectman felt the EAS message, as relayed to the EOC, was unclear. She, therefore, authorized a local siren sounding and loudspeaker broadcast after the EAS message to clearly inform Brentwood residents of the need to shelter. However, she did not coordinate this with any other jurisdiction. (Objective 3/New Criterion 1.c.1) (NUREG-0654, A.1.d, 2.a,b)

Corrective Action Demonstrated: The EOC management team did not independently activate the sirens in the community. The senior Selectman on duty at the EOC knows the need for close coordination with state authorities and the possible ramifications uncoordinated actions may cause.

Issue No.: 57-00-04-A-12 (1.e.1)

Description: The Brentwood Police Chief received the initial page from RCDC. Activation of the local response organization was incomplete, however, when only the Fire Chief's pager worked properly. One additional pager received a garbled message and all others failed. (Objective 4/New Criterion 1.e.1) (NUREG-0654, F.1, F.2)

Corrective Action Demonstrated: Emergency Classification Level update message was disseminated via the pager system. When the Emergency Classification Level (ECL) came in several pagers sounded. The Selectman's pager was checked by the evaluator. The pager received the ECL update.

f. PRIOR ARCAs - UNRESOLVED: None.

2.2 East Kingston EOC

The Emergency Management Director led the organization with a high degree of professionalism and tact. The Deputy Emergency Management Director provided comprehensive and timely briefings to the staff. The large number of volunteers cheerfully gave of their valuable time to assure the success of the exercise.

a. MET: Evaluation Criteria 1.a.1, b.1, c.1, d.1, e.1
2.a.1, c.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

ISSUES # 57-02-3.a.1-A-05

Emergency Workers were not properly trained in dosimetry operation and procedures. Several workers were interviewed but did not know administrative limits or the procedure to take when those limits were reached.

SCHEDULE OF CORRECTIVE ACTION

This issue will be reviewed as part of the ongoing training program.

e. PRIOR ARCAs - RESOLVED:

Issue No.: 57-00-01-A-13 (1.a.1)

Description: The police officer on duty who received the initial notification from the RCDC did not promptly follow the plan by contacting key members of the Greenland Emergency Response Organization (Reference: Greenland Implementing Procedures, 2.2 Notification, p. 2.2-1.) (Objective 1/New Criterion 1.a.1) (NUREG-0654, A.4, D.3, D.4, E.1, E.2, H.4, N.1.a)

Corrective Action Demonstrated: The Town of Greenland Police Officer, who was the acting Police Chief, successfully demonstrated the issue by promptly notifying the key members of the Greenland Emergency Response Organization one minute after receiving the Alert Emergency Classification Level from the Rockingham County Dispatch Center at 0839. The individuals that were notified at 0840 were Selectman, Emergency Management Director, Fire Chief, RADEF Officer and Transportation Officer.

f. PRIOR ARCAs - UNRESOLVED: None.

2.5 Hampton EOC

It was obvious that the staff in the Hampton EOC had worked together before and is a good team. The staff demonstrated a thorough understanding of its responsibilities and followed their checklists.

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

Three members of the Board of Selectmen participated in the exercise. They interacted well with EOC staff members. The Town's Emergency Management Director did an outstanding job keeping staff up to date and displayed good direction and control. The Radiological Defense Officer did a great job in reminding staff to read dosimetry and his dosimetry briefing corrected a prior ARCA.

- a. **MET: Evaluation Criteria** 1.a.1, b.1, c.1, d.1, e.1
2.a.1, 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.: 57-00-05-A-14 (3.a.1)

Description: The RADEF Officer failed to verbally explain the use of direct reading dosimeters (DRD), thermoluminescent dosimeters (TLD), KI, and the Acknowledgment Forms to all personnel receiving them. It was expected that the instruction card was to be read by all personnel receiving the equipment. (Objective 5/New Criterion 3.a.1) (NUREG-0654, K.3.b, J.10.e)

Corrective Action Demonstrated: The Radiological Defense Officer provided verbal instructions to ten staff on the use of Direct Reading Dosimeters (DRDs), 0-20R, 0-200mR, TLD, and the use of KI. Instructions were provided on when to read dosimetry and whom to call when DRDs reach a call-in level.

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

2.7 Kensington EOC

The Kensington Emergency Operations Center Staff is a unified team. They discussed State recommended protective actions and their effects on the community prior to implementation. The Staff has complete understanding of their plans and procedures.

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

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

ISSUE #57-02-1.c.1-A-07

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.

SCHEDULE OF CORRECTIVE ACTION

This issue will be reviewed with New Castle Officials. Incoming information will be reviewed, prioritized and properly routed to insure timely response.

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

ISSUE NO.: 57-00-05-A-15 (3.a.1)

Description: 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)

Reason ARCA Unresolved: The evaluator conducted interviews with two emergency workers (an indoor worker and an outdoors worker). Both workers were unable to identify the maximum exposure limit defined in the Town Plan, page 3.5-16. However, they did know that they had to report to the Radiological Officer when they reached 175 mR and every increment of 1 R (e.g., 1, 2, 3 R). In addition the worker that was going outside frequently did not offer that he needed to observe and record his dosimetry level.

The current reference card that emergency workers wear around their neck tell the workers to alert their supervisor if they reach 175 mR and 1, 2, 3, and 4 R.

Recommendation: Revise the printed reference card to say that the maximum exposure limit is 5R and that authorization to exceed that limit must be received from the state health radiological officer through their local radiological officer.

2.10 Newfields EOC

The Newfields Emergency Response Organization (ERO) is an experienced group that displayed the ability to work as a team. In addition, due to the absence of some ERO members caused by weather or job-related matters, the Selectman proved her versatility by assuming new functions and rapidly grasping and executing their requirements. The Emergency Management Director actively coordinated the efforts of the staff, provided recurring updates on the evolving situation, and conferred with the Town Selectman and other department heads regarding the situation and the Town's responsibilities. Local emergency plans and procedural documents and checklists provide the ERO representatives, and Emergency Operations Center augmentees, with clear guidance on fulfilling their roles. All participants displayed a professional and positive attitude as they carried out their functions.

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

2.11 Newton EOC

The Emergency Management Director and Radiological Defense Health Officer showed quality leadership and knowledge during the exercise. They also carried out their duties in providing service to the community during an unexpected severe weather condition.

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

ISSUE NO.: 57-00-01-A-16 (1.a.1)

Description: The North Hampton Fire Department RO could not participate in the exercise, and there were no trained backups for this key position. As a result, the RO's position could not be staffed on a 24-hour basis. (Objective 1/New Criterion 1.a.1) (NUREG-0654, A.4, E.2)

Corrective Action Demonstrated: The Fire Department RO did participate in this exercise, resulting in 24-hour coverage. This resolves previous ARCA 57-00-01-A-16.

f. PRIOR ARCAs - UNRESOLVED: None.

2.13 Portsmouth EOC

The Portsmouth Emergency Operations Center (EOC) demonstrated outstanding emergency response capability. The Emergency Management Director was particularly noteworthy. He was knowledgeable in all aspects of Portsmouth's emergency response, and his firm leadership was effective in keeping all personnel focused on the tasks at hand. Additionally, the Radiological Defense Officer was superb. He was knowledgeable and thorough in dealing with dosimetry and potassium iodide (KI) issues. His management of the program is commendable.

- a. MET:** Evaluation Criteria 1.a.1, b.1, c.1, d.1, e.1
2.a.1, 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.: 57-00-01-A-17 (1.a.1)

Description: Between 0835 and 0844, the Police Dispatcher notified the staff listed in the Portsmouth Plan Information and Implementing Procedures (Vol. 33/Rev. 11, page 3.7.6) of a declaration of an Alert ECL at the Seabrook Nuclear Power Station. While calling, the Dispatcher used an out-of-date Emergency Response Phone List (last updated in April 1998). The list did not contain the name of the current RO, who later reported to the EOC. Instead, the list included the names of other persons who did not report to the EOC. (Objective 1/New Criterion 1.a.1) (NUREG-0654, A.4, E.2)

Corrective Action Demonstrated: The Emergency Recall Information List is current, and contains addresses; office, home, and cell phone numbers; in addition to pager numbers. The list is updated at least quarterly, or as the need arises. The most recent update was October 18, 2002. The list has been distributed to appropriate offices and personnel.

During this exercise, the effectiveness of the corrective action was underscored by the quick arrival of the Portsmouth Emergency Operations Center (EOC) staff. Within 30 minutes of the initial call from the Police Dispatcher to the City Manager, the Emergency Operations Center (EOC) was declared operational.

Issue No.: 57-00-14-A-18 (3.b.1)

Description: The RO at the Portsmouth EOC was unaware of who makes the decision to take KI for emergency workers and institutionalized individuals. According to the Seabrook Station Local Radiological Emergency Response Plan, Vol. 20/Rev. 11, P. 2.10-3, the NH Office of Community and Public Health Director authorizes use of KI. (Objective 14/New Criterion 3.b.1) (NUREG-0654, J.10.e, J.10.f)

Corrective Action Demonstrated: The Radiological Defense (RADEF) Officer was familiar with the decision making process for KI implementation for emergency workers and institutionalized individuals. Through an interview, he demonstrated his understanding that the Director, New Hampshire Office of Community and Public Health is the authorization authority for the administration of potassium iodide (KI).

f. PRIOR ARCAs - UNRESOLVED: None.

2.14 Rye EOC

In the event that the siren alerting system fails and the battery back up didn't work, the Town of Rye has developed a plan, not currently listed in the state or town plan, to provide route alerting. This would be accomplished by using the police and fire department vehicles public address system and bullhorns to alert the residents.

To assist emergency workers in recognizing their radiological limits, Rye has listed administrative limits and important radiological information on the back of their EOC identification badges.

