



# Federal Emergency Management Agency

Region I

J.W. McCormack Post Office &  
Court House Building, Room 442  
Boston, MA 02109

**JUL 02 2003**

U.S. Nuclear Regulatory Commission  
Attn: Eric Weiss  
One White Flint North  
11555 Rockville Pike  
Rockville, MD 20852-2738

Dear Mr. Weiss:

The final exercise report for the April 8, 2003, full-participation plume pathway exercise of the offsite radiological emergency response plans site-specific to the Entergy Northeast Nuclear Power Station is attached. This report addresses the evaluation of the plans and preparedness for the States of Vermont, New Hampshire and the Commonwealth of Massachusetts portions of the Emergency Planning Zone. The States of Vermont, New Hampshire, the Commonwealth of Massachusetts, five Vermont communities, five New Hampshire communities and seven Massachusetts communities participated in the exercise. The final exercise report was prepared by the Federal Emergency Management Agency, Region I staff. Copies of this report will be forwarded to the States of Vermont, New Hampshire, and the Commonwealth of Massachusetts.

There were no Deficiencies identified during the exercise. There were, however, eight Areas Requiring Corrective Action (ARCAs) identified in Vermont, six ARCAs identified in New Hampshire and three ARCAs identified in Massachusetts. Region I staff will coordinate with the States of Vermont, New Hampshire and the Commonwealth of Massachusetts to correct the ARCAs on or before the next scheduled biennial exercise.

Based on the results of the April 8, 2003, exercise, the offsite radiological emergency response plans and preparedness for the States of Vermont, New Hampshire, the Commonwealth of Massachusetts and their affected local jurisdictions site-specific to the Entergy Northeast Nuclear Power Station, can be implemented and are adequate to provide reasonable assurance that appropriate measures can be taken offsite to protect the health and safety of the public in the event of a radiological emergency at the site.

If you should have any questions, please contact Deborah Bell, RAC Chair, at 617-223-4444.

Sincerely,

A handwritten signature in black ink, appearing to read "Daniel A. Craig", is written over the word "Sincerely,".

Daniel A. Craig  
Regional Director



# **Exercise Report**

## **Entergy Northeast Nuclear Vermont Yankee**

Licensee

Entergy Northeast Nuclear Vermont  
Yankee

Exercise Date

April 8, 2003

Report Date

July 7, 2003

---

**DEPARTMENT OF HOMELAND SECURITY  
FEDERAL EMERGENCY MANAGEMENT AGENCY  
REGION I**

**JOHN W. MCCORMACK POST OFFICE AND COURTHOUSE  
BOSTON, MASSACHUSETTS 02109**

---

## TABLE OF CONTENTS

	Page
I. EXECUTIVE SUMMARY.....	1
II. INTRODUCTION.....	2
III. EXERCISE OVERVIEW .....	4
A. Plume Emergency Planning Zone Description.....	4
B. Exercise Participants .....	5
C. Exercise Timeline.....	14
IV. EXERCISE EVALUATION AND RESULTS.....	23
A. Summary Results of Exercise Evaluation - Table 2 .....	23
B. Status of Jurisdictions Evaluated.....	27
1. STATE OF VERMONT .....	29
1.1 State Emergency Operations Center.....	29
1.2 Emergency Operations Facility .....	31
1.3 Joint Information Center.....	32
1.4 Radiological Field Monitoring Teams.....	34
1.5 Incident Field Office.....	34
1.6 State Warning Point.....	35
1.7 Department of Health Laboratory.....	35
2. RISK JURISDICTIONS (VERMONT).....	36
2.1 Brattleboro.....	36
2.2 Dummerston .....	37
2.3 Halifax .....	37
2.4 Guilford .....	38
2.5 Vernon .....	39
2.6 Schools and Day Cares .....	39
3. SUPPORT JURISDICTIONS (VERMONT) .....	39
4. STATE OF NEW HAMPSHIRE.....	40
4.1 State Emergency Operations Center.....	40
4.2 Emergency Operations Facility .....	41
4.3 Joint Information Center.....	42

	<b>Page</b>
4.4 State Police Troop C .....	42
4.5 Radiological Field Monitoring Teams.....	43
4.6 State Warning Point.....	44
<b>5. RISK JURISDICTIONS (NEW HAMPSHIRE).....</b>	<b>44</b>
5.1 Chesterfield .....	44
5.2 Hinsdale.....	46
5.3 Richmond .....	47
5.4 Swanzey.....	48
5.5 Winchester.....	48
5.6 Schools .....	49
<b>6. SUPPORT JURISDICTIONS (NEW HAMPSHIRE).....</b>	<b>49</b>
6.1 Keene Emergency Operations Center.....	49
6.2 Local Warning Point - Southwest New Hampshire District Fire Mutual Aid .....	49
6.3 State Transportation Staging Area.....	50
<b>7. COMMONWEALTH OF MASSACHUSETTS .....</b>	<b>51</b>
7.1 State Emergency Operations Center.....	51
7.2 Emergency Operations Facility .....	51
7.3 Joint Information Center.....	52
7.4 State Police Troop B .....	53
7.5 Radiological Field Monitoring Teams.....	53
7.6 MEMA Region III Emergency Operations Center .....	55
7.7 DEM Fire District.....	55
7.8 DFWDLE.....	56
7.9 State Police - Shelburne .....	56
<b>8. RISK JURISDICTIONS (MASSACHUSETTS).....</b>	<b>56</b>
8.1 Bernardston.....	56
8.2 Colrain .....	57
8.3 Gill.....	58
8.4 Greenfield .....	58
8.5 Leyden .....	59
8.6 Northfield .....	59
8.7 Warwick .....	60
8.8 Schools, Day Care, Children's Day Camps .....	60



## **List of Appendices**

	<b>Page</b>
<b>APPENDIX 1 ACRONYMS AND ABBREVIATIONS .....</b>	<b>63</b>
<b>APPENDIX 2 EXERCISE EVALUATORS AND TEAM LEADERS .....</b>	<b>68</b>
<b>APPENDIX 3 EXERCISE CRITERION AND EXTENT-OF-PLAY AGREEMENT .....</b>	<b>73</b>
<b>APPENDIX 4 EXERCISE SCENARIO.....</b>	<b>242</b>

## **List of Tables**

<b>Table 1 - Exercise Timeline.....</b>	<b>15</b>
<b>Table 2 - Summary Results of Exercise Evaluation .....</b>	<b>24</b>

## **I. EXECUTIVE SUMMARY**

On April 8, 2003, the Federal Emergency Management Agency (FEMA), Region I, conducted an exercise in the plume exposure pathway emergency planning zone (EPZ) around the Vermont Yankee 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, September 4, 2001. The qualifying emergency preparedness exercise was conducted on February 18, 1982.

FEMA wishes to acknowledge the efforts of the many individuals who participated in this exercise. The various agencies, organizations, and units of government from the State and local jurisdictions within the States of Vermont, New Hampshire, and the Commonwealth of Massachusetts, who participated in the exercise, are listed in Section III.B of this report.

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

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

- Vermont Schools, Child Care Centers, Nursing Homes, State Transportation Staging Area and an Emergency Worker Monitoring and Decontamination Station;
- New Hampshire Schools, Day Care Centers and State Transportation Staging Area;
- Massachusetts Schools, Day Care Centers, DPW Sites and an Emergency Worker Monitoring and Decontamination Station.

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 17 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, and
  - U.S. Food and Drug Administration.

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

Formal submission of the RERPs for the Vermont Yankee Nuclear Power Station to FEMA Region I, by the State of Vermont and involved local jurisdictions occurred in April 1980, by the State of New Hampshire in October 1981, and by the Commonwealth of Massachusetts in December 1979.

A REP exercise was conducted on April 8, 2003, 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 Vermont Yankee 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
- "Radiological Emergency Preparedness: Exercise Evaluation Methodology," published in the Federal Register on September 12, 2001, and amended April 25, 2002.

Section III of this report, entitled "Exercise Overview," presents basic information and data relevant to the exercise. This section of the report contains a description of the plume 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 Criterion 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 April 8, 2003, exercise to test the offsite emergency response capabilities in the area surrounding the Vermont Yankee 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, which were evaluated, and a tabular presentation of the time of actual occurrence of key exercise events and activities.

#### **A. Plume Emergency Planning Zone Description**

The Vermont Yankee Nuclear Power Station is located in the State of Vermont in southeast Windham County on the west bank of the Connecticut River immediately upstream of the Vernon Hydroelectric Station. The topography of the 10-mile EPZ is gently rolling terrain and low hills along the Connecticut River valley.

The 10-mile EPZ contains a total population of 34,405 within three counties and three states: Windham County, Vermont — 16,352; Cheshire County, New Hampshire — 10,474; and Franklin County, Massachusetts — 7,579. The land use is a mixture of industrial and diversified agricultural production.

The area is served by limited access highways such as Interstate 91, and secondary traffic roads such as Route 5, Route 9, Route 10, Route 30, Route 63, Route 78, and Route 119. There is non-commercial boat traffic within the Connecticut River. The New England Central Railroad has access through the 10-mile EPZ.

Major parks and recreational areas located within the EPZ include (for all three states): Vermont — Ft. Dummer (Summer), Brattleboro; Camp Waubanoag (Summer 8am-5pm), Brattleboro; Living Memorial Park (Annual), Brattleboro; Massachusetts - Camp Northfield (Summer), Northfield; Camp Keewanee (July-Early August 9am-3pm), Greenfield; Camp Lion Knoll (July, August 9am-3:45pm), Greenfield; Purple Meadow Campground (May-October), Bernardston; Traveler's Woods Camping Area (May-October), Bernardston; Mt. Grace Recreational Area, Warwick State Park (May-Labor Day), Warwick; Barton Cove (Memorial Day-Labor Day), Gill; Franklin County Boat Club (April 15-October 30), Gill; New Hampshire — Spofford Lake Area (Summer), Chesterfield; Pisgah State Park (Year Round), Winchester, Hinsdale and Chesterfield; Wantastiquet Natural Area (Year Round) Chesterfield; Shir-Roy (Summer), Richmond; Camp Takodah (Summer), Richmond; and Camp Wiyaka (Summer), Richmond.

The EPZ is divided into 17 subareas (Emergency Response Planning Areas): 5 in Vermont, 5 in New Hampshire, and 7 in Massachusetts.

**B. Exercise Participants**

The following agencies, organizations, and units of government participated in the Vermont Yankee Nuclear Power Station exercise on April 8, 2003.

**STATE OF VERMONT**

**STATE EMERGENCY OPERATIONS CENTER**

Emergency Management Division  
Vermont Association of Hospitals & Health Systems  
American Red Cross  
Williston Dispatch (Rumor Control Call-takers)  
State Police  
Department of Public Health  
Department of Agriculture  
Civil Air Patrol  
National Guard  
Agency of Natural Resources  
Department of Environmental Conservation  
Department of Fish and Wildlife  
Agriculture Department  
Department of Labor and Industry  
Agency of Human Resources  
Agency of Transportation  
Vermont Health Care Association

**EMERGENCY OPERATIONS FACILITY**

U.S. Army Reserve  
Regional Planning Commission  
Department of Corrections

**JOINT INFORMATION CENTER**

Vermont Emergency Management Division  
New Hampshire Department of Safety Office  
of Emergency Management  
Entergy Northeast Nuclear Vermont Yankee  
U.S. Nuclear Regulatory Commission



## **RADIOLOGICAL FIELD MONITORING TEAMS**

**Vermont Department of Public Health**

## **INCIDENT FIELD OFFICE**

**Agency of Transportation  
State Police  
Health Department  
National Guard  
Windham County Sheriff's Department  
American Red Cross  
Rescue Inc. (Emergency Medical Services)**

## **TRANSPORTATION STAGING AREA**

**Agency of Transportation – Dummerston Office**

## **RISK JURISDICTIONS (VERMONT)**

### **BRATTLEBORO**

**Police Department  
Fire Department  
Public Works Department  
Superintendent WSESU**

### **DUMMERSTON**

**Select Board  
Volunteer Fire Department  
Other volunteers**

### **HALIFAX**

**Select Board  
Volunteer Fire Department**

### **GUILFORD**

**Select Board  
Fire Department  
Highway Department  
Emergency Management Director**

**Town Volunteers**

**VERNON**

Police Department  
Fire Department  
Emergency Management  
Highway Department

**SCHOOLS, DAYCARES, AND NURSING HOMES**

The Owl Tree Nursery School  
Academy School  
Sue's Family Childcare  
Winston Prouty Early Learning Center  
Little Bumpkin Daycare  
Vernon Preschool Group  
Judy's Home Childcare  
Hilltop Montessori School  
Angie's Day Care  
Vernon Elementary  
Mulberry Bush Early Education Center  
Birge Nest  
Hilltop House Residential Care  
WSESU  
Brattleboro Middle School  
Brattleboro Child Development  
Kim's Daycare  
Canal Street School  
Sandra Pittman's Childcare  
Green Street School  
Kim Freeman's Daycare  
Oak and Acorn Child Development Center  
Vernon Green Nursing Home  
St. Michael's Elementary School  
St. Michael's Early Childhood and After-School Program  
Neighborhood Schoolhouse

**STATE OF NEW HAMPSHIRE**

**STATE EMERGENCY OPERATIONS CENTER**

Governor's Office  
Department of Safety Office of Emergency Management

Department of Agriculture  
Department of Education  
Fish and Game Department  
Department of Safety Division of State Police  
Department of Transportation  
Northeast Division of the American Red Cross and Local Volunteer  
Chapter  
Radio Amateur Civil Emergency Services (RACES)  
Human Resources  
Office of Community and Public Health  
Office of Health Management  
Public Utilities Commission

#### **EMERGENCY OPERATIONS FACILITY**

Office of Health Management, Bureau of Radiological Health  
New Hampshire Department of Safety Office  
of Emergency Management  
Office of Community and Public Health

#### **JOINT INFORMATION CENTER**

New Hampshire Department of Safety Office  
of Emergency Management  
Vermont Emergency Management Division  
Entergy Northeast Nuclear Vermont Yankee  
U.S. Nuclear Regulatory Commission

#### **STATE POLICE TROOP C**

State Police  
Office of Environmental Management  
Department of Transportation

#### **RADIOLOGICAL FIELD MONITORING TEAMS**

Office of Community and Public Health

#### **STATE WARNING POINT**

State Police  
New Hampshire Department of Safety Office  
of Emergency Management

## **FIELD TEAM DISPATCH**

New Hampshire Department of Public Health

### **RISK JURISDICTIONS (NEW HAMPSHIRE)**

#### **CHESTERFIELD**

Board of Selectmen  
Fire and Rescue Department  
Police Department  
Highway Department  
Spofford Fire and Rescue Department  
Library  
Radio Amateur Civil Emergency Services (RACES)  
Health Office  
Laidlaw Bus Company  
Elementary School  
Keene State College

#### **HINSDALE**

Compensatory Plan

#### **RICHMOND**

Volunteer Fire Department  
Police Department  
Volunteer Rescue Squad  
Amateur Radio (ARES)

#### **SWANZEY**

Board of Selectmen  
Police Department  
Volunteer Fire Department  
Public Works Department  
Emergency Management Directorate

#### **WINCHESTER**

Board of Selectmen  
EMA Director  
Police Department  
Fire Department  
RADEF Officer  
Highway Superintendent  
Communications Officer  
Ambulance Assistant Chief and Staff

#### **SCHOOLS**

Chesterfield Elementary School  
Winchester School  
Hinsdale Elementary School  
Hinsdale High School

#### **LOCAL WARNING POINT – SWNHFDMA**

Southwest New Hampshire District Fire Mutual Aid

#### **COMMONWEALTH OF MASSACHUSETTS**

##### **STATE EMERGENCY OPERATIONS CENTER**

Massachusetts Emergency Management Agency  
State Police  
Highway Department  
Department of Public Health  
National Guard  
Federal Emergency Management Agency (Region 1 Liaison)  
U.S. Nuclear Regulatory Commission  
Secretary of State's Office  
Department of Mental Health  
Vermont Yankee Nuclear Power Station  
Massachusetts Emergency Animal Response Team  
Radiological Monitoring and Decontamination Stations – Colrain &  
Warwick

##### **EMERGENCY OPERATIONS FACILITY**

Emergency Management Agency  
Department of Public Health

##### **JOINT INFORMATION CENTER**

Massachusetts Emergency Management Agency  
Vermont Emergency Management Division  
New Hampshire Department of Safety Office  
of Emergency Management  
Entergy Northeast Nuclear Vermont Yankee

**STATE POLICE TROOP B**

State Police Troop B

**RADIOLOGICAL FIELD MONITORING TEAMS**

Department of Public Health  
Nuclear Incident Advisory Team

**AREA III EMERGENCY OPERATIONS CENTER**

Massachusetts Emergency Management Agency  
Environmental Police  
State Police  
Highway Department  
Department of Public Health  
Department of Environmental Management  
Department of Fisheries, Wildlife and Environmental Law  
Enforcement  
Radio Amateur Civil Emergency Services (RACES)

**DEPARTMENT OF ENVIRONMENTAL MANAGEMENT FIRE  
DISTRICT 9**

DEM District 9 Fire Personnel

**DEPARTMENT OF FISHERIES, WILDLIFE AND ENVIRONMENTAL  
LAW ENFORCEMENT, DIVISION OF LAW ENFORCEMENT**

Department of Fish and Wildlife-Law Enforcement Division Staff

**MASSACHUSETTS STATE POLICE -- SHELBURNE CONTROL**

Massachusetts State Police



## **RISK JURISDICTIONS (MASSACHUSETTS)**

### **BERNARDSTON**

Town Selectmen  
Fire Department  
Board of Health  
Police Department  
Department of Public Works  
Town Volunteers

### **COLRAIN**

Fire Department (volunteer)  
Police Department  
Highway Department  
Board of Selectmen

### **GILL**

Board of Selectmen  
Police Department  
Fire Department Volunteers

### **GREENFIELD**

Town Manager  
Fire Department  
Police Department  
Health Department  
Department of Public Works/Engineer  
Chairmen and Selectmen Committee

### **LEYDEN**

Board of Selectmen  
Fire Department  
Police Department  
Department of Public Works  
Board of Health  
Emergency Management

## **NORTHFIELD**

**Board of Selectmen  
Volunteer Fire Department  
Volunteer Police Department  
Radiological Officer  
Communications Officer  
Emergency Management Director**

## **WARWICK**

**Board of Health  
Police Department  
Fire Department  
Highway Department  
Selectwoman**

## **SCHOOLS**

**Bernardston Elementary School  
Full Circle School  
Linden Hill School**

### **C. Exercise Timeline**

Table 1, on the following pages, presents the time at which key events and activities occurred during the Vermont Yankee Nuclear Power Station plume exposure pathway exercise on April 8, 2003. Also included are times notifications were made to the participating jurisdictions/functional entities.

**Vermont**  
**Table 1. Exercise Timeline**

**DATE AND SITE:** April 8, 2003, Vermont Yankee Nuclear Power Station

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received or Action Was Taken					
		VT SEOC	BRATTLEBORO	DUMMERSTON	HALIFAX	GUILFORD	VERNON
Unusual Event	0821	0851			0857	0821	0840
Alert	0905	0910	0921	0915	0924	0922	0922
Site Area Emergency	1004	1004	1024	1018	1021	1019	1022
General Emergency	1124	1124	1159	1155	1158	1155	1153
Simulated Rad. Release Started	1115	1124	1159	1124	1157	1155	1121
Simulated Rad. Release Terminated							
Facility Declared Operational <sup>(1)</sup>		0905	0935	0900	0930	0915	0914
Declaration of State of Emergency		1035	1045	1045	1045	1045	1045
Exercise Terminated		1320	1328	1320	1327	1320	1320
1st A/N Sequence Decision <sup>(2)</sup>		1035	N/A	N/A	N/A	N/A	N/A
1st Siren Activation		1045	1045	1045	1045	1045	1045
1st EAS or EBS Message		1048	1048	1048	1048	1048	1048
2nd A/N Sequence Decision <sup>(3)</sup>		1112	N/A	N/A	N/A	N/A	N/A
2nd Siren Activation		1122	1122	1122	1122	1122	1122
2nd EAS or EBS Message		1125	1125	1125	1125	1125	1125

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received or Action Was Taken					
		VT SEOC	BRATTLEBORO	DUMMERSTON	HALIFAX	GUILFORD	VERNON
3rd A/N Sequence Decision <sup>(4)</sup>		1210	N/A	N/A	N/A	N/A	N/A
3rd Siren Activation		1220	1220	1220	1220	1220	
3rd EAS or EBS Message		1223	1223	1223	1223	1223	1223
4th A/N Sequence Decision							

**NOTES ON VERMONT TIMELINE:**

- (1) Not declared – Decision maker arrived
- (2) 1st A/N sequence. Close parks; transfer students; store feed.
- (3) 2nd A/N sequence. Evacuate Vernon.
- (4) 3rd A/N sequence. Evacuate Guilford.

# Massachusetts

## Table 1. Exercise Timeline

**DATE AND SITE:** April 8, 2003, Vermont Yankee Nuclear Power Station

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received or Action Was Taken								
		MA SEOC	AREA III EOC	BERNARDSTON	COLRAIN	GILL <sup>(6)</sup>	LEYDEN <sup>(6)</sup>	NORTHFIELD	WARWICK <sup>(6)</sup>	GREENFIELD <sup>(6)</sup>
Unusual Event	0821	0839	0845	0838	0841	0841	0840	0845	0841	0840
Alert	0905	0918	0918	0927	0925	0928	0933	0930	0933	0928
Site Area Emergency	1004	1015	1015	1034	1038	1029	1033	1033	1035	1038
General Emergency	1124	1136	1137	1146	1153	1150	1143	1145	1147	1145
Simulated Rad. Release Started	1115	1122	1139	1150	1143	1150	1143	1145	1147	1124
Simulated Rad. Release Terminated										
Facility Declared Operational		0955	0937	0940	0945	1012	0927	0920	0920	0904
Declaration of State of Emergency		1015	1017	1101	1135	1137	1057	1130	1039	1135
Exercise Terminated		1322	1325	1325	1330	1322	1325	1320	1325	1320
1st A/N Sequence Decision <sup>(1)</sup>		1035	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1st Siren Activation		1045	1045	1045	1045	1045	1045	1045	1045	1045
1st EAS or EBS Message		1048	1048	1048	1048	1048	1048	1048	1048	1048
2nd A/N Sequence Decision <sup>(2)</sup>		1112	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received or Action Was Taken								
		MA SEOC	AREA III EOC	BERNARDSTON	COLRAIN	GILL <sup>(6)</sup>	LEYDEN <sup>(6)</sup>	NORTHFIELD	WARWICK <sup>(6)</sup>	GREENFIELD <sup>(6)</sup>
2nd Siren Activation		1122	1122	1122	1122	1122	1122	1122	1122	1122
2nd EAS or EBS Message		1125	1125	1125	1125	1125	1125	1125	1125	1125
3rd A/N Sequence Decision <sup>(3)</sup>		1210	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3rd Siren Activation		1220	1220	1220	1220	1220	1220	1220	1220	1220
3rd EAS or EBS Message		1223	1223	1223	1223	1223	1223	1223	1223	1223
4th A/N Sequence Decision										
4th Siren Activation										
4th EAS or EBS Message										
5 <sup>th</sup> A/N Sequence Decision										
5 <sup>th</sup> Siren Activation										
5 <sup>th</sup> EAS or EBS Message										
KI Administration Decision:		1203								

**NOTES ON MASSACHUSETTS TIMELINE:**

- (1) 1<sup>st</sup> A/N sequence: Precautionary actions: Close all beaches, parks and recreational areas; put dairy animals on stored feed and water.
- (2) 2<sup>nd</sup> A/N sequence: Precautionary transfer of school children, and continue previous precautionary actions.
- (3) 3<sup>rd</sup> A/N sequence: Shelter-in-place Barnardston, Northfield, and Warwick. Continue previous precautionary actions.
- (4) Evacuate Barnardston and Northfield. Continue shelter-in-place for Warwick and other previous precautionary actions.

**New Hampshire  
Table 1. Exercise Timeline**

**DATE AND SITE:** April 8, 2003, Vermont Yankee Nuclear Power Station

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received Or Action Was Taken						
		NH SEOC	SWNHDFMA <sup>(5)</sup>	CHESTERFIELD	HINSDALE	RICHMOND	SWANZEY	WINCHESTER
Unusual Event	0821	0830	0821	0852	Compensatory Plan demonstrated	0846	0840	0841
Alert	0905	0927	0918	0923		0922	0921	0924
Site Area Emergency	1004	1010	1028	1017		1024	1021	1024
General Emergency	1124	1134	1147	1136		1142	1143	1144
Simulated Rad. Release Started	1115	1134	1124	1136		1142	1143	1144
Simulated Rad. Release Terminated								
Facility Declared Operational		0954	1031			0930		
Declaration of State of Emergency		1047	1049	1056		1049	1049	1049
Exercise Terminated		1300	1300	1301		1303	1303	1303
1st A/N Sequence Decision <sup>(1)</sup>		1035	N/A	N/A		N/A	N/A	N/A
1st Siren Activation		1045	1045	N/A		N/A	N/A	N/A
1st EAS or EBS Message		1048	1048	1048		1048	1048	1048

<sup>(5)</sup>

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received Or Action Was Taken						
		NH SEOC	SWNHDFMA <sup>(4)</sup>	CHESTERFIELD	HINSDALE	RICHMOND	SWANZEY	WINCHESTER
2nd A/N Sequence Decision <sup>(2)</sup>		N/A						
2nd Siren Activation		N/A						
2nd EAS or EBS Message		N/A						
3rd A/N Sequence Decision		1210	N/A	N/A	Compensatory	N/A	N/A	N/A
3rd Siren Activation		1220	1220	N/A		N/A	N/A	N/A
3rd EAS or EBS Message		1223	1223	1223		1223	1223	1223
4th A/N Sequence Decision								
4th Siren Activation								
4th EAS or EBS Message								
5th A/N Sequence Decision								
5 <sup>th</sup> Siren Activation								
5 <sup>th</sup> EAS Message								
<b>KI Administration Decision:</b> <b>PUBLIC/EMERGENCY WORKERS</b>		1225/1253 <sup>(4)</sup>						1305

**NOTES ON NEW HAMPSHIRE TIMELINE:**

- (1) 1<sup>st</sup> A/N sequence: Site Area Emergency declared
- (2) 2<sup>nd</sup> A/N sequence: Repeat EAS #1 with no change.

---

(4)

- (3) 3<sup>rd</sup> A/N sequence: Evacuate Hinsdale and Winchester; place animals on stored feed and water; Governor declares State of Emergency
- (4) 1225 –Decision made for Public not to ingest KI/1253 –Decision made for Emergency Workers in Hinsdale and Winchester to ingest KI
- (5) The Southwest New Hampshire District Fire Mutual Aid sounds the sirens for the state of New Hampshire.

**THIS PAGE INTENTIONALLY LEFT BLANK**

## **V. 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 April 8, 2003, exercise to test the offsite emergency response capabilities of State and local governments in the 10-mile EPZ surrounding the Vermont Yankee Nuclear Power Station.

Each jurisdiction and functional entity was evaluated on the basis of its demonstration of criteria delineated in "Radiological Emergency Preparedness: Exercise Evaluation Methodology," published in the Federal Register on September 12, 2001, and amended April 25, 2002.