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

2.18.2 East Kingston Elementary School

- 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.

2.18.3 Exeter High School

- 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.

2.18.4 Greenland Central Schools

- 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.

2.18.5 Hampton – Sacred Heart School

- 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 Hampton Falls – Lincoln Ackerman School

- 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 Kensington Play School

- 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 Kingston -- Sanborn Regional High School

- 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.

2.18.9 New Castle – Trefethen School

- 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.

2.18.10 Newfields Elementary School

- 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.

2.18.11 Newton -- Sanborn Regional Middle School

- 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.

2.18.12 North Hampton Elementary School

- 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.

2.18.13 Portsmouth Middle School

- 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.

2.18.14 Rye Elementary School

- 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.

2.18.15 Seabrook Elementary School

- 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.

2.18.16 South Hampton Banard School

- 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.

2.18.17 Stratham -- Richie McFarland School

- 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.

3. SUPPORT JURISDICTIONS (NEW HAMPSHIRE)

3.1 Dover Host EOC

The staff consisted of mostly Dover Fire Department personnel, who worked well together and at the same time they treated the non-fire department personnel as fellow team members.

- a. **MET:** Evaluation Criteria 1.a.1, b.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 Manchester Emergency Management Director coordinated the Emergency Operations Center (EOC) operations in a confident, proficient, and professional manner. He provided timely and accurate briefings to the EOC staff, encouraging feedback as appropriate. The EOC staff members should be commended for exercising their duties and responsibilities. Procedures utilized in the transfer of information to the status board operator were exceptional.

- a. **MET: Evaluation Criteria** 1.a.1, b.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 EOC

The Rochester Emergency Operations Center (EOC) is a well organized facility and efficiently managed operation. The EOC Director demonstrated superior direction and control of the EOC and his staff.

- a. **MET: Evaluation Criteria** 1.a.1, b.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 Memorial High School Reception Center - Manchester

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

e. **PRIOR ARCAs - RESOLVED:**

Manchester Reception Center - South Side Middle School

Issue No.: 57-00-18-A-21

Description: The four staff members available to set-up and operate the portal monitor were inexperienced. (Objective 18) (NUREG-0654, J.12.)

Corrective Action Demonstrated: Portal monitor crews followed procedures when performing the operation checks of the portals. Two portal monitors were set up, operationally checked and found to be working in accordance with the plans and procedures. This corrects Issues number 57-00-18-A-21, 57-00-18-A-22, 57-00-18-A-30 and 57-00-18-A-31.

Issue No.: 57-00-18-A-22

Description: Only six evacuees were monitored in six minutes. This is not adequate to ensure the monitoring of 20% of the peak population in 12 hours. (Objective 18) (NUREG-0654, J.12.)

Corrective Action Demonstrated: Eight evacuees were monitored in 59 seconds. This rate is adequate to ensure that 20% of the peak population could be monitored in 12 hours.

Issue No.: 57-00-18-A-23

Description: At secondary monitoring, the monitor failed to check the bottoms of the contaminated male's feet. (Objective 18) (NUREG-0654, N.1.a)

Corrective Action Demonstrated: Secondary monitoring was performed in accordance with their plans and procedures. The evacuees were monitored from head to foot and the paperwork marked accordingly. This corrects Issues 57-00-18-A-24 and 57-00-18-A-25.

Issue No.: 57-00-18-A-24

Description: The contaminated female being monitored had paperwork in her right hand. She was asked to drop it to the floor so her hand could be monitored. Her hand was found to be contaminated, and it was covered with a bootie. When monitoring was completed, the monitor picked up the papers and gave them to the woman in her left hand, thus possibly contaminating the woman's left hand. Cross-contamination could have come from either the paper being held in the right hand originally or from contamination on the floor from the previous evacuee whose feet had not been monitored. (Objective 18) (NUREG-0654, J.10.h, 12)

Corrective Action Demonstrated: See Issue 57-00-18-A-23.

Issue No.: 57-00-18-A-25

Description: The recorder at the secondary monitoring station incorrectly marked the left hand contaminated rather than the right when filling out the F300P form. She also incorrectly signed off on this evacuee as final with a reading of more than 100 cpm. Had that been the case, the evacuee would not have been released to registration but sent to a medical facility. (Objective 18) (NUREG-0654, J.9, 12)

Corrective Action Demonstrated: See Issue 57-00-18-A-23.

Issue: 57-00-18-A-26

Description: Twenty-five emergency workers were used at two or more Manchester facilities in the primary and secondary monitoring areas and the female decontamination area. In a real event, these emergency workers could not be in two or possibly three places at once. , Training rosters provided show adequate trained staff for all three locations, but only enough people to adequately staff one location showed up to demonstrate the plans. (Objective 18) (NUREG-0654, J.12)

Corrective Action Demonstrated: One facility, Hillside Junior High School, is no longer being used as a reception center. The reception centers are now located at the Memorial High School and the Southside Middle School. This corrects issues: 57-00-18-A-26, 57-00-18-A-33 and 57-00-22-A-40.

Issue: 57-00-18-A-27

Description: A draft of Rev. 12 was used for the exercise. This was not negotiated prior to the exercise. (Objective 18) (NUREG-0654, N.1.a)

Corrective Action Demonstrated: In accordance with the plans and procedures Rev 12 was used for the exercise. This corrects issues: 57-00-18-A-34.

Manchester Reception Center – Memorial High School

Issue: 57-00-18-A-28

Description: The plan calls for 12 people to conduct automotive monitoring with 16 backup personnel. Only 2 people showed up, and the command control was able to obtain one additional person. (Objective 18) (NUREG-0654, J.12)

Corrective Action Demonstrated: After reviewing the sign-in roster it was revealed that there were 12 individuals present to conduct automotive monitoring. A discussion with the training officer revealed that there were adequate staff for backup personnel.

Issue: 57-00-18-A-29

Description: The survey team at the vehicle monitoring site had difficulty in putting its meters into operation and determining the proper background reading. (Objective 18) (NUREG-0654, J.12)

Corrective Action Demonstrated: The survey team demonstrated how to conduct a background check and the use of the CDV-700 monitoring instrument. This was completed in accordance with their plans and procedures.

Issue No.: 57-00-18-A-30

Description: One individual conducting the operational test on the portal monitor was not conducting the test satisfactorily. He passed the test source through the monitoring areas too fast for the instrument to detect the source in the location prescribed in the procedures. (Objective 18) (NUREG-0654, J.12)

Corrective Action Demonstrated: See Issue 57-00-18-A-21

Issue No.: 57-00-18-A-31

Description: Only one of the two portal monitors in the plan was available for the exercise. The second monitor is being repaired. (Objective 18) (NUREG-0654, H.10, J.12)

Corrective Action Demonstrated: See Issue 57-00-18-A-21.

Issue No.: 57-00-18-A-32

Description: The primary means for registering evacuees was unavailable to the Reception Center staff because no one was present to unlock the computers. (Objective 18) (NUREG-0654, J.12)

Corrective Action Demonstrated: The Reception Center staff was able to properly register and retrieve evacuee data on the computerized system.

Issue: 57-00-18-A-33

Description: Twenty-five emergency workers were used at two or more Manchester facilities in the primary and secondary monitoring areas and the female decontamination area. In a real event, these emergency workers could not be in two or possibly three places at once. Training rosters provided show adequate trained staff for all three locations, but only enough people to adequately staff one location showed up to demonstrate the plans. (Objective 18) (NUREG-0654, J.12)

Corrective Action Demonstrated: See issue 57-00-18-A-26.

Issue: 57-00-18-A-34

Description: A draft of Rev. 12 was used for the exercise. This was not negotiated prior to the exercise. (Objective 18) (NUREG-0654, N.1.a)

Corrective Action Demonstrated: See Issue 57-00-18-A-27.

Manchester Emergency Worker Decon Facility – Hill Side Middle School

Issue: 57-00-05-A-35

Description: The dosimetry instrument team did not conduct operational checks on survey meters. (Objective 5) (NUREG-0654, K.3.a)

Corrective Action Demonstrated: Operational checks were conducted on survey meters before issuance to the various monitoring teams at the Reception Center.

Issue: 57-00-22-A-36

Description: During the female survey monitoring, the monitor moved the probe too fast and touched the contaminated worker multiple times with the probe and the probe cable. Also, the monitor did not perform a thyroid check on the emergency worker. (Objective 22) (NUREG-0654, K.5.b)

Corrective Action Demonstrated: The monitor in the female decontamination area was thorough in monitoring the female evacuee and was aware of the correct procedures for monitoring. When interviewed she knew to change covers on the probe if the contaminated worker was touched and the correct speed to conduct the monitoring. Training had been completed previously.

Issue: 57-00-22-A-37

Description: During the female decontamination process, the contaminated emergency worker's right hand was contaminated. The survey monitor requested that the protective cover be removed for decontamination. When the cover was removed, the survey monitor determined that the emergency worker's shoes were contaminated. To aid in taking off the shoes, the contaminated worker leaned against the wall so the worker could take the shoes off. This action created a cross-contamination condition. (Objective 22) (NUREG-0654, K.5.b)

Corrective Action Demonstrated: The monitor in the female decontamination area was thorough in monitoring the evacuees and they were aware of the correct procedures for monitoring. The plans and procedures were followed. When interviewed she knew to change covers on the probe if the contaminated worker was touched, the correct speed to conduct the monitoring and that the area would be cleaned with maslin cloth if an area was cross-contaminated. Training has been completed previously.

Issue: 57-00-22-A-38

Description: No background readings were taken during the male Decon demonstration as is identified in their procedures. (Objective 22) (NUREG-0654, N.1.a)

Corrective Action Demonstrated: Individuals monitoring for contamination took background readings prior to the evacuees entering the decontamination area.

Issue: 57-00-22-A-39

Description: In the male Decon area, the first monitor was too fast and too close, which made it questionable whether the monitoring procedure demonstrated would be sufficient to detect radiological contamination. (Objective 22) (NUREG-0654, K.5.b)

Corrective Action Demonstrated: The monitor in the male decontamination area was thorough in monitoring the male evacuee and was aware of the correct procedures for monitoring. Their plans and procedures were followed when monitoring was completed.

Issue: 57-00-22-A-40

Description: Twenty-five emergency workers were used at two or more Manchester facilities in the primary and secondary monitoring areas and the female decontamination area. In a real event, these emergency workers could not be in two or possibly three places at once. Training rosters provided show adequate trained staff for all three locations, but only enough people to adequately staff one location showed up to demonstrate the plans. (Objective 22) (NUREG-0654, K.5.b)

Corrective Action Demonstrated: See issue 57-00-18-A-26.

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

3.4.2 Dover Middle School Reception Center

a. **MET:** Evaluation Criteria 1.c.1
3.a.1

b. **DEFICIENCY:** None.

c. **AREAS REQUIRING CORRECTIVE ACTION:** (6.a.1, 6.b.1)

ISSUE # 57-02-6.b.1-A-09

Team # 1, monitoring a potentially contaminated woman, touched the clothing while monitoring. When the monitor registered more than 300 mR at her jacket they told her to

remove it. They did not have a bag ready and she placed it on the chair next to her. She then placed her camera and bag on top of the jacket potentially cross contaminating them.

Schedule of Corrective Action:

Training will be conducted in proper procedures for monitoring contaminated personnel and the possibility of cross contamination.

ISSUE # 57-02-6.b.1-A-10

The contaminated evacuee handed a baggie containing form 300 to a female decon staff. They opened the bag to read the form and closed the bag. The worker did not change her gloves after holding the bag from the contaminated evacuee. Also, once the evacuee was determined clean, she picked up the baggie, recontaminating herself.

Schedule of Corrective Action:

Training will be conducted in proper procedures for monitoring contaminated personnel and the possibility of cross contamination.

ISSUE # 57-02-6.b.1-A-11

Though an interview with the FEMA evaluator, the supervisor stated that evacuees who were unable to be decontaminated would dress in the Tyvek suits and wait in the holding area with the clean individuals.

Schedule of Corrective Action:

Training will be conducted in proper procedures for monitoring contaminated personnel and the possibility of cross contamination.

ISSUE # 57-02-6.a.1-A-12

One of the Dover, NH female DECON staff was also at the Manchester, NH Reception Center drill on October 26, 2002.

Schedule of Corrective Action:

Training rosters revealed that there are additional staff that will be used at the next exercise.

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

3.5 Hospitals

3.5.1 Wentworth Douglass Hospital/Seabrook Fire Department

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

ISSUE # 57-02-6.d.1-A-13

The doctor had called for a second monitoring of the patient after determining the condition of the wounds and some preliminary treatment. The Rad Tech attempted to monitor the patient with the Ludlum 12, alpha counter with the probe cover was still in place.

CORRECTIVE ACTION TAKEN: See ISSUE: 57-02-6.d.1-A-20

ISSUE # 57-02-6.d.1-A-14

The initial monitoring of the patient was completed with the Eberline 5-20, high-level monitor. In accordance with their plan the Eberline E-140N with HP-210 probe should have been utilized.

CORRECTIVE ACTION TAKEN: See ISSUE: 57-02-6.d.1-A-20

ISSUE # 57-02-6.d.1-A-15

The initial monitoring of the patient began well, however, subsequent monitoring was poorly completed. The probe was moved to fast across the patient and also not close enough to detect any contamination.

CORRECTIVE ACTION TAKEN: See ISSUE: 57-02-6.d.1-A-20

ISSUE # 57-02-6.d.1-A-16

A background reading of the REA was not performed.

CORRECTIVE ACTION TAKEN: See ISSUE: 57-02-6.d.1-A-20

ISSUE # 57-02-6.d.1-A-17

The instruments made ready for the demonstration were a Ludlum 12, alpha monitor, calibration due date 3/20/03, an Eberline E-140N with HP-210 probe attached, calibration due date 3/19/03, and an Eberline 5-20, high level monitoring instrument, with a calibration due

date of 9/19/03. These instruments were turned on, however, they were not checked for proper operation.

CORRECTIVE ACTION TAKEN: See ISSUE: 57-02-6.d.1-A-20

ISSUE # 57-02-6.d.1-A-18

EMTs had not considered necessary precautions and procedures to prevent or control 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 contaminated area. Equipment was placed on the floor of the contaminated area. They threw emergency medical equipment, as well as bandages, on 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 TAKEN: Training is being scheduled for EMT personnel.

ISSUE # 57-02-6.d.1-A-19

The Radiological Technician at the Wentworth- Douglass Hospital used the wrong type of survey instrument. The Radiological Technician used a Ludlum – 12 survey meter (ALPHA) he would not have received any readings of contamination or improper reading because the red plastic protective cover was still on the end of the survey probe as well as a piece of plastic wrap which would have interfered with obtaining a proper reading. Additionally there was no alpha rays being emitted.

CORRECTIVE ACTION TAKEN: See ISSUE: 57-02-6.d.1-A-20

ISSUE # 57-02-6.d.1-A-20

The Hospital Radiological Technician did not demonstrate knowledge of the hospital plan to determine an action level for contamination. The controller continued to give contamination levels of 150, 300, 350, and 400 counts per minute and the technician never declared that areas or items on the ambulance were contaminated. The same readings of 300 to 400 CPM applied to the ambulance crew. The hospital plan states that any reading greater than 100 CPM plus background is considered contaminated.

CORRECTIVE ACTION TAKEN: Remedial Training was conducted on December 11, 2002 for hospital staff. They were trained on the selection and use of the portable survey instruments used during the exercise. This training corrects issues 57-02-6.d.1-A-13, 57-02-6.d.1-A-14, 57-02-6.d.1-A-15, 57-02-6.d.1-A-16, 57-02-6.d.1-A-17, 57-02-6.d.1-A-18, 57-02-6.d.1-A-19.

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

3.7 State Transportation Staging Area – Epping

The Sheriffs Department and the University of New Hampshire Volunteers worked as a team and the state transportation staging area was set up and operations in a short amount of time. The dosimetry staff was new and had learned very quickly the procedures of that position.

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

4. COMMONWEALTH OF MASSACHUSETTS

4.1 State Emergency Operations Center

The Massachusetts Emergency Management Agency Communications Officer and Dispatcher should be commended for their performance during the Seabrook Nuclear Power Station Exercise. Radio contact with Merrimac was repeatedly interrupted. This required the Communications Officer to employ extraordinary measures to ensure continued contact with Merrimac.

An exceptionally well-coordinated and well-integrated emergency response operation was demonstrated at the Massachusetts State Emergency Operations Center (EOC). Protective action decision-making was especially well coordinated, by the Acting Emergency Management Director who received both technical and logistical input from the Department of Public Health and other agency staff members.

The Massachusetts State Emergency Operations Center Public Information Line was efficiently staffed. Personnel worked well together as a team, in order to ensure that callers were provided with the most up-to-date information possible. Personnel were calming, informative, and handled calls in a professional manner. Staff were quick to identify rumors, and informed the Public Affairs Officer of these rumors immediately. In addition, the Public Affairs Officer and the Operations Officer worked well together to ensure that Emergency Alert Messages and follow-up information were timely and informative.

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

ISSUE # 57-0-1.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

It was clear that the team took pride in their work and treated the drill as they would an actual event. They should be proud of themselves for a job well done.

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

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

ISSUE # 1: 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. (See the attached letter.)

ISSUE # 57-02-3.d.1-A-23

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.

Schedule of Corrective Actions:

Letter from the Massachusetts State Police may be viewed in the Boston Office or faxed on request.

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

4.4 Media Center

Massachusetts' representatives at the Joint Media Center demonstrated strong teamwork and a good understanding of their roles and responsibilities. The designated Public Information Officer (PIO) delivering the media briefings showed a good understanding of the situation. There was good

cooperation and coordination demonstrated with the Massachusetts State Emergency Operations Center and with PIOs from New Hampshire and the utility. Meetings were held both before and after the media briefings to prepare for and critique and improve performance at the briefings.

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

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.

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

4.5 Field Teams

4.5.1 Nuclear Incident Advisory Team 8

The members of the Massachusetts field monitoring team Nuclear Incident Advisory Team 8 demonstrated their proficiency in conducting radiation measurements and drawing air samples. Sample locations were promptly located and the measurements were efficiently taken and quickly reported to the Field Team Coordinator at the Emergency Operations Facility. Proper health physics techniques were demonstrated throughout the exercise.

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

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

4.5.2 Nuclear Incident Advisory Team 14

The strengths demonstrated by the members of field monitoring team Nuclear Incident Advisory Team 14 can be summarized in one word: familiarity. The team was familiar with their procedures, the area in which they were operating, and most importantly, the ability of each team member. They worked quickly, effectively, and demonstrated a professional demeanor.

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

4.6 State Police Troop A, Danvers ACP/TCP

The demonstration conducted by the MSP Troop A was a model of order and efficiency. All participants were well trained and undertook their duties promptly and with a high degree of professionalism. The Assembly Area Commander responded decisively to information as it was received and appeared to be well-prepared to manage the effort in an actual emergency. The Radiological Officer and Assistant demonstrated solid understanding of their duties and provided a clear and complete briefing.

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

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

f. **PRIOR ARCAs - UNRESOLVED:**

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.