Detailed information on the exercise evaluation areas 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 "Radiological Emergency Preparedness: Exercise Evaluation Areas that were scheduled for demonstration during this exercise by all participating jurisdictions and functional entities. Evaluation areas are listed by number and the demonstration status of those areas is indicated by the use of the following letters:

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



## Table 2. Summary Results of Exercise Evaluation

**DATE AND SITE:** April 8, 2003, Vermont Yankee Nuclear Power Station

JURISDICTION/FUNCTIONAL ENTITY	1.a. 1	1.b. 2	1.c. 3	1.d. 4	1.e. 5	2a. 6	2b. 7	2b. 8	2c. 9	2d. 10	2e. 11	3a. 12	3b. 13	3c. 14	3c. 15	3d. 16	3d. 17	3e. 18	3e. 19	3f. 20	4a. 21	4a. 22	4a. 23	4b. 24	4c. 25	5a. 26	5a. 27	5a. 28	5b. 29	6a. 30	6b. 31	6c. 32	6d. 33
<b>STATE OF VERMONT</b>																																	
State Emergency Operations Center	A	M	A	M	M	M	M	M	M			M	M			M										M			A				
Emergency Operations Facility	M	A	M	M	M		M					M																					
Joint Information Center	A	M	M	M	M							M																	M				
Field Monitoring Teams	M		M	M	M							M	M									M	M	M									
Incident Field Office	M	M	M	M	M	M						M	M			M	M																
State Warning Point		M	M	M	M																												
Alternate State Warning Point		M	M	M	M																												
Department of Health Laboratory		M	M	M	M																	M			M								
<b>RISK JURISDICTIONS (VERMONT)</b>																																	
Brattleboro	M	M	M	M	M	M						M	M	M	M	M	M									A		M	M				
Dummerston	M	M	M	M	M	M						M	M	M	M	M	M									M		M	M				
Halifax	M	M	M	M	A	M						M	M	M	M	M	M									M		M	M				
Guilford	M	M	M	M	M	M						A	M	M	M	M	M									M		M	M				
Vernon	M	M	M	M	M	M						M	M	M	M	M	M									M		M	M				
Schools and Day Care Centers													M	M																			

**LEGEND:**

M = Met (No Deficiency or ARCAs assessed and no unresolved prior ARCAs)

D = Deficiency(ies) assessed

A = ARCA(s) assessed and/or unresolved prior ARCAs

N = Not Demonstrated

Blank = Not scheduled for demonstration

**Table 2. Summary Results of Exercise Evaluation**

**DATE AND SITE:** April 8, 2003, Vermont Yankee Nuclear Power Station

JURISDICTION/FUNCTIONAL ENTITY	1.a. 1	1.b. 1	1.c. 1	1.d. 1	1.e. 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	
STATE OF NEW HAMPSHIRE																																		
State Emergency Operations Center			M	M	M	M	M	M	M				M	M	M	M	M										A			A				
Emergency Operations Facility	M	M	M	M	M	M	M					M	M																					
Joint Information Center	M	M	M	M	M							M	M																M					
State Police Troop C			M	M	M							M	M			M	M																	
Field Monitoring Teams	A		M	M	M							A	M									M	M	M										
State Warning Point		M	M	M	M																													
RISK JURISDICTIONS (NEW HAMPSHIRE)																																		
Chesterfield	M	M	A	A	M							M	M	M	M	M	M										M		M	M				
Hinsdale (State Compensatory Plan Demonstrated at the State EOC)	N	N	N	N	N							N	N	N	N	N	N										N		N	N				
Richmond	M	M	M	M	M							A	M	M	M	M	M										M		M	M				
Swanzey	M	M	M	M	M							M	M	M	M	M	M										M		M	M				
Winchester	M	M	M	M	M							M	M	M	M	M	M										M		M	M				
Schools, Day Cares and Transportation													M	M																				
SUPPORT JURISDICTIONS (NEW HAMPSHIRE)																																		
Keene Emergency Operations Center	M	M	M	M	M							M	M	M	M	M	M										M			M				
Local Warning Point-SWNHDFMA		M	M	M	M																													
State Transportation Staging Area	M	M	M	M	M								M	M	M																			

**LEGEND:**

M = Met (No Deficiency or ARCAs assessed and no unresolved prior ARCAs)

D = Deficiency(ies) assessed

A = ARCA(s) assessed and/or unresolved prior ARCAs

N = Not Demonstrated

Blank = Not scheduled for demonstration

**Table 2. Summary Results of Exercise Evaluation**

**DATE AND SITE:** April 8, 2003, Vermont Yankee Nuclear Power Station

JURISDICTION/FUNCTIONAL ENTITY	1. a.	1. b.	1 c.	1 d.	1. e.	2 a.	2 b.	2 b.	2 c.	2 d.	2 e.	3 a.	3 b.	3 c.	3 c.	3 d.	3 d.	3 e.	3 e.	3f .1	4 a.	4 a.	4 a.	4 b.	4 c.	5 a.	5 a.	5 a.	5 b.	6 a.	6 b.	6 c.	6 d.
COMMONWEALTH OF MASSACHUSETTS																																	
State Emergency Operations Center	M	M	M	M	M	M	M	M	M	M				M												M			M				
Emergency Operations Facility	M	M	M	M	M	M	M	M																									
Joint Information Center	M	M		M	M																								M				
State Police Troop B		M	M	M	M							M	M			M	M			M	M												
Field Monitoring Teams				M	M							M	M								M	A	A										
Region III Emergency Operations Center	M	M	M	M	M							M	M	M	M	M	M												M				
DEM Fire District												M	M	M												M							
DFWDLE												M	M	M												M							
State Police, Shelburne Control		M	M	M	M							M	M			M	M																
RISK JURISDICTIONS (MASSACHUSETTS)																																	
Bernardston	M	M	M	M	M							M	M	M	M	M	M									M		M	M				
Colrain	M	M	M	M	M							M	M	M	M	M	M									M		M	M		M		
Gill	M	M	M	M	M							M	M	M	M	M	M									M		M	M				
Greenfield	M	M	M	M	M							M	M	M	M	M	M									M		M	M				
Leyden	M	A	M	M	M							M	M	M	M	M	M									M		M	M				
Northfield	M	M	M	M	M							M	M	M	M	M	M									M		M	M				
Warwick	M	M	M	M	M							M	M	M	M	M	M									M		M	M		M		
Schools, Day Cares, Day Camps														M	M																		

**LEGEND:**

M = Met (No Deficiency or ARCAs assessed and no unresolved prior ARCAs)  
D = Deficiency(ies) assessed

A = ARCA(s) assessed and/or unresolved prior ARCAs  
Blank = Not scheduled for demonstration

N = Not Demonstrated

## **B. Status of Jurisdictions Evaluated**

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

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

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

- **An ARCA is defined in FEMA-REP-14 as “...an observed or identified inadequacy of organizational performance in an exercise that is not considered, by itself, to adversely impact public health and safety.”**

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

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

- **Plant Site Identifier** - A two-digit number corresponding to the Utility Billable Plant Site Codes.
- **Exercise Year** - The last two digits of the year the exercise was conducted.
- **Evaluation Area** - A three character, alpha-numeric corresponding to the Evaluation Areas in “Radiological Emergency Preparedness: Exercise Evaluation Methodology,” published in the Federal Register on September 12, 2001, and amended April 25, 2002.
- **Issue Classification Identifier** - (D = Deficiency, A = ARCA). Only Deficiencies and ARCAs are included in exercise reports.
- **Exercise Issue Identification Number** - A separate two (or three) digit indexing number assigned to each issue identified in the exercise.

## **1. STATE OF VERMONT**

### **1.1 State Emergency Operations Center**

The Dose Assessment Staff performed their task of providing radiological dose information to senior Department of Health officials who, in turn, make protective action decisions associated with this role well. They were conscientious in their efforts to provide timely and accurate data to decision makers. They were highly organized and proficient at their tasks. Direction and Control was efficient and effective in managing the response activities.

Through these key positions of Incident Director, a liaison Officer, Information Liaison, Operations Chief, Planning Chief, and Logistics Chief, State agency personnel reported their progress and issues. The smoothness of the operation was especially noteworthy because critical functions or positions were recently filled with new people including, the Vermont State Emergency Management Agency Director, the Commissioner of Public Health and the Secretary of Civil and Military Affairs from the Governor's office. The Incident Director held hourly briefings to report and gather input, and he took his entire management team into a decision room to consult with all of them to make coordinated protective action decisions. A noteworthy performance was also demonstrated by the Medical Services Coordinator who was very proactive in pre-staging ambulances at the Incident Field Office to ensure their readiness to evacuate special needs populations from the Town of Vernon and later all special need populations in the entire Emergency Planning Zone.

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

b. **DEFICIENCY:** None

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

**ISSUE #: 67-03-1.a.1-A-01**

The exercise of an administrative paging to all Emergency Management and State Agencies staffs at approximately 0615 hours, to advise them of the evaluated exercise and time to report to their emergency position location did not permit an adequate evaluation on the ability of the Emergency Management and State Staff to mobilize for an emergency. This created a pre-positioning condition of players that would not normally be employed at the Emergency Management EOC. The VT RERP calls for alerting Emergency Management staff at the Alert ECL and the State Staff members to respond at the Site Area Emergency (SAE). Emergency Management and State staff. Members were arriving and reporting for duty during the first Unusual Event (UE). These actions of reporting for duty so early was beyond the intent of the agreed upon extent of play. Pre-positioning staff prior to time specified in the plans and procedures for the appropriate Emergency Classification Level. This early arrival of staff made it extremely difficult to evaluate the ability of Emergency Management to actually mobilize the required staff for emergencies. This could have caused an aggravation on the part of various staff members who received multiple pagings for the same issue and would not respond to every page

because the response lines were too busy and or the message attendant was also busy to wait for the appropriate emergency message.

**RECOMMENDATION:**

Do not conduct administrative paging prior to scheduled exercises with the possibility to confuse staff members when it is known that they will be paged for subsequent events, during exercise play. Establish stringent controls not to allow staff access to the EOC unless they have specific authority to do so.

**SCHEDULE OF CORRECTIVE ACTION:**

The State of Vermont will work with FEMA to develop a way to practice notification and mobilization separate from the evaluated exercises and will develop more stringent and better enforced access control to the State EOC.

**ISSUE # 67-03-1.c.1-A-2**

The Vermont Field Team Coordinator failed to deploy state Field Teams to a location in time to locate, identify and accurately project the plume. As a result, they caught the tail end of the plume and did not measure the iodine and did not make any reports to the dose assessment team at the SEOC about the plume, especially that it contained iodine. Meanwhile, the SEOC made a decision at 1210 to issue a complete evacuation of the Town of Vernon and of special needs populations in all Vermont EPZ towns. The decision was broadcast at 1223 and implementation began soon after.

**RECOMMENDATION:**

Update State Plan and Implementing Procedures to direct field teams to inventory and check equipment at an earlier time, e.g., Site Area Emergency, or prior to departing assembly area.

**SCHEDULE OF CORRECTIVE ACTION:**

The State Plan and Health Department procedures and SOPs will be reviewed and revised as required to clearly direct the Team as to what procedures it may fulfill earlier in the mobilization process and thereby expedite their deployment.

**ISSUE # 67-03-5.b.1-A-3**

Trends developed by the public inquiry office were submitted to public information but were never incorporated into news releases. Seventy-eight concerns were identified resulting in thirteen trends. Public concerns were not being addressed. Many people expressed concerns yet they were not answered by using news advisories.

**RECOMMENDATION:**

Instruct public information personnel to be watchful for trend information as the public inquiry office provides it. Provide additional training to public information personnel

#### **SCHEDULE OF CORRECTIVE ACTION:**

Vermont will review procedures and revise training to ensure that the Information Officer staff are more watchful for trend information.

d. **NOT DEMONSTRATED:** None

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

f. **PRIOR ARCAs - UNRESOLVED:** # 67-01-11-A-03 (5.b.1)

The first EAS message included actions taken for special populations such as schools, hospitals, nursing homes, and reception areas in addition to the evacuation of Vernon. Subsequent EAS messages did not contain complete information for special populations due to time limitations. Follow on news briefings and news releases did not contain this information either. (NUREG-0654, e.7). Public schools could have been misinformed or received wrong and conflicting information.

g. **REASON ARCA UNRESOLVED:**

This ARCA remains not corrected. EAS messages and news advisories did not contain clear emergency information, relative to nursing homes and hospitals that were evacuated and where were the clients/patients going. Also instructions for transients and non-residents were asked to evacuate and were given only compass directions rather than specific route numbers.

#### **SCHEDULE OF CORRECTIVE ACTION:**

Vermont will thoroughly review and revise the Information Officer procedures and require persons filling the information officer staff positions to attend training. Vermont will also develop additional staff who can fill in when members of the Information Officer staff are unable to respond.

### **1.2 Emergency Operations Facility**

The primary role of the Vermont Emergency Management Agency Liaison and Assistant Liaison is to obtain and transmit information and data to the Vermont State Emergency Operations Center. They performed the tasks associated with their role well. They were conscientious in their efforts to provide the appropriate information in a timely manner in order to promote the prompt calculation of off-site radiation doses, which could be used for protective actions decision-making. When requested, they also diligently sought to obtain information, which was not routinely provided by Emergency Operations Facility



management. They were highly organized and proficient at their tasks and effective in overcoming obstacles, which they encountered.

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

**ISSUE # 67-03-1.b.1-A-4**

The State Assembly Room at the EOF is the designated working area for Massachusetts, Vermont and New Hampshire responders to the facility. The room is too small and crowded when considering the functions to be conducted at that location. Both New Hampshire and Massachusetts direct their respective field teams from that room. Massachusetts also performs dose assessment from that location. All three states perform their liaison functions to their respective State EOCs from that room. This results in cramped working areas and excessive noise levels. Briefings and public address announcements were difficult to hear and added to the difficulties in communicating via telephone or radio to field teams.

The impact of the small, loud working conditions is increased stress for the responders, the potential for missing important information being transmitted, and that of having communications from the EOF being misunderstood.

**RECOMMENDATION:**

The working area for the states needs to be larger, with consideration of means of muffling noise levels from radios. Having all three states in the same room has some advantages for interstate communications at the EOF, but this is not an absolute requirement. Adjoining rooms could be a workable solution.

**SCHEDULE OF CORRECTIVE ACTION:**

Vermont Yankee is considering a number of options to resolve the over crowding in the State's Room at the EOF. One of these involves a move from room 117 to rooms 121 and 122. Vermont Yankee will consult with the three states to resolve this issue.

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

**1.3 Joint Information Center**

All the State Public Information Officers displayed outstanding teamwork, professionalism, and commitment to provide accurate information to the media and subsequently the public. The use of Utility provided State Assistants greatly facilitated the work of the Public Information Officers. During the exercise three State Assistants were supportive, facilitated the Public Information Officers in accomplishing their emergency responsibilities, and folded easily into their respective team.

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

**ISSUE #: 67-03-1.a.1-A-5**

Vermont Joint News Center (JNC) staff mobilized to the JNC earlier than agreed to in the extent of play agreement. Vermont Joint News Center (JNC) staff was paged to mobilized to the JNC prior to the Notification of Unusual Event (UE) Emergency Classification Level (ECL). This Administrative page-out was in accordance with the extent of play. However, the extent of play allowed only for staff to preposition in a nearby location for mobilization at the time prescribed by the plan. The first Vermont PIO staff person arrived at the JNC at 0910, at the Alert ECL. The two additional staff arrived 0945, again at the Alert ECL. JNC procedures state that at the UE there is no notification; at the Alert they receive notification and are put on standby to await further information; and, at the Site Area Emergency they are to report to the JNC. This created an inability to adequately evaluate the State's ability to mobilize staff in a timely manner.

**RECOMMENDATION:**

Mobilizations should be "real time" or, if pre-positioning is allowed in the extent of play agreement it should be demonstrated as agreed. If the State wishes to activate the NMC/JIC prior to the Site Area Emergency ECL they should modify their plans accordingly.

**SCHEDULE OF CORRECTIVE ACTION:**

The Implementation P for the Joint Information Center (JIC) liaison personnel will be revised to direct personnel to report at Alert. If personnel report and the situation does not require their participation, they may be released. In future exercises the extent of play will provide a specific pre-assembly location.

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

Issue # 67-01-02-A-04

Occasionally the status board on the News Media Center maintained by the utility for media briefings was not updated promptly and all of the events not shown in chronological order. This could prove confusing to media representatives. Further, there was no prominent display of the current emergency classification level or current meteorological conditions in the EPZ.

**CORRECTIVE ACTIONS TAKEN:**

The two dry erase status boards were maintained and updated in a timely manner. Information on ECLs and wind direction were displayed and discussed throughout each media briefing.

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

**1.4 Radiological Field Monitoring Teams**

The members of the field monitoring team were very familiar with their field monitoring procedures and with the area in which they were working. They appeared comfortable and worked efficiently and quickly. Field Team #155 was well versed in the state field monitoring procedures. They were able to quickly locate their sampling locations, take their measurements and promptly notify the field team leader of the results. They utilized excellent sampling techniques to minimize the risk of contamination.

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

b. **DEFICIENCY:** None

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

d. **NOT DEMONSTRATED:** None

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

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

**1.5 Incident Field Office**

The Emergency Medical Coordinator was very knowledgeable and professional in performing his duties. He provided information to the Transportation Officer regarding transportation for the special needs and institutionalized persons. The manner and enthusiasm with which he performed his tasks is a credit to Rescue, Inc.

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

b. **DEFICIENCY:** None

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

**1.6 Alternate State Warning Point (Rockingham)**

The Vermont State Police and 911 Dispatchers displayed great skill in the simultaneous operation of the computers, police radios and commercial telephones. Excellent knowledge of the procedures and superb teamwork were displayed.

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

**1.7 State of Vermont Department of Public Health Laboratory**

The primary role that the Vermont Department of Health Laboratory plays is to analyze plume and environmental samples to determine radioactive content of such samples. They were conscientious in their efforts to avoid cross contamination and to provide accurate analytical results in a timely manner. They were highly organized, proficient at their tasks, and effective in overcoming obstacles.

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

## **2. RISK JURISDICTIONS (VERMONT)**

### **2.1 Brattleboro**

The Brattleboro Emergency Operations Center personnel were professional, very knowledgeable of their positions and can work with little instruction. This was exemplified when early on in the operation an actual structure fire occurred and had little impact on the exercise operations. The EOC personnel were very familiar of its purpose in supporting emergency responders.

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

#### **ISSUE #: 67-03-5.a.1-A-6**

The Brattleboro EOC did not receive the test message sent by the National Weather Service (NWS). If this were an actual event, the Brattleboro EOC would not have received an important EAS message.

#### **RECOMMENDATION:**

Determine why the message was not received. Verification at the next regularly scheduled test is necessary.

#### **SCHEDULE OF CORRECTIVE ACTION:**

Although the tone alert radio at the EOC in Brattleboro did not receive the signal it was received one floor above them in central dispatch. Four things will be done to resolve the issue:

1. Attach an antenna to the radio in the EOC.
  2. Revise the Communications Officer procedures to include calling central dispatch to see if they received the signal.
  3. Revise the central dispatch procedure to inform the EOC any time they receive a tone alert signal and message.
  4. Replace the existing radio in the EOC if needed.
- d. NOT DEMONSTRATED: None**
  - e. PRIOR ARCAs - RESOLVED: None**
  - f. PRIOR ARCAs - UNRESOLVED: None**

## **2.2 Dummerston**

The Dummerston Emergency Operations Center staff performed all their assigned emergency response functions in a timely and professional manner.

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

## **2.3 Halifax**

The Town of Halifax Emergency Management Director did a great job of communicating plant status to Halifax School Officials. The EOC Director provided updates in a very timely manner to all staff at the EOC and for any staff that came to the EOC to participate throughout the exercise.

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

**ISSUE #: 67-03-1.e.1-A-7**

No KI was available at the Halifax EOC for emergency workers. This could affect the town's ability to ensure the health and safety of its emergency workers.

### **RECOMMENDATION:**

Ensure KI is available at the Halifax EOC for emergency workers.

### **SCHEDULE OF CORRECTIVE ACTION:**

1. The KI has been replaced in Halifax.
2. It is in a locked file cabinet in the EOC.

3. A list of the drawer contents will be affixed to the outside of the drawer.
4. The new town emergency management director has been made aware of the problem and will inventory the drawer more often.

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

## **2.4 Guilford**

Emergency Operations Center staff used procedures and checklists proficiently. The interest of staff was one of concern and commitment. Command and control was very well done.

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

### **ISSUE #: 67-03-3.a.1-A-8**

The RADEF officer was not available for this exercise; the EMD assigned two staff personnel who only handed out the 0-20R direct reading dosimeter and a TLD. However, although this is not in accordance with their plan, the distribution of the dosimetry included a briefing on its use.

### **RECOMMENDATION:**

Train additional EOC staff in the RADEF position.

### **SCHEDULE OF CORRECTIVE ACTION:**

The title "RADEF" Officer is no longer valid. The procedures now uniformly in all towns call it "Radiological" Officer. Additional personnel will be recruited to be Radiological Officers and larger group of the Guilford EOC staff will be cross-trained to fill that position in the event that the primary persons can not respond.

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

## **2.5 Vernon**

The EOC Director demonstrated knowledge and confidence in the staff and plan by conducting frequent briefings and encouraging feedback from participants.

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

## **2.6 Schools and Day Cares**

The Brattleboro schools and special facilities visited were well organized. Each facility had its own emergency operations plan. The Dummerston School Principal demonstrated a dedicated attitude and knowledge of emergency procedures during the interview. Halifax Schools and special needs facilities were all very well organized and familiar with their plans and procedures. The Guilford Central School Principal knows the plan well. They have their own buses readily available for any event. Each Child Care Center had their own emergency plan available. Extra measures were taken independently to create attendance lists and notices for their doors in the events of an evacuation. Some went the extra mile and made up laminated pocket sized contact information for the parents and Child Care workers.

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

## **3. SUPPORT JURISDICTIONS (Vermont):**



Support jurisdictions were demonstrated in a previous exercise and not required to demonstrate this exercise.

#### **4. STATE OF NEW HAMPSHIRE**

##### **4.1 State Emergency Operations Center**

The Governor's Representative, the 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. 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. Technical knowledge level of assessment personnel was high caliber. Individuals worked as a cohesive team and utilized the information provided by the utility liaison related to plant status to postulate several what-if scenarios.

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

##### **ISSUE #: 67-03-5.a.1-A-9**

The second Alert and Notification was not performed at 1122 for Sirens and 1125 for an EAS message. The residents on the New Hampshire side of the river would have heard the sirens in Vermont and Massachusetts, and tone alert radios being sounded in New Hampshire and would begin to wonder what was happening at the Vermont Yankee Power Plant.

##### **RECOMMENDATION:**

Although the New Hampshire EOC may not concur with the recommended action of the states of VT and MA, they should sound sirens and repeat the previous message or state that there was no change to the previous message.

##### **SCHEDULE OF CORRECTIVE ACTION:**

New Hampshire accepts the FEMA recommendation to coordinate the sounding of sirens and issuance of an EAS message when the other states in the EPZ do so, even if there is no new information to announce in New Hampshire. Discussion of this issue at ongoing training for media and decision-making personnel will be undertaken in order to enhance performance.

##### **ISSUE #: 67-03-5b.1-A-10**

Inaccurate and confusing information could have been broadcast through EAS and EPI messages. Three of the messages refer to recommended actions or protective actions when there were no actions recommended. This could possibly create confusion for the public and increase calls to Rumor Control and the Media Center, as residents would need to contact authorities for clarification of the instructions they are being asked to follow. Several messages advised residents to tune in to their local radio stations or Emergency Alert System broadcasts, but did not identify the specific radio stations that carry broadcasts. In addition, the EPI message concerning evacuation and sheltering in place did not include information on evacuation routes, what to take or leave when evacuating, specific instructions regarding sheltering in place, transportation information for transportation-dependent individuals, or information for special populations.

#### **RECOMMENDATION:**

Messages need to be carefully proofread before being issued. In addition, the template used could be improved or additional templates could be created.

#### **SCHEDULE OF CORRECTIVE ACTION:**

There were certainly mistakes that should have been and likely would have been caught and repaired prior to their broadcast to the public. With respect to the lack of detailed information on sheltering and evacuation we would point out that Emergency Public Information Messages elaborating on the details of sheltering and evacuation were not used due to extra-exercise considerations. A shorter less detailed message was used. We would point out that ample emphasis on the details of shelter and evacuation were provided at the media center. Discussion of these issues at ongoing training for media and decision-making personnel will be undertaken in order to enhance performance.

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

#### **4.2 Emergency Operations Facility**

Personnel from the New Hampshire Office of Health Management and Office of Emergency Management were the State contingent staffing the Emergency Operations Facility. Alert notification and mobilization were timely. Direction and control was effective in task delegation among assembled staff and protective action and potassium iodide recommendations made to the Emergency Operations Facility. Overall, internal and external communications were timely and accurate. Repeat back procedures were used with field teams and EOC components to ensure accuracy of information provided. Equipment and supplies were adequate to conduct assigned operations. Required dosimetry was worn

by all personnel. Dosimetry usage and exposure limits, and KI implementation requirements were clearly understood.

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

#### **4.3 Joint Information Center**

All the State Public Information Officers displayed outstanding teamwork, professionalism, and commitment to provide accurate information to the media and subsequently the public. The use of utility provided State Assistants greatly facilitated the work of the Public Information Officers. During the exercise the three State Assistants were supportive, facilitated the Public Information Officers in accomplishing their emergency responsibilities, and folded easily into their respective team.

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

#### **4.4 State Police Troop "C"**

New Hampshire State Police Troopers were very professional and knowledgeable of their responsibilities that would require them to perform during an emergency at Vermont Yankee.

- a. **MET:** Criterion 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.d.1, 3.d.2
- b. **DEFICIENCY:** None

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

#### **4.5 Radiological Field Monitoring Teams**

Members of the New Hampshire Field Monitoring Team 1 were extremely well prepared for the exercise and performed and explained their duties with a high degree of skill and knowledge. Team 1 performed their air sampling duties in accordance with their procedures. Team Members exhibited a thorough understanding of their procedures and the radiation protection principles underlying the procedures. Each explanation of responses was articulate and accurate. Field Team 2 was fully prepared and demonstrated their ability to perform their assigned tasks. They communicated with the field team coordinator in a timely manner and were clear in their transmissions. They had no difficulty in finding assigned monitoring location or in monitoring and sampling once at their locations.

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

#### **ISSUE #: 67-03-3.a.1-A-11**

At 0900 hours, the Monitoring Team Coordinator (MTC) dispatched NH FMT1 from Concord, NH to the Chesterfield Fire Station assembly point, to begin conducting radiological monitoring. While on route to the assembly point, the NH FMT 1 received directions from the MTC to proceed to Highway 63 South and ½ mile north of the Massachusetts border and begin air sampling. After several failed attempts to receive guidance, from the MTC, NH FMT 1 (on their own) discussed the alternatives to either stop and reverse their route to a lower dose rate area or continue to proceed to the radiological monitoring location. NH FMT 1 decided to continue to proceed toward the plume until the background readings exceeded 500 mR/hr. At 1145 hours, the exercise controller provided the background reading, at which time the field monitoring team immediately called the readings in to the MTC. At 1157 hours, after three failed attempts to reach the MTC by radio, the field team decided to stop and reverse their route to a low dose rate area. At 1158 hours, the MTC finally instructed the team to stop, turnaround, and reverse direction and immediately proceed to a low dose rate area. NH FMT 1 was exposed to levels of 150mr/hr to 630 mR/hr for approximately 19-minutes (1140 hours to 1159 hours).

#### **RECOMMENDATION:**

The NH FMT1 should each exercise demonstration as if it was a real event and follow their procedures accordingly:

**New Hampshire Field Monitoring Team Procedures, Chapter 4, page 4.8.**

“If the meter (not your dosimeter nor the accumulated dose) set up to monitor in your vehicle should exceed 500mR/hr you will immediately proceed to a lower dose rate area. You do not need MTC authorization. Contact MTC as soon as possible and provide data on location of reading and your status.”

**SCHEDULE OF CORRECTIVE ACTION:**

DOSOEM will review this issue with OCPH and, ongoing training of field team members will cover the issues raised in this issue. Subsequent extent of play agreements will clearly identify monitoring team activities.

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

**4.6 State Warning Point**

Offsite Response Organizational personnel were knowledgeable of tasks assigned and utilized their procedures. Communication links were well established and indicated appropriate utilization of resources. Availability of redundant communications systems enhance the center’s ability to respond in an actual emergency.