Recommendation: The TMM should be rewritten to specify the ACPs that should be established by the MSP when traffic flow between ERPA B and ERPA E should be restricted. The disposition of locally staffed ACPs should also be clarified. These new or redesignated ACPs should be integrated into the manual for purposes of specifying staffing, prioritization of these ACPs compared to other ACPs in Region 5, and traffic control equipment requirements. Once the instructions are clear, training of Headquarters staff and troopers should be provided.

Schedule of Corrective Actions:

Letter from the Massachusetts State Police may be viewed in the Boston Office or faxed on request.

5. RISK JURISDICTIONS (MASSACHUSETTS)

5.1 Amesbury

There was outstanding coordination and demonstration of teamwork by Amesbury Emergency Operations Center Director and Staff.

- a. **MET: Evaluation Criteria** 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: 1.a.1**

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.

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

5.2 Merrimac

The Merrimac Emergency Operations Center (EOC) staff demonstrated a sense of unity. EOC staff worked together seamlessly to provide a timely response effort. All EOC staff, particularly the Emergency Management Director (EMD) and his Deputy, fully understood their plans and procedures.

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

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.

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 redemonstration 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.

5.4 Newburyport

Effective command and control was observed at the Newburyport Emergency Operations Center (EOC). Facility updates of emergency conditions were frequent and detailed. Prompt updates were made to schools, special facilities, and field personnel. The EOC was well designed, equipped, and staff was professional.

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

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.

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.

receiving routine briefings from the EMD and sharing important information from board postings and written messages.

- a. **MET: Evaluation Criteria** 1.a.1, b.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 # 57-02-3.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.

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

5.7 Schools, Special Facilities and Day Cares

5.7.1 Amesbury

Amesbury High School
Amesbury Country Day
Windmill Country Day
Educational Child Care
Amesbury Health Center
Harborside Health Care

Harbor School
James Place and James Place Next Generation
Hillside Rest Home
Amesbury Wild Acres

- 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.**

5.7.2 Merrimac

Dr. F.N. Sweetsire School
Little Peoples Pre-School
Merrimac House
Harbor School

- 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.**

5.7.3 Newbury

Triton School District
Superintendent, Triton Regional Middle/High School
Gov. Dummer Academy
Harbor School

- 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

Newburyport School District
 Superintendent, George Brown School
 Kelley School
 Immaculate Conception School
 Kinder Care Learning Center
 Knoll Edge Nursery
 Brigham Manor
 Wheelwright House
 Harbor School
 Merrimack Place Assisted Living
 Griffin House
 Harborside Adult Health at St. Paul's Church
 James Steam Mill Opportunity Works

- 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:**

Issue No.: 57-98-15-A-31

Description: Staff members at the Knoll Edge Nursery Schools in West Newbury and Newburyport, including the Lead Teacher at West Newbury, were not familiar with the emergency plans and procedures. (Objective 15) (NUREG-0654, E.7, J.10.c,d,e,g, N.1.a)

Corrective Action Demonstrated: A visit on January 8th revealed that the school has their current plans and procedures and updated emergency phone numbers for all students. The Director and teachers were aware of where the students would be transported to, if needed, and whom they would receive notification from to evacuate.

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

5.7.5 Salisbury

Salisbury Elementary School
Harbor School
Boardwalk Kitty Corner

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.

5.7.6 West Newbury

Pentucket School District
Superintendent, Dr. John C. Page School
Children's Castle
Knoll Edge Nursery
Early Intervention Koinonia

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:**

Issue No.: 57-98-15-A-31

Description: Staff members at the Knoll Edge Nursery Schools in West Newbury and Newburyport, including the Lead Teacher at West Newbury, were not familiar with the emergency plans and procedures. (Objective 15) (NUREG-0654, E.7, J.10.c,d,e,g, N.1.a)

Corrective Action Demonstrated: A visit on January 8th revealed that the school has their current plans and procedures and updated emergency phone numbers for all students. The Director and teachers were aware of where the students would be transported to, if needed, and whom they would receive notification from to evacuate

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

6. SUPPORT JURISDICTIONS (MASSACHUSETTS)

6.1 Emergency Worker Monitoring and Decontamination Station - Haverhill

a. **MET:** Evaluation Criteria 1.b.1, d.1, e.1
3.a.1
6.b.1

b. **DEFICIENCY:** None.

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

d. **NOT DEMONSTRATED:** None.

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

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

6.2 State Transportation Staging Area – No. Essex Community College

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

6.3 **Tewsbury Reception Center**

a. **MET:** Evaluation Criteria 1.b.1, c.1, e.1
3.a.1
6.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

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 |
| 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 |
| EWMS | 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, <i>“Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants,” November 1980</i> |
| 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 |
| SNPS | 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> |
|-----------------|------------------|---------------------|
|-----------------|------------------|---------------------|

STATE OF NEW HAMPSHIRE

| | | |
|-----------------------------------|--|-----------------------------------|
| State EOC | Joe Keller Wanda Gaudet David Petta William Neidermeyer | ICF (TL) FEMA R1 DOT ICF |
| EOF | Robert Young | ICF |
| IFO | Robert Poole Paul Nied | FEMA R1 ICF |
| State Warning Point | Wanda Gaudet | FEMA R1 |
| Media Center | Mike Beeman Janice Melton (Shadow) | FEMA R2 FEMA R1 |
| Field Monitoring Team #1 | Jerry Staroba | ICF |
| Field Monitoring Team #2 | Jim Hickey | ICF |
| Rockingham County Dispatch Center | Joe Austin | ICF |

| <u>LOCATION</u> | <u>EVALUATOR</u> | <u>ORGANIZATION</u> |
|-----------------|------------------|---------------------|
|-----------------|------------------|---------------------|

RISK JURISDICTIONS

| | | |
|-------------------|---|----------------|
| Brentwood EOC | Tim McCoy | FEMA R1 |
| East Kingston EOC | Robert Waters | FEMA R1 |
| Exeter EOC | David Schweller | ICF |
| Greenland EOC | Mark Gallagher Bud Iannazzo (Shadow) | FEMA R1 ICF |
| Hampton EOC | Mike Hammond | FEMA R10 |
| Hampton Falls EOC | Richard Quinlan | FEMA R1 |
| Kensington EOC | Pat Tenorio | FEMA HQ |
| Kingston EOC | Michael Brazel | FEMA R1 |
| New Castle EOC | Anita Kellogg | ICF |
| Newfields EOC | Willis Larabee | ICF |
| Newton EOC | O.C. Payne | FEMA HQ |
| North Hampton EOC | Don Cray | ICF |
| Portsmouth EOC | Larry Visniesky | ICF |
| Rye EOC | Glenn Kinnear | ICF |
| Seabrook EOC | Bill Edmonson | ICF |
| South Hampton EOC | Joe Canoles | FEMA R4 |
| Stratham | Robert Neisius | ICF |

SCHOOLS

| | | |
|---------------------------------|-----------------|---------|
| Swazey Central School | Tim McCoy | FEMA R1 |
| East Kingston Elementary School | Robert Waters | FEMA R1 |
| Exeter High School | David Schweller | ICF |

| <u>LOCATION</u> | <u>EVALUATOR</u> | <u>ORGANIZATION</u> |
|---|---|----------------------------|
| Greenland Central School | Mark Gallagher Bud Iannazzo (Shadow) | FEMA R1 ICF |
| Lincoln Ackerman School | Richard Quinlan | FEMA R1 |
| Kensington Play School | Pat Tenorio | FEMA HQ |
| Sanborn Regional High School | Michael Brazel | FEMA R1 |
| Trefethen School | Anita Kellogg | ICF |
| Newfields Elementary School | Willis Larabee | ICF |
| Sanborn Regional Middle School | O.C. Payne | FEMA HQ |
| North Hampton Elementary School | Don Cray | ICF |
| Portsmouth Middle School | Larry Visniesky | ICF |
| Rye Middle School | Glenn Kinnear | ICF |
| Seabrook Elementary School | Bill Edmonson | ICF |
| South Hampton Banard School | Joe Canoles | FEMA R4 |
| Richie McFarland School | Robert Neisius | ICF |
| <u>SUPPORT JURISDICTIONS</u> | | |
| Manchester Reception Center | FEMA, Region I Staff | |
| Dover Reception Center | FEMA, Region I Staff | |
| Wentworth Douglass Hospital / Seabrook Fire Department | Bob Poole Bob Swartz | FEMA R1 FEMA R1 |

| <u>LOCATION</u> | <u>EVALUATOR</u> | <u>ORGANIZATION</u> |
|-----------------|------------------|---------------------|
|-----------------|------------------|---------------------|

STATE OF MASSACHUSETTS

| | | |
|-------------------------------|--|-----------------------------------|
| State EOC | Robert Rospenda Tom Brown Jennifer Roberson Gary Naskrent | ICF (TL) ICF ICF FEMA R5 |
| EOF | Joseph Lischinsky | ICF |
| Region 1 (Tewksbury) | Ron Van Jeanne Gallagher | ICF FEMA R1 |
| Media Center | Deborah Bell Mike Goetz | FEMA R1 FEMA R1 |
| Field Monitoring Teams | Jim Cherniak Ron Bernacki | EPA FDA |
| State Police Troop A, Danvers | Walter Gawlak | ICF |

RISK JURISDICTIONS

| | | |
|--|--|-------------------------------|
| Amesbury EOC | Roy Smith Patrick Mooney | ICF FEMA R1 |
| Merrimac EOC | Lauren Record | FEMA R1 |
| Newbury EOC | Brian Hasemann | FEMA R2 |
| Newburyport DOT for ACP/TCP Salisbury EOC | Brad McRee Bob Swartz | ICF FEMA R1 |
| West Newbury EOC | Keith Earnshaw | ICF |
| Amesbury Schools | Patrick Mooney Daisy Sweeney Gary Naskrent | FEMA R1 FEMA R1 FEMA R5 |
| Merrimac Schools | Lauren Record | FEMA R1 |
| Newbury Schools | Brian Hasemann | FEMA R2 |

LOCATION

EVALUATOR

ORGANIZATION

Newburyport Schools

Brad McRee
Lauren Record

ICF
FEMA R1

Salisbury Schools

Bob Swartz

FEMA R1

West Newbury

Keith Earnshaw

ICF

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 20, 2002, respectively, in preparation for the Seabrook Nuclear Power Station exercise on October 23, 2002. 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.