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

**5. RISK JURISDICTIONS (NEW HAMPSHIRE)**

**5.1 Chesterfield**

The Chesterfield Emergency Operations Center staff is very committed to effectively responding in the event that a radiological emergency were to affect the town's population, and in particular its school children. The Emergency Management Director engaged key EOC staff, as appropriate, to discuss key issues and to clarify the intent and purpose of certain actions. Additionally, the EMD was very proactive in planning ahead and discussing with the Chief of Police the potential impact on Chesterfield of protective actions implemented by neighboring towns. Furthermore, the EMD and the Chief of Police effectively discussed the expected seasonal and weekly variations in potential emergency response resources demands that Chesterfield would face if the emergency were to take place at a different time.

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

**ISSUE #: 67-03-1.c.1-A-12**

During the exercise, record keeping by Chesterfield Emergency Operations Center (EOC) personnel was insufficient. Several key EOC members did not adequately document the actions they performed, as required by the Chesterfield plan and procedures. The Chesterfield Transportation Officer did not document who he spoke to at the New Hampshire Office of Emergency Management (NHOEM) EOC regarding transportation needs. This lack of documentation resulted in repeated requests for transportation information from the Local Liaison at the NHOEM EOC.

At 1022, 1056, and approximately 1225, the Local Liaison made three separate requests for information related to transportation needs for schools. The Transportation Officer promptly responded to all three requests, but in the first two instances provided the information requested to the NHOEM EOC, instead of to the Local Liaison at the NHOEM EOC as required by the Chesterfield Radiological Emergency Response Plan (RERP).

The Emergency Management Director (EMD) did not recognize a trend, of repeated requests for information, suggesting a communication breakdown between the Transportation Officer at the EOC and the Local Liaison at the NHOEM EOC. The Communications Officer informed the EMD that the Local Liaison did not receive a response to the first two requests. The EMD acknowledged the oversight and the Transportation Officer provided the information to the Communications Officer, who relayed it to the Local Liaison.

Lack of adequate record keeping weakens the ability of the Town of Chesterfield to complete and/or follow up on actions in a timely fashion. This is particularly relevant in the context of requests for additional resources made to other emergency response

organizations, as well as in the event of a substitution of a key EOC member or a shift change.

**RECOMMENDATION:** Training on forms and message tracking.

**SCHEDULE OF CORRECTIVE ACTION:**

DOSOEM will review this issue with Chesterfield Officials and provide training in the proper use of forms and appropriate record keeping at the Chesterfield EOC.

**ISSUE #: 67-03-1.d.1-A-13**

The AM/FM radio used by the Chesterfield Emergency Operations Center (EOC) is inadequate for monitoring the broadcast of Emergency Alert System (EAS) messages. The Chesterfield EOC would have been unable to verify the reception of the EAS message in the Chesterfield area and such verification is critical for the EOC to be in a position to implement backup notification of the public in the event that the EAS message broadcast was not received in the Chesterfield area.

**RECOMMENDATION:**

Ensure that the AM/FM radio unit used at the Chesterfield EOC has adequate reception of WKNE and other EAS stations.

**SCHEDULE OF CORRECTIVE ACTION:**

The AM/FM receiver in the Chesterfield EOC has been replaced/repared and is now operational.

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

**5.2 Hinsdale**

The Town of Hinsdale did not participate in this exercise. The State of New Hampshire implemented the State Compensatory Plan at the State Emergency Operations Center in Concord, NH.

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

- d. **NOT DEMONSTRATED:** Criterion 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5a.1, 5.a.3, 5.b.1
- e. **PRIOR ARCAs - RESOLVED:** None
- f. **PRIOR ARCAs - UNRESOLVED:** None

### **5.3 Richmond**

The Richmond Emergency Operations Center staff worked well to accomplish their mission. Particularly impressive was the seamless transition from the Fire Chief to the Emergency Management Director. During the initial notification, the Fire Chief assumed the duties of the EMD. The Fire Chief immediately took action and began notifications. Upon the EMD's arrival, the Fire Chief provided accurate information to ensure the EMD was up to date and able to take over command and control.

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

#### **ISSUE # 67-03-3.a.1-A-15**

Radiological Officer (RAD) Officer did not advise the female emergency workers on all aspects of radiological exposure. A female worker could have been pregnant and not known the potential health risks.

#### **RECOMMENDATION:**

Provide training to the RAD Officer on all aspects of radiological exposure.

#### **SCHEDULE OF CORRECTIVE ACTION:**

DOSOEM will review and emphasize this aspect of radiation safety in ongoing training for RADEF Officers and will review this issue specifically with the Richmond RDO and other members of the Emergency Response Organization.

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



#### **5.4 Swanzey**

A positive aspect of the emergency response demonstration at the town of Swanzey would be the proficiency and teamwork of the Emergency Operations Center staff. The staff was relaxed and friendly. They followed their plans and coordinated with each other when necessary. Where appropriate, they sought the approval of the Emergency Management Director. The EMD and the selectman did not micromanage the individual efforts. The EMD was able to make timely decisions and sought the input of the staff. Every member of the EOC sought and discussed improvements to the EOC and the town's plan.

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

#### **5.5 Winchester**

The response organization for the Winchester EOC had several volunteers along with the Chief Selectman, Fire Chief, and Police Chief. This organization with all the volunteers functioned very effectively as a team and worked very well together. They assisted each other in overcoming obstacles and performed very professionally. The RADEF Officer provided an excellent briefing and maintained a constant watch over exposure control. Overall it was an excellent demonstration showing leadership, professionalism, and a commitment to get the job done.

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

## **5.6 Schools**

The Principal of the Chesterfield Elementary School implemented a very solid management strategy for emergency preparedness and response. The staffs of the Hinsdale Elementary, Hinsdale High School and Winchester schools were very well prepared for an emergency. Their plans were available and the staffs were familiar with them.

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

## **6. SUPPORT JURISDICTIONS (NEW HAMPSHIRE)**

### **6.1 Keene Emergency Operations Center**

The staff at the City of Keene's Emergency Operations Center showed great interest in their assignments and in both locations those involved in the exercise were most helpful and cooperative throughout this evaluation.

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

### **6.2 Local Warning Point - Southwest New Hampshire District Fire Mutual Aid**

At the Southwestern New Hampshire District Fire Mutual Aid, which is co-located with the City of Keene Fire Department, staff were very knowledgeable of their duties and responsibilities.

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

### **6.3 State Transportation Staging Area**

The highly motivated manager of the Laidlaw Bus Company enthusiastically cooperated with the State and local communities to provide necessary resources. The ability of a commercial company to shift from a daily routine to an emergency response facility was commendable.

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

## **7. COMMONWEALTH OF MASSACHUSETTS**

### **7.1 State Emergency Operations Center**

After the EOC was operational the Director of MEMA appointed the MEMA Operations Officer to assume the role as Acting Director. The Operations Director was able to uphold the leadership role established by the Director. The EOC staff provided the same level of support to the acting and the agency's response efforts remained strong. The Public affairs Officer identified key items for the news releases and EAS messages. Coordination of emergency response activities was handled in an exceptional manner in the Massachusetts State EOC. Essential and timely coordination with New Hampshire and Vermont was accomplished in a timely and thorough process by the MEMA Acting Director and his decision-making staff. The Public Information Officer identified key items for the news advisories and EAS messages.

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

### **7.2 Emergency Operations Facility**

The Massachusetts team at the Emergency Operations Facility had a number of members functioning at the EOF for the first time. The new members in these positions included the Director of Massachusetts Department of Health and the Field Team Coordinator. The team of MDPH and MEMA functioned very well together, frequently sharing information and discussing ongoing activities. The team was well trained, professional and performed very well throughout the challenging scenario situations.

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

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

### **7.3 Joint Information Center**

All the Utility provided State Assistants greatly facilitated the work of Public Information Officers. During the exercise the three State Assistants were supportive, facilitated the Public Information Officers in accomplishing their emergency responsibilities, and folded easily into their respective team. The Massachusetts Public Information Officer team is to be commended for their coordination, thoroughness, and ability to respond to difficult questions. Additionally, during the media briefings, the PIO adroitly defused controversial questions in a calm professional manner.

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

Issue # 67-01-05-A-12

By interview, the MA JIC personnel indicated that they had been issued a dosimetry packet but left them in their vehicle 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.

#### **CORRECTIVE ACTION TAKEN:**

Each of the Massachusetts Public Information Officers arrived with a completed dosimeter kit. Each PIO was aware of their reporting requirements and to read their dosimeters every 15 minutes unless instructed to do otherwise. Readings would be recorded on the dosimeter record form.

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

#### **7.4 State Police Troop "B"**

The shift Commander was able to coordinate both actual emergencies and the exercise without conflicting the situations presented to him.

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

**b. DEFICIENCY: None**

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

**d. NOT DEMONSTRATED: None**

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

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

#### **7.5 Radiological Field Monitoring Teams**

Field Team #14 members were enthusiastic and professional in the completion of their tasks. The field team worked as a team to minimize contamination in packaging samples, using the "clean hands/dirty hands" technique. Field team #16 showed very positive response actions when one of the RO-2A instruments failed the per-operational check. They first went back through the process of installation of the batteries and then the operational check a second time to verify the instrument did fail the source check. The team then obtained a second RO-2A from the backup instruments at the EOC in Greenfield, MA and went through the pre-operational check on the second instrument. The second instrument did pass the pre-operational check and was put into services. The team used the "Field Monitoring Checklists" section D.4 on a regular basis during the deployment, reading specific information if there was any question as to the required action. The team demonstrated good techniques for handling the sample media to prevent any cross-contamination when processing the air sample.

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

**b. DEFICIENCY: None**

**c. AREAS REQUIRING CORRECTIVE ACTION: 4.a.2, 4.a.3**

**ISSUE #: 67-03-4.a.2-A-16**

At the time of the radio check-in with the Field Team Coordinator (FTC) the Field Monitoring Team (FMT) was instructed to take only an air sample when they arrived at their sampling location. The team requested clarification of the instructions, asking if they

were to also take the ion chamber measurements at waist and 2 inches. The FTC responded that the FMT should only take the air sample immediately upon arrival. Section D.4, Field Monitoring Checklists states that the ion chamber measurements should be taken first, therefore, the FMT member continued to ask the question. This time the response was that a full sample protocol should be done but the air sample should be taken first. The FMT members were in an area at 500 mR/h for over 10 minutes. If the ion chamber readings had been taken immediately upon arrival, this data would have been discovered and the equipment would not have been unloaded, thus avoiding potential contamination and limiting the dose to the FMT members.

#### **RECOMMENDATION:**

Retraining of both the FTC and the FMT. Clarification to the FMT that specific protocols are to be followed at every location regardless of the focus of the sample at that location.

#### **SCHEDULE OF CORRECTIVE ACTION:**

The Department of Public Health disagrees with the assertions of the evaluator with regard to this item. The Field Team Coordinator (FTC) correctly assumed that the Field Monitoring (FMT) had been following the instructions found in the Field Monitoring Checklists, particularly the section that requires the team to monitor continuously while en route to the monitoring site and to perform a survey upon arrival (Section D.4, item 4.2, paragraphs 12, 13, and 14 of the Field Monitoring Checklist). The FTC then instructed them to take the air sample in accordance with item 16 on the checklist. This was corroborated by the FMT leader who does not recall that the FTC instructed his team to take the air sample "only" or "first". In fact, his memory of the events include "nearly simultaneous efforts of one member setting up the air sampler and the other member beginning to obtain survey instrument readings". On this latter issue, his recollection is that the survey team spent as long in the area as it did because when the Controller was asked for "readings" he/she began "flipping pages, questioning the numbers and self-verifying" before supplying the survey readings to the FMT. The time taken to connect/disconnect the air sampler is short, and would not contribute in any significant way to personnel dose.

#### **ISSUE#: 67-03-4.A.3-A-17**

Three separate re-demonstrations occurred per the Extent of Play Agreement. These included attempting to transport the air sampler and attached head without bagging the sample head, placing potentially contaminated tweezers into the pocket of personal clothing, and not verifying the flow meter on the air sample at the start of the sample. Transport of the air sampler head while the head was still attached to the uncovered air sampler could have resulted in loss of sample on the particulate filter and/or contamination of the vehicle. Placing the tweezers used to handle the 285,000 cpm air filter into the team member's pocket would have resulted in contamination of clothing. Not noting that the flow meter was responding appropriately at the start of the air sample may have resulted in an improper calculation of the volume of the air sample if the air sampler had been malfunctioning. Transport of the air sampler head while the head was

still attached to the uncovered air sampler could have resulted in loss of sample on the particulate filter and/or contamination of the vehicle. Placing the tweezers used to handle the 285,000 cpm air filter into the team member's pocket would have resulted in contamination of clothing. Not noting that the flow meter was responding appropriately at the start of the air sample may have resulted in an improper calculation of the volume of the air sample if the air sampler had been malfunctioning.

#### **CORRECTIVE ACTIONS DEMONSTRATED**

Field Monitoring Team (FMT) members simulated or demonstrated satisfactory response in each instance.

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

#### **7.6 MEMA Region III Emergency Operations Center**

This was the Region III Director's first exercise and he demonstrated strong, knowledgeable and effective leadership that resulted in a strong performance by the entire Region III response organization. The Director made timely decisions during the course of operations and was able to initiate procedures to clarify confusing situations that arose during the response operations. For example, the Director immediately noticed that an Emergency Action Directive Form prepared by the State EOC contained confusing and incorrect information. This form, issued at 1112 in advance of the second A/N sequence, incorrectly noted that the Precautionary/Protective Action directive included Shelter-in-Place. The Director recognized this error and immediately directed his local liaison team to provide corrected information to the local EOCs and also had corrected information relayed to the local EOCs by radio. He also requested that the State EOC provide a corrected form to all response organizations.

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



## **7.7 DEM Fire District**

The personnel of the DEM Fire District were very well prepared for an emergency. They had proper equipment available and all was within current inspection dates. Plans, procedures and notification materials were available for reference, if required.

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

## **7.8 DFWDLE**

During a staff assistance visit on March 26, 2003, it was evident that the personnel were well trained and knowledgeable of their plans and procedures.

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

## **7.9 State Police – Shelburne**

The teamwork demonstrated at this emergency operation center was very impressive. They all demonstrated knowledge of the plan and procedures in such a way that their cohesiveness was outstanding.

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

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

## 8. RISK JURISDICTIONS (MASSACHUSETTS)

### 8.1 Bernardston

The Emergency Management Director demonstrated excellent command and control throughout the exercise. All key staff members effectively demonstrated the implementation procedures. The Selectman was involved in all aspects of the exercise providing advice and recommendations to the EMD. The Bernardston EOC staff quickly responded to every emergency classification level and followed their procedures carefully.

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

Issue # 67-01-02-A-13

Bernardston EOC does not have an AM/FM radio in their equipment suite; consequently, they are unable to monitor the transmissions of EAS information to the public.

#### CORRECTIVE ACTION TAKEN:

AM/FM radio was available to monitor EAS broadcasts to the general public.

- f. PRIOR ARCAs - UNRESOLVED: None

### 8.2 Colrain

The Colrain EOC was a well run and organized organization. The EMD exhibited strong leadership skills. EOC staff cross-trained on different positions within the EOC to insure the flexibility in staffing. This allowed the small EOC to have the capability to staff two 12-hour shifts.

- a. **MET:** Criterion 1.a.1, 1.b.1, 1.c.1, 1d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.1, 5.a.3, 5.b.1, 6.b.1
- b. **DEFICIENCY:** None
- c. **AREAS REQUIRING CORRECTIVE ACTION:** None
- d. **NOT DEMONSTRATED:** None
- e. **PRIOR ARCAs - RESOLVED:**

Issue # 67-01-10-A-14

Even though it was not in the extent of play, the actual sounding of sirens was attempted. At 1044 and again 1120, attempts were made and both times the sirens failed.

#### **CORRECTIVE ACTION TAKEN**

The Colrain sirens were actually sounded during a staff assistance visit (SAV) on March 27, 2003. The siren system was inspected and repaired by Vermont Yankee technicians. The advertised test was conducted and the sirens operated properly.

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

### **8.3 Gill**

The Town of Gill has professionally paid and volunteer personnel who are familiar with their towns necessary response required to respond to any problem arising from Vermont Yankee Nuclear Power Station. Personnel take their jobs seriously and their prior training was evident during the exercise. Facilities and equipment were adequate for the response to an actual event. The Emergency Management Director and Fire Chief demonstrated outstanding direction and control and are to be commended for their professionalism.

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

- f. PRIOR ARCAs - UNRESOLVED: None**

#### **8.4 Greenfield**

The Town of Greenfield EOC staff were very proactive, demonstrated great interaction with each other and were all team players.

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

#### **8.5 Leyden**

Town of Leyden officials deserve high marks for a professional performance during the exercise. This assessment is based upon the following: first, during the activation, they prioritized positions for staffing to ensure critical initial response actions were addressed; Second, the EOC staff acted in a proactive manner; this proactive stance included the Emergency Operations Center Manager empowering the staff to perform their tasks with minimal supervision. The staff responded, accordingly, by taking initiatives and working as a team to accomplish mission requirements; third, their teamwork and outreach efforts demonstrations were impressive.

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

#### **ISSUE #: 67-03-1.b.1-A-18**

The EOC lacks bathroom facilities. EOC staff must travel a considerable distance to the town hall to use its restrooms. This issue has sanitary and safety problems. The sanitary effects are obvious and do not require elaboration. Safety becomes a problem in the event of a radiological release at the plant and the plume zone transcend the Town of Leyden. EOC personnel would have to venture into the plume to gain access to restroom facilities.

This not only poses a risk to them but also threatens the EOC staff if radioactive materials are carried back into the EOC.

**RECOMMENDATION:**

Relocate the EOC to a facility with a restroom or provide funding assistance to the community for the construction of restroom facilities in their EOC.

**SCHEDULE OF CORRECTIVE ACTION:**

The Commonwealth acknowledges this situation with the Leyden EOC and will work with the Town and the power plant to remedy and eliminate the sanitary and safety problem. We will explore the possibility of grant monies available to the Town in correcting the condition.

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

**8.6 Northfield**

The Emergency Management Director had organized a telephone listing, in book form, that had all pertinent phone numbers (both listed and unlisted) of all individual that would need to contact in an emergency.

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

**8.7 Warwick**

There was exceptional rapid organization of the EOC by staff members who received initial notification by pagers. The Emergency Management Director provided very effective and detailed briefings and maintained excellent direction and control during the exercise. There

was the utmost coordination and cooperation of all staff members who were very well qualified in their respective positions and kept aware of all emergency activities at all times.

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

**8.8 Schools, Day Cares, Children's Day Camps**

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

Issue # 67-01-16-A-15

The Pioneer Valley Regional School District, Pearl Rhodes Elementary School, Mohawk Regional School District, and both preschools (Giving Tree and Otter Pond) said that they had tone alert radios and that they tested them regularly. Gill-Montague Regional School District Superintendent is presently looking into buying radios or cell-phones for backup. All other schools, including the superintendent, did not know where the tone alert radios were and what they were used for. (NUREG-0654, J.9, 10.c.,d,g) (Colrain Central School, Gill Elementary, Northfield Elementary, Pioneer Valley Regional School, Warwick Community School)

**REASON NOT DEMONSTRATED**

These school districts were not included in the negotiations for this exercise. However, a staff assistance visit can be scheduled to correct this issue.

## **APPENDICES**

# **APPENDIX 1**

## **ACRONYMS AND ABBREVIATIONS**



## **APPENDIX 1. ACRONYMS AND ABBREVIATIONS**

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

<b>A&amp;N</b>	<b>Alert and Notification</b>
<b>AAT</b>	<b>Accident Assessment Team</b>
<b>ACP</b>	<b>Access Control Point</b>
<b>ARC</b>	<b>American Red Cross</b>
<b>ARCA</b>	<b>Area Requiring Corrective Action</b>
<b>ARES</b>	<b>Amateur Radio Emergency Services</b>
<b>CCC</b>	<b>Congregate Care Center</b>
<b>CDD</b>	<b>Civil Defense Director</b>
<b>CF</b>	<b>Cubic Feet</b>
<b>CFM</b>	<b>Cubic Feet per Minute</b>
<b>CFR</b>	<b>Code of Federal Regulations</b>
<b>CPM</b>	<b>Counts Per Minute</b>
<b>DEM</b>	<b>Department of Environmental Management</b>
<b>DFWDLE</b>	<b>Department of Fisheries, Wildlife and Environmental Law Enforcement, Division of Law Enforcement</b>
<b>DOT</b>	<b>U.S. Department of Transportation</b>
<b>DPHS</b>	<b>Division of Public Health Services</b>
<b>DPW</b>	<b>Department of Public Works</b>
<b>DRD</b>	<b>Direct Reading Dosimeter</b>
<b>EA</b>	<b>Evaluation Area</b>
<b>EAL</b>	<b>Emergency Action Level</b>
<b>EAS</b>	<b>Emergency Alert System</b>
<b>EBS</b>	<b>Emergency Broadcast System</b>
<b>ECL</b>	<b>Emergency Classification Level</b>
<b>EM</b>	<b>Emergency Management</b>
<b>EMA</b>	<b>Emergency Management Agency</b>
<b>EMD</b>	<b>Emergency Management Director</b>
<b>EMS</b>	<b>Emergency Medical Services</b>
<b>EMT</b>	<b>Emergency Medical Technician</b>
<b>EOC</b>	<b>Emergency Operations Center</b>
<b>EOF</b>	<b>Emergency Operations Facility</b>
<b>EPA</b>	<b>U.S. Environmental Protection Agency</b>
<b>EPI</b>	<b>Emergency Public Information</b>
<b>EPZ</b>	<b>Emergency Planning Zone</b>
<b>ERO</b>	<b>Emergency Response Organization</b>
<b>ERP</b>	<b>Emergency Response Plan</b>
<b>EW</b>	<b>Emergency Worker</b>

FDA	U.S. Food and Drug Administration
FEMA	Federal Emergency Management Agency
FEMA HQ	Federal Emergency Management Agency Headquarters
FEMA RI	Federal Emergency Management Agency Region I
FMT	Field Monitoring Team
FR	Federal Register
FTC	Field Team Coordinator
GE	General Emergency
ICF	ICF Consulting
IFO	Incident Field Office
JIC	Joint Information Center
KI	Potassium Iodide
MA	Massachusetts
MARERP	Massachusetts Radiological Emergency Response Plan
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
MTC	Monitoring Team Coordinator
NAS	Nuclear Alert System
NH	New Hampshire
NHDOT	New Hampshire Department of Transportation
NHOCPH	New Hampshire Office of Community Public Health
NHDSFSEM	New Hampshire Department of Safety, Fire Safety and Emergency Management
NHOHM	New Hampshire Office of Health Management
NHRERP	New Hampshire Radiological Emergency Response Plan
NIAT	Nuclear Incident Advisory Team
NID	Nuclear Information Director
NMC	News Media Center
NOAA	National Oceanic and Atmospheric Administration
NOUE	Notification of Unusual Event
NPS	Nuclear Power Station
NRC	U.S. Nuclear Regulatory Commission

NUREG-0654	NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants, November 1980
OEM	Office of Emergency Management
ORO	Offsite Response Organization
OSC	On-Scene Coordinator
PAD	Protective Action Decision
PAR	Protective Action Recommendation
PHAAP	Public Health Accident Assessment Program
PIO	Public Information Officer
R	Roentgen
RAC	Regional Assistance Committee
RACES	Radio Amateur Civil Emergency Service
RADEF	Radiological Defense
REM	Roentgen Equivalent Man
REP	Radiological Emergency Preparedness
RERP	Radiological Emergency Response Plan
RHTA	Radiological Health Technical Advisor
SAE	Site Area Emergency
SAV	Staff Assistance Visit
SEOC	State Emergency Operations Center
SRM	Site Recovery Manager
SWNHDFMA	Southwest New Hampshire District Fire Mutual Aid
TCP	Traffic Control Point
TDD	Telecommunications Device for the Deaf
TL	Team Leader
TLD	Thermoluminescent Dosimeter
TSC	Technical Support Center
TTY	Teletypewriter
UE	Unusual Event
UHF	Ultra High Frequency
USDA	U.S. Department of Agriculture
VEM	Vermont Emergency Management
VRERP	Vermont Radiological Emergency Response Plan
VSP	Vermont State Police
VT	Vermont
VY	Vermont Yankee
VYNPS	Vermont Yankee Nuclear Power Station

**THIS PAGE INTENTIONALLY LEFT BLANK**

**APPENDIX 2**

**EXERCISE EVALUATORS AND TEAM LEADERS**

## APPENDIX 2.

### EXERCISE EVALUATORS AND TEAM LEADERS

The following is a list of the personnel who evaluated the Vermont Yankee Nuclear Power Station exercise on April 8, 2003. Evaluator Team Leaders are indicated by the letters "(TL)" after their names. The organization which each evaluator represents is indicated by the following abbreviations:

EPA	- Environmental Protection Agency
FDA	- Food and Drug Administration
FEMA	- Federal Emergency Management Agency
ICF	- ICF Consulting

<u>EVALUATION SITE</u>	<u>EVALUATOR</u>	<u>ORGANIZATION</u>
<b>STATE OF VERMONT</b>		
State Emergency Operations Center	Anita Kellogg, TL H. Harrison Bob Swartz Sam Nelson	ICF ICF FEMA R1 ICF
Emergency Operations Facility	Charles Phillips	ICF
Joint Information Center	Deborah Bell Jane Young	FEMA RI FEMA Region VII
Radiological Field Teams	Ron Bernacki Jim Cherniack	USDA FDA
Incident Field Office	OC Payne	FEMA, HQ
Alternate State Warning Point (Rockingham)	Bob Poole	FEMA RI
<b>RISK JURISDICTIONS (Vermont)</b>		
Brattleboro	Mark Gallagher	FEMA R1
Dummerston	Ed Wojnas Lauren McLane	ICF FEMA R1
<u>EVALUATION SITE</u>	<u>EVALUATOR</u>	<u>ORGANIZATION</u>

Halifax	Rick Quinlan	FEMA Region I
Guilford	Mike Brazel	FEMA Region I
Vernon	Daisy Sweeney	FEMA Region I
Schools and Day Cares	Ed Wojnas	ICF
	Daisy Sweeney	FEMA RI
	Helen LaForge	FEMA RI
	Mark Gallagher	FEMA RI
	Lauren McLane	FEMA RI
	Bob Poole	FEMA RI
Public Health Lab	Harry Harrison	ICF
<b>STATE OF NEW HAMPSHIRE</b>		
State Emergency Operations Center	Wanda Gaudet, TL	FEMA, Region I
	Joe Lischinsky	ICF
	Nancy Johnson	ICF
	Bob Neisius	ICF
Emergency Operations Facility	Brad McCree	ICF
Joint Information Center	Deborah Bell	FEMA, Region I
	Jane Young	FEMA, Region VII
State Police Troop C	Ron Van	ICF
Radiological Field Teams	Mike Leal	USDA
	Lynn Mariano	ICF
State Warning Point	Joe Lischinsky	ICF
Radio Station - WKNE	Josh Moore	ICF
<b>RISK JURISDICTIONS (New Hampshire)</b>		
Chesterfield	Alejandro Fernandez	ICF
Hinsdale – Compensatory Plan	Bob Neisius	ICF
Richmond	Lauren Record	FEMA, Region I

Swanzey	Patrick Mooney	FEMA, Region I
Winchester	Richard Grundstrom	ICF
NH Schools		
Hinsdale High School	Bob Neisius	ICF
Chesterfield Elementary School	Alejandro Fernandez	ICF
Hinsdale Elementary School	Bob Poole	FEMA RI
Winchester Schools	Richard Grunstrom	ICF
Transportation Staging Area – Laidlaw Terminal	Bob Poole	FEMA RI

#### **SUPPORT JURISDICTIONS (New Hampshire)**

Keene Emergency Operations Center	Joshua Moore	ICF
Local Warning Point Southwest NH District Fire Mutual Aid	Joshua Moore	ICF

#### **COMMONWEALTH OF MASSACHUSETTS**

State Emergency Operations Center	Roy Smith-TL D. Helzner D. Blunt ICF Jim Gibbons	ICF ICF FEMA, Region I
Emergency Operations Facility	Bob Bores	NRC
Joint Information Center	Deborah Bell Jane Young,	FEMA, Region I FEMA, Region VII
State Police Troop B	Helen LaForge	FEMA, Region I
Radiological Field Teams	John Fox Rowena Argall	ICF ICF
Area III Emergency Operations Center	Michael Goetz	FEMA, Region I
State Police, Shelburne	Helen LaForge	FEMA, Region I



## **RISK JURISDICTIONS (Massachusetts)**

<b>Bernardston</b>	<b>Roman Helo</b>	<b>FEMA, Region III</b>
<b>Colrain</b>	<b>Tommy Brown</b>	<b>ICF</b>
<b>Gill</b>	<b>Jim McClanahan</b>	<b>ICF</b>
<b>Greenfield</b>	<b>John McGough</b>	<b>FEMA Region I</b>
	<b>Al Henryson</b>	<b>FEMA Region III</b>
<b>Leyden</b>	<b>Tim McCoy</b>	<b>FEMA Region I</b>
<b>Northfield</b>	<b>Kevin Flynn</b>	<b>ICF</b>
<b>Warwick</b>	<b>Bill Lueders</b>	<b>ICF</b>
<b>Schools</b>	<b>Bob Poole</b>	<b>FEMA RI</b>

**APPENDIX 3**

**EXERCISE CRITERION  
AND  
EXTENT-OF-PLAY AGREEMENT**

### **APPENDIX 3.**

#### **EXERCISE CRITERION AND EXTENT-OF-PLAY AGREEMENT**

This appendix lists the exercise Criterion that were scheduled for demonstration in the Vermont Yankee Nuclear Power Station exercise on April 8, 2003, and the extent-of-play agreement approved by FEMA Region I on March 1, 2003.