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

**57-00-01-A-05 2000 EXERCISE REPORT PG.36 EVALUATION AREA 1.A.1
INCIDENT FIELD OFFICE ISSUE: NOTIFICATION OF MANCHESTER AND
ROCHESTER EOCS.**

57-00-01-A-13 2000 EXERCISE REPORT PG.54 EVALUATION AREA 1.A.1
GREENLAND EOC ISSUE: POLICE OFFICER ON DUTY DID NOT COMPLETE
INITIAL NOTIFICATIONS.

57-00-01-A-16 2000 EXERCISE REPORT PG.62 EVALUATION AREA 1.C.1
NORTH HAMPTON EOC ISSUE: RADIOLOGICAL DEFENSE OFFICER NOT
AVAILABLE, NO BACK-UP TRAINED AND AVAILABLE.

57-00-01-A-17 2000 EXERCISE REPORT PG.63 EVALUATION AREA 1.A.1
PORTSMOUTH EOC ISSUE: DISPATCH CALL LIST OUT OF DATE.

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

Each participating facility will demonstrate its capabilities in accordance with this Evaluation Area. Facilities participating are the: State EOC, EOF, IFO, Media Center, Joint Information Center, Local EOCs: Brentwood, East Kingston, Exeter, Greenland, Hampton, Hampton Falls, Kensington, Kingston, New Castle, Newfields, Newton, North Hampton, Portsmouth, Rye, Seabrook, South Hampton, Stratham, Dover (host) and MANCHESTER (host).

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

57-00-02-A-19 2000 EXERCISE REPORT PG.6 EVALUATION AREA 1.B.1 **SEABROOK EOC** ISSUE: EOC SECURITY WAS NOT ADEQUATE.

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):

57-00-03-A-01 2000 EXERCISE REPORT PG.31 EVALUATION AREA 1.C.1
STATE EOC ISSUE: DECISION TO CLOSE BEACHES.

57-00-03-A-11 2000 EXERCISE REPORT PG.50 EVALUATION AREA 1.C.1
BRENTWOOD EOC ISSUE: SELECTMEN SOUNDED SIRENS WITHOUT COORDINATING EAS OR OTHER ADVISORIES.

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.

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

**57-00-03-A-07 2000 EXERCISE REPORT PG.37 EVALUATION AREA 1.D.1
INCIDENT FIELD OFFICE ISSUE: GREENLAND EOC DID NOT RECEIVE
NOTIFICATION OF STATE OF EMERGENCY OR SHELTER ADVISORY.**

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 facilities 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 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):

57-98-05-A-17 2000 EXERCISE REPORT PG.68 EVALUATION AREA 1.E.1
SEABROOK EOC ISSUE: INSTRUMENTATION OUT OF CALIBRATION.

57-00-04-A-12 2000 EXERCISE REPORT PG.50 EVALUATION AREA 1.E.1
BRENTWOOD EOC ISSUE: PAGERS INOPERATIVE.

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.

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. PHAAP and other accident assessment models will be used.

Protective action recommendations will be made in accordance with the NHRERP.

This accommodation does not absolve the accident assessment team from making appropriate strategic decisions with respect to the deployment and coordination of field monitoring resources at their disposal.

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

ORO's 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 the State EOC.

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 and institutionalized individuals will be demonstrated at the State EOC.

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

**57-00-03-A-01 2000 EXERCISE REPORT PG.31 EVALUATION AREA 2.A.1
STATE EOC ISSUE: DECISION TO CLOSE BEACHES**

Note: Look at Evaluation Area 1.c.1, Direction and Control, as well.

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.

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's 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. Ingestion exposure pathway issues may be incidentally addressed in the context of the plume exposure pathway demonstration but do not constitute a basis for evaluation of this sub-element or its evaluation criterion.

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. Ingestion exposure pathway issues may be incidentally addressed in the context of the plume exposure

pathway demonstration but do not constitute a basis for evaluation of this sub element or its evaluation criterion.

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

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

During a plume phase exercise, emergency workers should demonstrate the procedures to be followed when administrative exposure limits and turn-back values are reached. The emergency worker should report accumulated exposures during the exercise as indicated in the plans and procedures. OROs should demonstrate the actions described in the plan and/or procedures by determining whether to replace the worker, to authorize the worker to incur additional exposures or to take other actions.

If scenario events do not require emergency workers to seek authorizations for additional exposure, evaluators should interview at least two emergency workers, to determine their knowledge of whom to contact in the event authorization is needed and at what exposure levels.

Emergency workers may use any available resources (e.g. written procedures and/or co-workers) in providing responses.

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

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

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, DOVER (host), MANCHESTER (host), RCDC, Field Teams and Troop A.

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

57-98-05-A-04 2000 EXERCISE REPORT PG.48 EVALUATION AREA 3.A.1 **TROOP A** ISSUE: DOSIMETRY NOT INSPECTED FOR ELECTRICAL LEAKAGE.

57-00-05-A-14 2000 EXERCISE REPORT PG.56 EVALUATION AREA 3.A.1 **HAMPTON FALLS EOC** ISSUE: NO DOSIMETRY BRIEFING.

57-00-05-A-15 2000 EXERCISE REPORT PG.60 EVALUATION AREA 3.A.1 **NEW CASTLE EOC** ISSUE: EMERGENCY WORKERS DID NOT KNOW REPORTING LEVELS.

57-00-05-A-20 2000 EXERCISE REPORT PG.66 EVALUATION AREA 3.A.1 **SEABROOK EOC** ISSUE: TCP OFFICERS WERE NOT BRIEFED ON ECL, PARS INEFFECT OR DOSIMETRY.

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

OROs should demonstrate the capability to make KI available to emergency workers, institutionalized individuals, and, where provided for in the ORO plan and/or procedures, to members of the general public. OROs should demonstrate the capability to accomplish distribution of KI consistent with decisions made. Organizations should have the capability to develop and maintain lists of emergency workers and institutionalized individuals who have ingested KI, including documentation of the date(s) and time(s) they were instructed to ingest KI. The ingestion of KI recommended by the designated ORO health official is voluntary.

For evaluation purposes, the actual ingestion of KI is **not** necessary. OROs should demonstrate the capability to formulate and disseminate appropriate instructions on the use of KI for those advised to take it. If a recommendation is made for the general public to take KI, appropriate information should be provided to the public by the means of notification specified in the ORO's plan and/or procedures. Emergency workers should demonstrate the basic knowledge of procedures for the use of KI whether or not the scenario drives the use of KI. This can be accomplished by an interview with the evaluator.

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 and Field Teams) 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.

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

57-00-14-A-18 2000 EXERCISE REPORT PG.64 EVALUATION AREA 3.B.1
PORTSMOUTH EOC ISSUE: RADIOLOGICAL DEFENSE OFFICER DID NOT KNOW WHO MAKES THE DECISION FOR EMERGENCY WORKERS TO TAKE KI.

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 already contained in the local EOCs' demonstration. A TDD/Relay Operator will be demonstrated at the IFO in Newington.

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.

An out-of-sequence demonstration of transportation routes and route maps will be combined with a mobilization and operation demonstration of the State Transportation Staging Area. The availability of resources to support transportation resource providers will be demonstrated.

No drivers will respond. Evaluators will use support materials issued to them by STSA Staff as if they were the assigned driver. Evaluators will receive instructions from controllers and follow route maps to designated facilities and on to reception centers.

Criterion 3.c.2: OROs/School officials 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.

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.

Protective Action Decisions for schools are made at the State EOC. A school or special facility in each municipality will be interviewed out of sequence.

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

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

INTENT

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

EXTENT OF PLAY

OROs should demonstrate the capability to select, establish, and staff appropriate traffic and access control points consistent with protective action decisions (for example, evacuating, sheltering, and relocation), in a timely manner. OROs should demonstrate the capability to provide instructions to traffic and access control staff on actions to take when modifications in protective action strategies necessitate changes in evacuation patterns or in the area(s) where access is controlled. Traffic and access control staff should demonstrate accurate knowledge of their roles and responsibilities. This capability may be demonstrated by actual deployment or by interview in accordance with the extent of play agreement.

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

NEW HAMPSHIRE EXTENT OF PLAY

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

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

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.

NEW HAMPSHIRE EXTENT OF PLAY

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

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. Ingestion exposure pathway issues may be incidentally addressed in the context of the plume exposure pathway demonstration but do not constitute a basis for evaluation of this sub element or its evaluation criterion.

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. Ingestion exposure pathway issues may be incidentally addressed in the context of the plume exposure pathway demonstration but do not constitute a basis for evaluation of this sub element or its evaluation criterion.

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. Ingestion exposure pathway issues may be incidentally addressed in the context of the plume exposure pathway demonstration but do not constitute a basis for evaluation of this sub-element or its evaluation criterion.

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 NHOCPH radiological monitoring teams will be dispatched. 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 out of sequence. Controller data will be provided to the Accident Assessment Team to facilitate the accident assessment process during the plume phase.

In accordance with the NHRERP, field monitoring teams pick up and inventory their equipment and are initially dispatched from the OCPH Laboratory in Concord. Field Teams should collect two complete samples and continue to pick up samples until the exercise terminates.

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

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.

ORO's 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 NHRERP, field monitoring teams pick up and inventory their equipment and are dispatched from OCPH Headquarters in Concord by the OCPH 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 OCPH 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.

In consideration of the exercise time line compression, appropriate field monitoring data will be provided to state accident assessment personnel by exercise controllers upon request. This data will be available for consideration by the assessors without regard to the real time status or location of field monitoring teams.

Criterion 4.a.3: Ambient radiation measurements are made and recorded at appropriate locations, and radioiodine and particulate samples are collected. Teams will move to an appropriate low background location to determine whether any significant (as specified in the plan and/or procedures) amount of radioactivity has been collected on the sampling media. (NUREG-0654, I.8. 9., 11.)

INTENT

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

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

EXTENT OF PLAY

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 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 the joint monitoring team dispatcher. This activity will take place out-of-sequence during the plume phase demonstration.

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. Ingestion exposure pathway issues may be incidentally addressed in the context of the plume exposure pathway demonstration but do not constitute a basis for evaluation of this sub element or its evaluation criterion.

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. Ingestion exposure pathway issues may be incidentally addressed in the context of the plume exposure pathway demonstration but do not constitute a basis for evaluation of this sub element or its evaluation criterion.

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.*

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

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

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

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

NEW HAMPSHIRE EXTENT OF PLAY

There are no populated FEMA approved exception areas in the Seabrook 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.

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.

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, the Media Center and JIC are the facilities where this process takes place. The Media Center and JIC are facilities that are 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.

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 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. A controller message will be generated for each community to initiate a response and referral of to the public inquiry 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):

57-00-11-A-02 2000 EXERCISE REPORT PG.31 EVALUATION AREA 5.B.1 STATE EOC ISSUE: EAS MESSAGES WERE INCONSISTENT.

57-00-16-A-04 2000 EXERCISE REPORT PG.32 EVALUATION AREA 5.B.1 STATE EOC ISSUE: EAS MESSAGES RE: PROTECTIVE ACTION DECISION WERE INCONSISTENT. ISSUE: EMERGENCY PUBLIC INFORMATION HAD NO INSTRUCTIONS ON SHELTER IN PLACE FOR SCHOOLS. (Identified under objective 16 but may be more easily identified for correction under 5.b.1.

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 Memorial High School and Dover 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. All portal monitors for each location must 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 run through sequentially.

AREAS REQUIRING CORRECTIVE ACTION (ARCA):

**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-32 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-31 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 Memorial High School and Dover 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):

**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.**

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 2002. Based on FEMA's survey review, a tour of selected (some, all, or none) congregate care facilities that support the Manchester and Dover reception centers will be conducted with a controller and an American Red Cross representative independently and out of sequence

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.

OROs 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 2002 MS-1 Drill

**MASSACHUSETTS
EVALUATION AREAS AND EXTENT OF PLAY
SEABROOK NUCLEAR POWER STATION EXERCISE
OCTOBER 23, 2002**

Overview

The following organizations/locations will demonstrate in 2002:

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
Massachusetts Emergency Animal Response Team
American Red Cross
Federal Emergency Management Agency

Region I Emergency Operations Center

Massachusetts Emergency Management Agency – Region I
Massachusetts State Police
Massachusetts Highway Department
Massachusetts Department of Mental Health
Massachusetts National Guard
American Red Cross
RACES Operators

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

State Police Troop A, Danvers Barracks

Risk Jurisdictions

Amesbury EOC & LTSA
Merrimac EOC & LTSA
Newbury EOC & LTSA
Newburyport EOC & LTSA
Salisbury EOC & LTSA
West Newbury EOC & LTSA

Support Jurisdictions (To be demonstrated out of sequence)

State Transportation Staging Area – September 7th
Radiological Monitoring & Decontamination Facility for Emergency Workers – Oct 2nd
Tewksbury Reception Center (Eastern Side) – Wednesday, October 16th

Schools (To be visited October 24th)

Amesbury School District Superintendent
Amesbury High School
Cashman Elementary School
Pentucket School District Superintendent
Dr. F. N. Sweetsir School
Dr. John C. Page School
Triton School District Superintendent
Triton Regional Middle & High School
Salisbury Elementary School
Governor Dummer Academy
Newburyport School District Superintendent
Brown School
Kelly School
Immaculate Conception School

Day Cares Centers (To be visited on October 24th)

Amesbury Country Day
James Place and James Place Next Generation
Windmill Country Day
Educational Child Care
Little People's Pre-School
Kinder Care Learning Center
Knoll Edge Nursery (2/Newburyport)
Kiddie Corner
Children's Castle
Knoll Edge Nursery (West Newbury)
Early Intervention
Koinonia

Special Facilities (To be visited on October 24th)

Amesbury Health Center
Harborside Healthcare
Hillside Rest Home

Special Facilities (continued)

Brigham Manor
Griffin House
Wheelwright House
Amesbury Wild Acres
Merrimac House
Harbor Schools (194R Main Street, Amesbury)
Harbor Schools (100 West Main Street, Merrimac)
Harbor Schools (24 Rolfes Lane, Newbury)
Harbor Schools (72 High Street, Newburyport)
Harbor Schools (13 Garfield Street, Salisbury)
Merrimack Place Assisted Living (Newburyport)
Harborside Adult Health
James Steam Mill
Opportunity Works
Boardwalk

Host Facilities for School & Day Care Centers (To be visited on October 24th)

Methuen High School
Marsh Grammar School
Wakefield High School

Transportation Providers

American Medical Response Northeast
Eastern EMS, Inc.
Fallon Service, Inc.
Laidlaw Transit, Inc., No. Andover
First Student Transportation Services
Merrimack Valley Regional Transit Authority

Mass Care

No new facilities

Other

The following organizations/locations will not demonstrate in 2002:

Schools

Academy for Academic Learning
Amesbury Elementary School
Amesbury Middle School
Horace Mann School
Sparhawk Schools
Donoghue School
Newbury Elementary School
Bresnahan School
Newburyport High School
Rupert A. Nock Middle School
River Valley Charter School
Pentucket Regional High School
Pentucket Regional Middle School

Day Care Centers

Community Action, Inc.
Knoll Edge (Amesbury)
Creative Playhouse
Newbury Youth Program Center
Children's House
Mrs. Murray's Nursery
Mulberry Child Care and Pre-School
Newburyport Montessori School
YWCA – School's Out Program

Special Facilities

Amesbury Residence
Camp Bauercrest
Elizabeth Calsey House
Highland Program
Amesbury Village, LLC
Country Manor Rehabilitation & Skilled Nursing Center
Heritage House
Newburyport Residence
Port Rehab & Skilled Nursing Center
Residential Options
Turning Point, Inc.
Anna Jaques Hospital
Assisted Living Center of Salisbury
Greater Newburyport Educational Collaborative

Host Facilities for Schools and Day Care Centers

Dewing Elementary School
Tewksbury Memorial High School
Minuteman Regional High School

Transportation Providers

Action Ambulance Service, Inc.
Cataldo Ambulance Company
Northshore Ambulance
Professional Ambulance Service
Laidlaw Transit, Inc., Merrimac
Worcester Regional Transit Authority
Lowell Regional Transit Authority
MA Bay Transportation Authority (MBTA)

Receptions Centers

Tewksbury (West)
Masconomet

Other

Saints Memorial Hospital (MS-1 Hospital)

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

MEMA will demonstrate Evaluation Area 5: Emergency Notification and Public Information, Criterion 5.a.3. during the Seabrook Exercise 2004.

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 call down or computerized lists to the FEMA evaluator.

EOF: MEMA and MDPH personnel 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 EOF 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). Staffing roster for MEMA, MDPH and MDPH field teams and Lab staff will be distributed at the pre-exercise meeting.

Media Center: MEMA personnel 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 Media Center 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).

Region I: Emergency staff who normally work at Region I EOC and who fill emergency positions at the Region 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 Region 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 Region 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 call down and computerized lists to the FEMA evaluator. A second shift roster for designated key personnel will be developed and shown to the evaluator.

NIAT Field Monitoring Team Personnel: 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 NIAT Field Monitoring Team reporting location 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).

State Police Troop A Danvers Barracks: Will develop rosters for state traffic and 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.

Massachusetts Highway Department: No mobilization to the field will occur, but staff will open the facility at the Newbury Scotland Road Garage to allow a FEMA inspection of equipment for traffic/access control. This inspection will take place after the main exercise by the Newbury FEMA evaluator.

Transportation Providers: Initial calls will be made to all transportation providers to tally the number of vehicles and drivers available. Follow-up calls will be made to a Control Cell. No mobilization of vehicles or personnel will occur. Default numbers will be used for non-participating providers. Drill ETAs will be simulated by controller injects.

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

Each facility participating this year will be evaluated to establish a baseline of its availability to support the accomplishment of emergency operations.

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

ORO 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.

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 provided through the Annual Letter of Certification and will be available for review at the Region I office.

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.

Massachusetts Highway Department, Scotland Road: Staff will open the facility at the MHD Depot to allow a FEMA inspection of equipment for traffic and access control.

EPZ EOCs: The FEMA Evaluator will visit the local highway garage (or designated storage area) to inspect equipment that would be used for traffic and access control points upon completion of the exercise.

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 (OROs) 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

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

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

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

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

Massachusetts Extent of Play

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

The procedure used to determine accumulated dose limits or exposure rates incurred by emergency workers will be demonstrated by MDPH.

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.

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.

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.

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 2002.

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 2002.

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 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 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 A, 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 who will be working outdoors within the EPZ and to two individuals who will be working inside each EPZ EOC.