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

Because the exercise Criterion 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 Criterion.

#### **A. Exercise Criterion**

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

#### **CRITERION 1a.1: EVALUATION**

##### **Sub-Element 1.a – Mobilization**

Criterion 1.a.1: Offsite 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.3)

### **Sub-Element 1.c – Direction and Control**

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

### **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.7, 10; J.10.a, b, e; J.11; K.3.a)

## **EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING**

### **Sub-Element 2.a – Emergency Worker Exposure Control**

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

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

**Criterion 2.b.1:** Appropriate protective action recommendations are based on available information on plant conditions, field monitoring data, and licensee and ORO dose projections, as well as knowledge of onsite and offsite environmental conditions. (NUREG-0654, I.8, 10 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 KI, if ORO policy). (NUREG-0654, J.9; J.10.f, m)

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

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

## **EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION**

### **Sub-Element 3.a – Implementation of Emergency Worker Exposure Control**

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

### **Sub-Element 3.b – Implementation of KI Decision**

**Criterion 3.b.1:** KI and appropriate instructions are available should a decision to recommend use of KI be made. Appropriate record keeping of the administration of KI for emergency workers and institutionalized individuals is maintained. (NUREG-0654, J.10.e)

### **Sub-Element 3.c – Implementation of Protective Actions for Special Populations**

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

**Criterion 3.c.2:** 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)

**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.7, 8, 9)

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)

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)

## **EVALUATION AREA 5: EMERGENCY NOTIFICATION AND PUBLIC INFORMATION**

### **Sub-Element 5.a – Activation of the Prompt Alert and Notification System**

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

### **Sub-Element 5.b – Emergency Information and Instructions for the Public and the Media**

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

## **EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES**

### **Sub-Element 6.a – Monitoring & Decontamination of Evacuees and Emergency Workers and Registration of Evacuees**

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

## **B. Extent-of-Play Agreements**

The extent-of-play agreements on the following pages were submitted by the States of Vermont, New Hampshire, and Massachusetts, and were approved by FEMA Region I on March 1, 2003 in preparation for the Vermont Yankee Nuclear Power Station exercise on April 8, 2003. The extent-of-play agreements include any significant modification or change in the level of demonstration of each exercise Criterion listed in Subsection A of this appendix.



# STATE OF VERMONT EXTENT OF PLAY AGREEMENT

## VERMONT YANKEE NUCLEAR POWER STATION

### 2003 PLUME PHASE EXERCISE

<b>VERMONT EMERGENCY MANAGEMENT</b> <b>Radiological Emergency Response Plan Program</b> <b>103 South Main Street</b> <b>Waterbury, Vermont 05671-2101</b> <b>802 - 244 - 8721</b>	<b>Vermont Department of Health</b> <b>Health Protection Division</b> <b>108 Cherry Street, PO Box 70</b> <b>Burlington, Vermont 05402</b> <b>802- 863-7205</b>
---	---

**Date: May 9, 2003**

**Executive Summary:** There will be two phases of the exercise: Plume (one day), EPZ interviews and demonstrations (two days). There will be Criterion in the plume phase, in the interviews, in the demonstrations. Some Criterion will be observed both on the day of the exercise and also in one or more interviews and or demonstrations out of sequence.

Sunday	April 6, 2003- Orientation Meetings (including scenario briefing)
Monday	April 7, 2003- VT, MA and NH State Briefings
Tuesday	April 8, 2003- Exercise- including one Route Alerting Route per town after the regular exercise is terminated and critiques held.
Wednesday	April 9, 2003- Transportation Staging Area demonstration, school personnel and Vermont State Laboratory interviews
Thursday	April 10, 2003- Interviews if necessary.
Tuesday	April 15, 2003- 7:00 PM Public Meeting conducted at the Vernon Elementary School.

**Point of contact: Lewis H. Stowell 802-241-5385 or E-mail [lstowell@dps.state.us.vt](mailto:lstowell@dps.state.us.vt)**

## **VERMONT 2003 FULL SCALE EXERCISE**

### **STATE OF VERMONT EVALUATION AREAS and EXTENT OF PLAY WEEK OF APRIL 8, 2003**

**May 9, 2003**

**PARTICIPANT LIST:** The following organizations/agencies/locations will demonstrate in April of 2003 as indicated in the extent of play.

<p>Vermont State EOC State Warning Point (Waterbury) &amp; Alternate State Warning Point (Rockingham VSP) Emergency Operations Facility (EOF) - Vermont Liaison staff Incident Field Office News Media Center (sometimes called the Joint Information Center {JIC})- Vermont Liaison staff State Radiation Laboratory (Burlington)(April 9 only).</p>
<p>Local EOC's in the Towns of: Brattleboro Dummerston Guilford Halifax Vernon</p>

		STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>			
<b>1 - EMERGENCY OPERATIONS MANAGEMENT</b>			
<b>1 -a -Mobilization</b>			
<b>Intent:</b> 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.			
<b>1 -a -1: Criterion:</b> OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner. (NUREG-0654, A.4., D.3., D.4., E.1., E.2., and H.4.)		X	X
<b>Extent of Play:</b> 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 (i.e., 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 if specified in the extent-of-play agreement.			
All activities must be based on the ORO's plans and procedures and must be completed as they would be in an actual emergency, unless otherwise indicated in the extent-of-play agreement.			

NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0	STATE OF VERMONT	LOCAL JURISDICTIONS
<p><b>State &amp; Local Extent of Play:</b></p> <p><b>Pager Carrier Notification-</b> Between 6:00 and 6:30 AM the morning of the exercise, state and local pager carriers will receive a page advising them when to report to the waiting area at their respective exercise duty station. This will be strictly administrative and will not involve any scenario information. See SEOC Exercise Messages for the text of this message.</p> <p><b>State EOC-</b> Staff who normally work in the Department of Public Safety will report to work at the normal time. EOC staff who normally work at other locations will report to a designated waiting area(s) unless they are paged or called to report to the EOC at an earlier time. Personnel at the designated waiting area(s) will be directed to the EOC at the appropriate time. State pager carriers will be notified according to the Notification Manual. Key staff will show call lists and rosters to the FEMA evaluator to demonstrate ability to notify personnel in addition to state pager carriers.</p> <p><b>State Warning Points-</b> Staff will work at their duty positions as normal and will respond as needed. Real world emergencies will take precedence over simulated events.</p> <p><b>EOF-</b> Vermont staff will be instructed during the early morning before the exercise to report to the IFO at a designated time. They will wait in a designated waiting area in or near the IFO until an "Alert" or higher ECL is received. They will be issued dosimetry by the IFO Radiological Officer. They will then proceed to the EOF and assume their duties.</p> <p><b>Media Center-</b> Vermont staff will be instructed during the early morning before the exercise to report to the IFO at a designated time. They will wait in a designated waiting area in or near the IFO until an "Alert" or higher ECL is received. They will then be issued dosimetry by the IFO Radiological Officer. They will then proceed to the Media Center and assume their duties.</p> <p><b>VDH Plume Teams-</b> Team members will be in the IFO area awaiting notification.</p> <p><b>Incident Field Office(IFO)-</b> Staff who normally work at the District 2 office will report as normal. Personnel who only staff the IFO will be in a designated waiting area until notified to report to the IFO.</p> <p><b>EPZ Towns-</b> EOC staffs will wait in designated waiting areas until their town pager carriers have been notified and direct them to report to the EOC.</p> <p><b>Transportation Providers-</b> They will be notified according to procedures but will not deploy drivers or vehicles during the exercise.</p>	X	X

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<b>1 -b -Facilities</b>		
<b>Intent:</b> This sub-element is derived from NUREG-0654, which provides that OROs have facilities to support the emergency response.		
<b>1 -b -1:</b> <b>Criterion:</b> Facilities are sufficient to support the emergency Response. (NUREG-0654, H.3.)	X	X
<b>Extent of Play:</b> 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 to adequately support emergency operations. Some of the areas to be considered are 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 as they would be in an actual emergency, unless otherwise indicated in the extent-of-play agreement.		
<b>State &amp; Local Extent of Play:</b> Each facility listed in the Participant List on the front cover of this document will be evaluated to establish a baseline of its availability to support emergency operations. VEM requests the implementation of "on the spot corrections" as outlined in "Recommendation Initiative 1.5- Correct Issues Immediately." <b>NOTE:</b> If during the exercise, a participant demonstrates this sub-element unsatisfactorily, the FEMA Evaluator will inform the participant. After an "on the spot" re-training, the FEMA Evaluator will provide the participant another opportunity to re-demonstrate the activity that same day.	X	X
<b>1 -c - Direction and Control</b>		
<b>Intent:</b> This sub-element is derived from NUREG-0654, which provides that OROs have the capability to control their overall response to an emergency.		
<b>1 -c -1:</b> <b>Criterion:</b> Key personnel with leader ship 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., and A.2.b.)	X	X

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<b>Extent of Play:</b> All activities associated with direction and control must be based on the ORO's plans and procedures and must be completed as they would be in an actual emergency, unless otherwise indicated in the extent-of-play agreement.		
<b>State &amp; Local Extent of Play:</b> <b>SEOC-</b> Communications with the Governor and his staff will be simulated where necessary. <b>EPZ Town EOCs-</b> If any towns are directed to evacuate, EOC personnel will simulate closing and transfer of their operation to the Incident Field Office and demonstrate continuity of government through a discussion. All appropriate communications with the State EOC and the IFO will continue to be demonstrated at the town EOC.		
<b>1 -d - Communications Equipment</b>		
<b>Intent:</b> 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.		
<b>1 -d -1: Criterion:</b> At least two communications systems are available and operate properly, and communications links are established with appropriate locations. Communications capabilities are managed in support of emergency operations. (NUREG-0654, F.1. and F.2)	<b>X</b>	<b>X</b>

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<b>Extent of Play:</b> 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 and field teams should be able to access at least one communication system that is independent of the commercial telephone system and uses a separate power source. Responsible OROs should demonstrate the capability to manage the communication systems and ensure that all message traffic is handled without delays that might disrupt emergency operations. Offsite response organizations 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.		
All activities associated with the management of communications capabilities must be based on the ORO's plans and procedures and must be completed as they would be in an actual emergency, unless otherwise indicated in the extent-of-play agreement.		
<b>State &amp; Local Extent of Play:</b> All facilities (SEOC, SWPs, IFO, Town EOCs, EOF) will demonstrate that a primary and at least one backup system are fully functional at the beginning of the exercise. For all above facilities, contact with locations or organizations that are not participating in the 2003 exercise or are demonstrating out of sequence will be simulated by placing an entry in the log at the appropriate time(s) in the exercise unless otherwise noted.	X	X
<b>1 -e - Equipment and Supplies to Support Operations</b>		
<b>Intent:</b> This sub-element is derived from NUREG-0654, which provides that OROs have emergency equipment and supplies adequate to support the emergency response.		
<b>1 -e -1:</b> <b>Criterion:</b> Equipment, maps, displays dosimetry, potassium iodide (KI), and other supplies are sufficient to support emergency operations. (NUREG-0654, H.7, H.10, J.10.a, J.10.b., J.10.e, J.11., and K.3.a.)	X	X

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - <u>Version: 3.0</u></b>		
<b>Extent of Play:</b> 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 to support 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.		
Dosimeters should be inspected for electrical leakage at least annually and replaced if necessary. Because of their documented history of electrical leakage problems, the CD V-138s 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 or through staff assistance visits.		
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 or provided in the Annual Letter of Certification). 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 indicating that the KI supply remains potent, in accordance with Food and Drug Administration (FDA) guidance.		