ARCA: Media Center – VY (to be resolved during this exercise)

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By interview, the MA JIC personnel indicated that they had been issued a dosimetry packet but left them in their vehicles because the implementing procedures for the public information officer (PIO) states that dosimeters do not need to be read inside the media center. The media center is a sheltered and monitored facility. Dosimeters left outside the building would be recording outside exposures that would likely be higher than the actual exposure received by the workers inside the building. The time the JIC personnel could operate in a multi-day event could be limited because the dosimeters might erroneously indicate that the workers had exceeded their exposure limits. (NUREG-0654 H.10, K.3.a)

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.

Massachusetts will not demonstrate distribution of KI to the general public for this exercise.

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

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 transportation providers to tally the number of vehicles and drivers available and the ETA, however, no vehicles will be mobilized during the exercise. Subsequent call will be made to a control cell.

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. Controller messages will provide estimates of availability of 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 be evacuated; 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 make calls to a control cell. The Special Needs List for each community will be shown to the FEMA Evaluator, however, the information is confidential, therefore, copies of the list will not be provided to the evaluator. Amesbury, Newburyport and West Newbury will demonstrate use of their TTY once with a control cell.

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 October 23rd. These facilities will be visited on October 24th by a FEMA evaluator, who will interview key exercise players.

Special Facilities

Amesbury Health Center
Harborside Healthcare
Hillside Rest Home
Brigham Manor
Griffin House
Wheelwright House
Amesbury Wild Acres
Merrimac House
Harbor Schools (Newbury)
Harbor Schools (Newburyport)
Harbor Schools (Salisbury)
Harbor Schools (Amesbury)
Harbor Schools (Merrimac)
Merrimack Place Assisted Living (Newburyport)
Harborside Adult Health
James Steam Mill
Opportunity Works
Boardwalk

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 and non-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 October 24th by a FEMA evaluator, who will interview key exercise players and review the emergency log from October 23rd.

Schools

Amesbury School Superintendent
Amesbury High School
Cashman Elementary School
Pentucket School District Superintendent
Dr. F. N. Sweetsir School
Dr. John C. Page School
Triton School District Superintendent
Triton Regional Middle & High School
Salisbury Elementary School
Governor Dummer Academy
Newburyport School District Superintendent
Brown School
Kelly School
Immaculate Conception 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 October 24th by a FEMA evaluator who will interview key exercise players and review the Day Care Emergency Checklist.

ARCA 57-98-15-A-31

Description: Staff members at the Knoll Edge Nursery Schools in West Newbury and Newburyport, including the Lead Teacher at West Newbury, were not familiar with the emergency plans and procedures. (Objective 15)(NUREG-0654, E.7, J.10.c,d,e,g. N.1.a)

The following day care centers are not in session and are not to receive any calls during the exercise:

Newbury Youth Program
YWCA – School's Out Program

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 and the Massachusetts Highway Department, but traffic control point personnel will not be mobilized.

State Police Troop A Barracks: 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.

ARCA 57-00-17-A-41

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) (NUREG-0654, J.10.g, J.10.j,k)

MHD Scotland Road: A FEMA evaluator will visit 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. No personnel or equipment will be deployed to field locations. Instead, local highway representatives at the local EOCs will participate in a discussion of procedures and resources available for traffic control. At a time to be determined, the FEMA evaluator will visit the local garage to inspect equipment that would be used for traffic control points.

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 decision-making regarding rerouting of traffic following a traffic impediment, in response to a controller inject. No personnel or equipment will be dispatched to the accident scene, but the EOC staff will demonstrate decision-making, use of resource lists, contact numbers and communication with the appropriate emergency responders.

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.

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.

Massachusetts Extent of Play

This sub-element will not be evaluated on 2002.

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 2002.

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's 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 2002.

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

Two field teams will each pick up a minimum of two complete samples and then continue to pick up samples until termination of the exercise. Charcoal filters will be substituted for silver zeolite for exercise purposes.

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.

OROs should use Federal resources as identified in the Federal Radiological Emergency Response Plan (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

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

OROs. 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.

OROs 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.

ORO's 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 2002.

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 2002.

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 and WXRV) will be contacted. A standard test message will be faxed to the stations and broadcast once at approximately the time of initial notification to the public. WNBP will pick up the message from WQSX over the EAS.

EPZ Towns: Route alerting will be demonstrated in the Seabrook 2004 exercise.

ARCA #48-02-5.b.1-A-01

Issue: Information in News Release #2 concerning the sheltering of milk producing animals and placing them on stored feed and water was telephoned to the Media Center by the PAO for inclusion in news briefings with earlier precautionary actions. The information was not given to the media in either the first or second press briefings. This information was given to the media in the press

briefing that started at 1209, approximately two hours after the decision and after portions of the impacted area were told to evacuate. (NUREG-0654, E.5.7., G.3.a., G.4, a., b., c.)

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

This sub-element will not be demonstrated this exercise.

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.

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

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

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

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

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

Massachusetts Extent of Play

Media Center: Controllers will act as media representatives.

Information generated as a result of incoming calls to the EOC Public Information Line phones (formerly Rumor Control) will be included in news briefings. At least one rumor trend will be handled.

News Releases with obvious errors or misinformation will be returned to point of origin for correction.

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 one rumor trend (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 EOCs: 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.

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

Tewksbury Reception Center (Eastern) will demonstrate out of sequence – October 16th.

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

The Radiological Monitoring and Decontamination Station for emergency workers will be demonstrated – October 2nd.

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 2002. (No new facilities have been identified.)

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

This sub-element will not be evaluated in 2002.

APPENDIX 4 – EXERCISE SCENARIO

| <u>REAL TIME</u> | <u>ELAPSED TIME</u> | <u>DETAILED SCENARIO DESCRIPTION</u> | <u>MESSAGE NUMBER</u> |
|------------------|---------------------|--|-----------------------|
| | | <p><u>Initial Conditions</u></p> <p>The exercise date is assumed to be October 23, 2002.</p> <p>On-site personnel are limited to the normal weekday compliment. Current reactor power is 100%. Reactor core power history is the actual history since completion of OR-08. All plant parameters are normal except for those identified below.</p> <p>Positive Displacement Charging Pump CS-P-128 is tagged out for replacement of the pump packing. It was taken out of service at 0900 yesterday and is scheduled to be returned to service later this afternoon. Refer to Mini-Scenario 6.1 for further information.</p> <p>Containment Building Spray (CBS) Pump P-9B is tagged out to investigate unacceptable vibration readings recorded during a surveillance test. It was taken out of service at 0000 today and is scheduled to be returned to service by 1500 today. Refer to Mini-Scenario 6.2 for further information.</p> <p style="background-color: #e0e0e0;">SIMULATOR: Establish the above initial conditions on the simulator. In addition: 1) Hang required tags 2) Turn off RDMS alarms</p> <p>It is a clear late fall day with winds from the east northeast at about 5 mph. Current temperature is 45° F.</p> <p>In order to allow adequate time to assimilate this information and answer related questions, players will be provided with the scenario Initial Conditions on Monday, October 21.</p> | |
| | | <u>Detailed Scenario Timeline</u> | |
| 0700 | H-01:00 | Initial Conditions are provided to Simulator players. | ERO1 |
| Upon Arrival | | Initial conditions will be provided to non-Control Room personnel as they respond to their assigned facilities. | ERO2 |
| 0800 | H+00:00 | Initial conditions established; exercise begins. | N/A |

| <u>REAL TIME</u> | <u>ELAPSED TIME</u> | <u>DETAILED SCENARIO DESCRIPTION</u> | <u>MESSAGE NUMBER</u> |
|------------------|---------------------|--|-----------------------|
| 0805 | H+00:05 | <p>The Control Room receives indications of Reactor Coolant System (RCS) leakage inside containment. The leak is estimated to be about 70 gpm. Operators will begin a controlled plant shutdown.</p> <p>SIMULATOR: Enter malfunction for RCS leakage into containment. Control pound mass flow to ~70 gpm.</p> <p>The Shift Manager will assess accident conditions and declare an Alert in accordance with SSER Procedure ER 1.1, <u>Classification of Emergencies</u>, Initiating Condition 15c. The Shift Manager will assume the role of Short Term Emergency Director (STED) and direct implementation of SSER Procedure ER 1.2, <u>Emergency Plan Activation</u>. The STED will turn over command and control responsibilities to the Site Emergency Director (SED).</p> | ERO3g |
| As needed | | <p>The Shift Manager may initially attempt to declare an Unusual Event in accordance with SSER Procedure ER 1.1, <u>Classification of Emergencies</u>, Initiating Condition 15a. This may occur because it will be readily apparent that the emergency action levels of 15a (leak rate > Technical Specification limits) have been exceeded while a few minutes may be required to recognize that those of 15c (leak rate > 50 gpm) have also been exceeded. In order to provide adequate time for demonstration of offsite exercise objectives, an Unusual Event declaration will not be allowed.</p> <p>The Technical Support Center will activate and perform subsequent duties in accordance with SSER Procedure ER 3.1, <u>TSC Operations</u>. The SED maintains control of onsite response actions from the TSC.</p> <p>The Operational Support Center will activate and perform subsequent duties in accordance with SSER Procedure ER 3.2, <u>OSC Operations</u>.</p> <p>The Emergency Operations Facility will activate and perform subsequent duties in accordance with SSER Procedure ER 3.3, <u>EOF Operations</u>. The Response Manager assumes overall command and control of the NAESCo Emergency Response Organization.</p> <p>The Media Center will activate and perform subsequent duties in accordance with SSER Procedure 3.5, <u>Media Center Operations</u>.</p> | ERO4c |

| <u>REAL TIME</u> | <u>ELAPSED TIME</u> | <u>DETAILED SCENARIO DESCRIPTION</u> | <u>MESSAGE NUMBER</u> |
|------------------|---------------------|--------------------------------------|-----------------------|
|------------------|---------------------|--------------------------------------|-----------------------|

Following Media Center activation, assigned controllers will use a series of messages as scripts to simulate media calls to members of the Media Center staff.

Non-essential station personnel are evacuated and accountability is conducted. These activities will be simulated for this exercise, and will be controlled primarily from Guard Island in accordance with Security Procedure GN1332.00, Security Response to a Declared Radiological Emergency.

The onsite assembly area at the In-processing Center will activate and perform subsequent duties in accordance with SSER Procedure ER 3.6, Assembly Area Operations. Activation will be simulated for this exercise as discussed in Section 1.0, ERO Objective I.7.

Following the Alert declaration, assigned controllers should refer to **Mini-Scenario 6.3** for further information regarding simulation of NRC and Westinghouse interfaces.

| | | | |
|------|---------|--|-------|
| 0825 | H+00:25 | If no emergency declaration has been made or is pending, the Shift Manager will be directed to declare an Alert . | ERO5c |
|------|---------|--|-------|

| | | | |
|------------------------|--|--|------|
| After NWS is Contacted | | This message provides forecasted meteorological information from the National Weather Service. | ERO6 |
|------------------------|--|--|------|

| | | | |
|------|---------|---|-------|
| 1000 | H+02:00 | A pipe break occurs inside containment resulting in a large break loss of coolant accident and subsequent reactor trip. The Control Room receives indications of a sudden and significant loss of reactor coolant system mass and pressure, and corresponding increases in containment pressure, sump, temperature and radiation levels. Safety injection is initiated. | ERO7g |
|------|---------|---|-------|

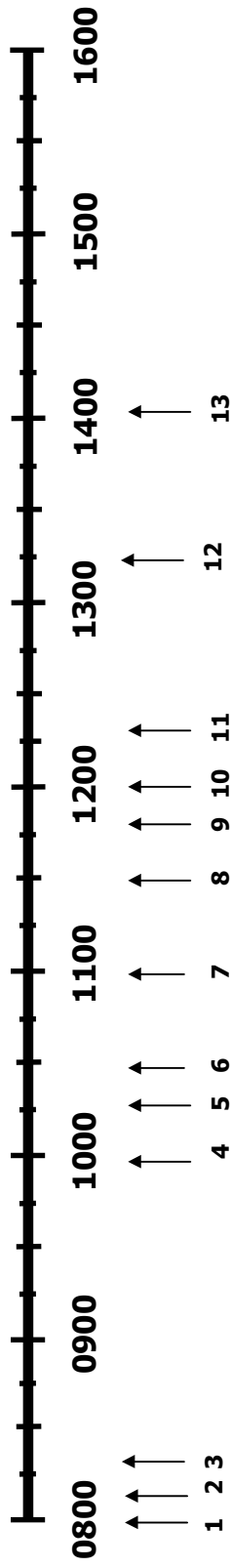
SIMULATOR: Delete RCS leak malfunction. Enter malfunction for a large break LOCA.

The Site Emergency Director will assess accident conditions and declare a **Site Area Emergency** in accordance with SSER Procedure ER 1.1, Classification of Emergencies, Initiating Condition 15d. Based on current conditions, and associated procedural requirements, NAESCo will not issue any Protective Action Recommendations (PARs) at this time.

| <u>REAL TIME</u> | <u>ELAPSED TIME</u> | <u>DETAILED SCENARIO DESCRIPTION</u> | <u>MESSAGE NUMBER</u> |
|------------------|---------------------|--|-----------------------|
| 1020 | H+02:20 | If no new emergency declaration has been made or is pending, the Site Emergency Director will be directed to declare a Site Area Emergency . | ERO8c |
| ~1030 | H+02:30 | <p>Injection from the Refueling Water Storage Tank (RWST) and the resulting reactor cooldown proceed normally until plant conditions require operators to initiate a swap-over to cold leg recirculation mode core cooling. Operators transition to emergency procedure ES 1.3, <u>Transfer to Cold Leg Recirculation</u>. At this point, containment sump suction isolation valve V8 fails to open. Refer to Mini-Scenario 6.4 for further information.</p> <p>SIMULATOR: Enter commands to keep CBS-V8 in the closed position and extinguish lights on associated MCB handswitch. ** Monitor Z CSFST - no red path **</p> <p>Operators secure the A Train Residual Heat Removal (RHR) and Containment Building Spray (CBS) Pumps.</p> | ERO9g |
| ~1100 | H+03:00 | <p>There is a pre-existing and unidentified leakage pathway from the Containment to the annulus area. The flow rate through this pathway will vary over time. The pathway will allow a radiological release from the containment atmosphere to the annulus, through the enclosure building ventilation system, and subsequently out the unit vent. The leakage should come to the attention of the ERO at approximately 11:00 am. The magnitude of the release is such that 1) the emergency classification will not be changed, 2) the EPA Protection Action Guides will not be exceeded, and 3) no Protective Action Recommendations are warranted.</p> <p>BUMP UP CEVA MONITOR EXHAUST READING (RM-6566-1) COLLATE WITH WRGM READING. ALSO-FIX PAB PART (RM-6532-2), should not be in alarm.</p> <p>NOTE - For scenario purposes, it is not necessary to define the exact leakage location since the players would not</p> | N/A |

| <u>REAL TIME</u> | <u>ELAPSED TIME</u> | <u>DETAILED SCENARIO DESCRIPTION</u> | <u>MESSAGE NUMBER</u> |
|------------------|---------------------|---|-----------------------|
| | | know this information until some time well after October 23, 2002. | |
| 1130 | H+03:30 | RHR Pump P-8B trips due to a faulty overcurrent relay. Refer to Mini-Scenario 6.5 for further information. | ERO10g |
| | | <p>SIMULATOR: Enter malfunction to trip RHR Pump P-8B. ** Monitor C CSFST - no red path **</p> <p>Operators acknowledge the failure and transition to Emergency Contingency Action (ECA) Procedure 1.1, <u>Loss of Emergency Coolant Recirculation</u>. In due course, operators will stop all Emergency Core Cooling System (ECCS) pumps for lack of an adequate suction source. Reactor vessel level will begin trending lower as coolant boils-off with no recirculation flow available to makeup inventory.</p> <p>The Site Emergency Director will assess accident conditions and declare a General Emergency in accordance with SSER Procedure ER 1.1, <u>Classification of Emergencies</u>, Initiating Condition 15f. Based on current conditions, and associated procedural requirements, NAESECo should issue the following PARs at this time.</p> <p>CLOSE: Salisbury Beach, Plum Island Beach and Parker River National Wildlife Refuge.</p> <p>SHELTER: In New Hampshire; ERPAs D, F and G. In Massachusetts; ERPA E.</p> <p>EVACUATE: In New Hampshire; Seabrook Beach, Hampton Beach, and ERPAs A and C. In Massachusetts; ERPA B.</p> <p>When operators attempt to add makeup to the RCS from the Volume Control Tank (VCT) in accordance with Procedure ECA-1.1, valve CS-LCV-112B fails to open. The valve is mechanically bound in the closed position.</p> <p>SIMULATOR: Enter commands to keep CS-LCV-112B in the closed position and extinguish lights on associated MCB handswitch.</p> | |
| 1150 | H+03:50 | If no new emergency declaration has been made or is pending, the Site Emergency Director will be directed to declare a General Emergency . | ERO11c |

| <u>REAL TIME</u> | <u>ELAPSED TIME</u> | <u>DETAILED SCENARIO DESCRIPTION</u> | <u>MESSAGE NUMBER</u> |
|------------------|---------------------|---|-----------------------|
| 1200 | H+04:00 | <p>Emergency repair team personnel are successful in returning CBS Pump P-9B to service. Containment pressure, and atmospheric particulate and iodine concentrations begin trending down following CBS initiation. With decreasing gas and steam flow into the containment annulus area, the unit vent release rate begins trending lower.</p> <p>SIMULATOR: Remove malfunction and allow operation of CBS Pump P-9B.</p> <p>The pump restoration time may be adjusted depending upon simulator response. The goal is to prevent a Containment Red Path on pressure > 52 psig.</p> | N/A |
| ~1215 | ~H+04:15 | <p>Emergency repair team personnel are successful in returning RHR Pump P-8B to service. Operators commence operation of procedurally selected ECCS pumps. Reactor vessel level is restored to above the top of the fuel assemblies, and core exit thermocouples begin trending lower.</p> <p>SIMULATOR: Remove malfunction and allow operation of RHR Pump P-8B.</p> <p>The pump restoration time may be adjusted depending upon simulator response. The goal is to prevent a Core Cooling Red Path on thermocouples > 725° with RVLIS < 40%.</p> | N/A |
| 1230 | H+04:30 | NRC player-controller arrives at the EOF. Refer to Mini-Scenario 6.6 for further information. | N/A |
| 1315 | H+05:15 | Exercise play is terminated as directed by the Exercise Manager. Emergency response facility managers are directed to begin deactivation and restoration of their respective facilities. Controllers will commence critiques at each emergency response facility. | ERO12 |
| 1400 | H+06:00 | All exercise participants should be dismissed by this time. | N/A |



1. Initial Conditions established. Plant at 100% reactor power. CS-P-128 (PDP) and CBS-P-9B OOS.
2. RCS leak inside containment; leak rate ~65 gpm.
3. Alert declared based on Initiating Condition 15c.
4. Large break LOCA inside containment.
5. Site Area Emergency declared based on Initiating Condition 15d.
6. RWST Lo-Lo. Swap-over to cold leg recirculation mode core cooling. CBS-V8 fails to open.
7. Low level radiological release initiated through plant vent.
8. RHR Pump P-8B trips.
9. General Emergency declared based on Initiating Condition 15f.
10. CBS Pump P-9B returned to service.
11. PHR Pump P-8B returned to service.
12. Play stopped; critiques started.
13. Participants dismissed.