	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
At locations where traffic and access control personnel are deployed, appropriate equipment (e.g., vehicles, barriers, traffic cones, and signs) should be available or their availability should be described.		
All activities must be based on the ORO's plans and procedures and must be completed as they would be in an actual emergency, unless otherwise indicated in the extent-of-play agreement.		
<b>State &amp; Local Extent of Play:</b> Documentation of instrument and dosimetry inspection, dosimetry and instrument inspection, and KI inventory , will be provided through the annual letter of Certification and through site visits. Documentation of traffic and access control equipment will be provided by town EOC staff and may be confirmed by site visits. VEM requests the implementation of on the spot corrections as outlined in <u>Recommendation Initiative 1.5- Correct Issues Immediately</u> . <b>NOTE:</b> If during the exercise, a participant demonstrates this sub-element unsatisfactorily, the FEMA Evaluator will inform the participant. After an "on the spot" re-training, the FEMA Evaluator will provide the participant another opportunity to re-demonstrate the activity that same day.	X	X
<b>2 - PROTECTIVE ACTION DECISION MAKING</b>		
<b>2 -a - Emergency Worker Exposure Control</b>		
<b>Intent:</b> This sub-element is derived from NUREG-0654, which provides that 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 those 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 [TEDE] or organ-specific limits) identified in the ORO's plans and procedures.		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<b>2 -a -1:</b> <b>Criterion:</b> Offsite response organizations use an effective 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 guidelines (PAGs). (NUREG-0654, K.4., J.10.e, J.10.f)	X	X
<b>Extent of Play:</b> 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 must be completed as they would be in an actual emergency, unless otherwise indicated in the extent-of-play agreement.		
<b>State &amp; Local Extent of Play:</b> There will be no exceptions to this sub-element in the Vermont extent of play.	X	X

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<b>ARCA:</b> <b>Issue No.: 67-01-03-A-01</b>  <b>Description:</b> There was a problem with the implementation of the decision made by the Health Services Coordinator for the ingestion of KI for the emergency workers in Vernon. The decision was transmitted to the other response locations (towns and IFO) by the low band radio system. The documentation of the decision clearly shows that only the Vernon workers were authorized to ingest KI. The IFO got the impression that their workers were to ingest KI and this was communicated to the workers at that facility. An additional message was transmitted (although there is no documentation to support this second message) that indicated only Vernon was to ingest KI; however, if it was received, it was after the workers had been told to ingest their KI. <u>Additionally, in the shift change briefing between the Radiological Health Advisors, the statement was made that KI had been authorized for all EPZ workers.</u> Situation Report # 2 for the time period 1001 to 1100 states (on page 2, 5th item) that the Commissioner of Health had authorized the use of KI by emergency workers in the EPZ. Some of the towns (other than Vernon) instructed their workers to ingest KI in the period after the distribution of the Situation Report #2.		
<b>Recommendation:</b>  The Vermont EOC has the capability to send messages by FAX and all of the facilities that are to receive this information have FAX capabilities. There would be no confusion if the order signed by the Health Services Coordinator transmitted by hard copy rather than radio. Situation Reports must be carefully reviewed for accuracy before being released from the State EOC.		
<b>Schedule Corrective Action:</b>  This (according to current procedures) will be demonstrated on April 8th in the 2003 graded exercise.		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<p>Issue No.: 67-01-09-A-02</p> <p><b>Description:</b> The initial KI decision was <u>clearly excessively</u> conservative. Current federal guidance specifies that KI ingestion should be based on the presence of radioiodine in the release or a projected thyroid dose of 25 rem. Neither condition existed when the initial decision was made. The decision not to authorize KI for Guilford was made based on the lack of reaching the 25 rem thyroid projection trigger. The plan, Health Department Emergency Procedures, pg C-4, #5 does not indicate the basis for a KI decision. It states "Continuously assess the need to authorize the use of KI for emergency workers and institutionalized individuals." <u>Using two different bases when decisions are made by different shifts can and did lead to confusion and lack of confidence by the emergency workers.</u> (NUREG-0654 J.9)</p>		
<p><b>Recommendation:</b></p> <p>Revise plan and specify the basis that will be used by all Vermont decision makers.</p>		
<p><b>Schedule Corrective Action:</b></p> <p>This (according to current procedures) will be demonstrated on April 8<sup>th</sup> in the 2003 graded exercise.</p>		
<b>2 -b - Radiological Assessment and Protective Action Recommendation and Decisions for the Plume Phase of the Emergency</b>		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<p><b>Intent:</b></p> <p>This sub-element is derived from NUREG-0654, which provides that OROs have the capability to independently project integrated doses on the basis of exposure rates or other information and compare the estimated dose savings with the PAGs. Offsite response organizations should have the capability to choose, among a range of protective actions, those most appropriate in a given emergency situation. They may base these choices on PAGs from their own plans and procedures; Federal Regional Center (FRC) Report Numbers 5 and 7; or United States Environmental Protection Agency (EPA) 400-R-92-001 and other criteria, such as plant conditions, licensee protective action recommendations (PARs), coordination of protective action decisions (PADs) with other 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.</p>		
<p><b>2-b-1: Criterion:</b> 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, I.10, and NUREG-0654, Supplement 3)</p>	X	
<p><b>Extent of Play:</b></p> <p>During the initial stage of the emergency response, following notification regarding 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.</p>		
<p>When release and meteorological data are provided by the licensee, the ORO also considers these data. The ORO should demonstrate a reliable capability to validate dose projections. The types of calculations to be demonstrated depend on the data available and the need for assessments to support the PARs appropriate to the scenario. In all cases, calculation of the projected dose(s) should be demonstrated. Projected doses should be related to quantities and units of the PAGs to which they will be compared. Protective action recommendations should be promptly transmitted to decision makers in a prearranged format.</p>		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
Differences greater than a factor of 10 between projected doses by the licensee and those projected by 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 must be completed as they would be in an actual emergency, unless otherwise indicated in the extent-of-play agreement.		
<b>State &amp; Local Extent of Play:</b> There will be no exceptions to this sub-element in the Vermont extent of play.	X	
<b>Intent:</b>  This sub-element is derived from NUREG-0654, which provides that OROs have the capability to independently project integrated doses on the basis of exposure rates or other information and compare the estimated dose savings with the PAGs. Offsite response organizations should have the capability to choose, among a range of protective actions, those most appropriate in a given emergency situation. They may base these choices on PAGs from their own plans and procedures; Federal Regional Center (FRC) Report Numbers 5 and 7; or United States Environmental Protection Agency (EPA) 400-R-92-001 and other criteria, such as plant conditions, licensee protective action recommendations (PARs), coordination of protective action decisions (PADs) with other 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.		
<b>2 -b -2: Criterion:</b> 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., J.10f, and.10.m.)	X	

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<b>Extent of Play:</b>  Offsite response organizations should have the capability to make both initial and subsequent PADs in a timely manner. The initial PADs should be made in a timely manner, appropriate to the situation, based on notification from the licensee's assessment of plant status and releases, and PARs from the utility and ORO staff.		
The dose assessment personnel may provide additional PARs based on the subsequent dose projections, field data, or information on plant conditions. The decision makers should demonstrate the capability to change protective actions, as appropriate bases 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 regarding 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 the decision-making process, OROs should communicate and coordinate PADs with the affected OROs. Offsite response organizations should demonstrate the capability to communicate all aspects of PADs (including the bases for the decisions) to the affected jurisdictions.		
All decision making activities by ORO personnel must be based on the ORO's plans and procedures and must be completed as they would be in an actual emergency, unless otherwise indicated in the extent-of-play agreement.		
<b>State &amp; Local Extent of Play:</b> The State of Vermont will not demonstrate decision making about the distribution of KI to the general public in 2003.	X	
<b>2 -c - Protective Action Decisions for the Protection of Special Populations</b>		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<b>Intent:</b>  This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to develop PARs and PADs, including evacuation, sheltering, and use of 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.		
<b>2 -c -1: Criterion:</b> Protective action decisions are made, as appropriate, for special population groups. (NUREG-0645, J.9., J.10.d., J.10.e.)		
<b>Extent of Play:</b>  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 otherwise indicated in the extent of play agreement.		
<b>State &amp; Local Extent of Play:</b>  There will be no exceptions to this sub-element in the Vermont extent of play.		
<b>2 -d - Radiological Assessment and Decision-Making for the Ingestion Exposure Pathway</b>		



	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<b>Intent:</b>  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 PAGs; and make timely, appropriate PADs to mitigate exposure from the ingestion pathway.		
<b>2 -d -1: Criterion:</b> Radiological consequences for the ingestion pathway are assessed and appropriate protective action decision are made based on the ORO planning criteria. (NUREG-0654, J.11.)	X	
<b>Extent of Play:</b>  It is expected that the ORO(s) 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 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 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.		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
The ORO should demonstrate timely decisions to minimize radiological impacts from the ingestion pathway, based on the given assessments and other information available. Any such decisions should be communicated and to the extent practical, coordinated with neighboring and local OROs.		
OROs should use Federal resources as identified in the Federal Radiological Emergency Response Plan (FRERP), and other resources (e.g., compacts, nuclear insurers, etc), if available. Evaluation of this criterion will take into consideration the level of Federal and other resources participating.		
All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless otherwise indicated in the extent of play agreement.		
<b>State &amp; Local Extent of Play:</b>  Precautionary actions during the plume phase of the emergency (i.e., sheltering milk producing animals) will be recommended as appropriate. Post -plume sampling will not occur because this is not an ingestion pathway exercise.	X	
<b>2 -e - Radiological Assessment and Decision-making Concerning Relocation, Re-entry, and Return</b>		
<b>Intent:</b>  This 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 to protect the public from direct, long-term exposure to deposited radioactive materials resulting from a severe accident at a commercial nuclear power plant.		
<b>2 -e -1: Criterion:</b> Timely relocation re-entry, and return decisions are made and coordinated as appropriate, based on assessments of radiological conditions and criteria in the ORO's plan and/or procedures. (NUREG-0654, I.10., and M.)	X	X

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<p><b>Extent of Play:</b></p> <p><b>Relocation:</b> 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.</p> <p>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.</p>		
<p><b>Re-entry:</b> 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.</p>		
<p>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.</p>		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
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.		
<b>State &amp; Local Extent of Play:</b> This sub element will not be demonstrated or evaluated until 2005.	X	X
<b>3 - PROTECTIVE ACTION IMPLEMENTATION</b>		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<b>3 -a - Implementation of Emergency Worker Exposure Control</b>		
<b>Intent:</b>  This sub-element is derived from NUREG-0654, which provides that offsite emergency response organizations (ORO) 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.		
<b>3 -a -1: Criterion:</b> 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)	X	X
<b>Extent of Play:</b>  ORO's should demonstrate the capability to provide appropriate direct and permanent record dosimetry, dosimetry chargers, and instructions on the use of dosimetry to emergency workers. For evaluation purposes, appropriate direct-reading dosimetry is defined as dosimetry that allows individual(s) to read the administrative reporting limits (that are pre-established at a level low enough to consider subsequent calculation of Total Effective Dose Equivalent) and maximum exposure limits (for those emergency workers involved in life saving activities) contained in the ORO's plans and procedures.		
Each emergency worker should have the basic knowledge of radiation exposure limits as specified in the ORO's plan and/or procedures. Procedures to monitor and record dosimeter readings and to manage radiological exposure control should be demonstrated.		

NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - <u>Version: 3.0</u>	STATE OF VERMONT	LOCAL JURISDICTIONS
<p>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.</p>		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
Although it is desirable for all emergency workers to each have a direct-reading dosimeter, there may be situations where team members will be in close proximity to each other during the entire mission and adequate control of exposure can be affected for all members of the team by one dosimeter worn by the team leader. Emergency workers who are assigned to low exposures 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 mission.		
All activities must be based on the ORO's plans and procedures and be completed as they would be in an actual emergency, unless otherwise indicated in the extent-of-play agreement.		
<b>State &amp; Local Extent of Play:</b>  Each of the following facilities will provide one emergency worker to discuss with the FEMA evaluator the turn back values according to their procedures.  Brattleboro EOC Dummerston EOC Guilford EOC Halifax EOC Vernon EOC EOF Liaison Joint News Media Center IFO	X	X

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
Staff at the above facilities will demonstrate actions described in their plans to determine whether to replace an exposed worker or get authorization for the worker to incur additional exposure.		
VEM requests the implementation of "on the spot corrections" as outlined in "Recommendation Initiative 1.5- Correct Issues Immediately."		
<b>NOTE:</b> If during the exercise, a participant demonstrates this sub-element unsatisfactorily, the FEMA Evaluator will inform the participant. After an "on the spot" re-training, the FEMA Evaluator will provide the participant another opportunity to re-demonstrate the activity that same day.		
<b>3 -b - Implementation of KI Decision</b>		
<b>Intent:</b>  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		
<b>3 -b -1: Criterion:</b> KI and appropriate instructions are available should a decision to recommend use of KI be made. Appropriate record keeping of the administration of KI for emergency workers and institutionalized individuals is maintained. (NUREG-0654, J. 10. e.)	X	X
Emergency workers should demonstrate the basic knowledge of procedures for the ingestion of KI whether or not the scenario drives the use of KI. This can be accomplished by an interview with the evaluator.		



	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<b>Extent of Play:</b>  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.		
All activities must be based on the ORO's plans and procedures and be completed as they would be in an actual emergency, unless otherwise indicated in the extent-of-play agreement.		
<b>State &amp; Local Extent of Play:</b>  Actual distribution and ingestion of KI will not occur. Radiological Officers and Dosimeter Coordinators will simulate the placement of one foil wrapped pill in each Emergency Worker packet by showing the FEMA evaluator the supply of pills and explaining that they would place one in each packet. KI is pre-distributed to the members of the general public residing or working in the EPZ communities. The Vermont State KI plan will be submitted by March 26, 2003. Emergency distribution to the members of the public will be demonstrated in 2005. Vermont will not demonstrate any aspect of distribution of KI to the general public in this exercise. This will be demonstrated in 2005.	X	X

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<p><b>ARCA:</b></p> <p>Issue No.: 67-01-03-A-07</p> <p><b>Description:</b> A State VEM 3 Form message directing immediate taking (simulated) of KI was received at the VT IFO via State low-band radio at 1032. Approximately five minutes later, a correction was made over the radio rescinding the 1032 message. The IFO Director was not informed of the subsequent message and, therefore, did not issue an order to cease the distribution and taking of KI at the IFO. (NUREG-0654, A.1.d, 2.a.,b.)</p>		
<p><b>Recommendation:</b> The IFO Director should implement provisions to ensure that all communications equipment is continuously monitored, and that record copies of all State directives and guidance communicated to the IFO regarding emergency worker safety are brought to his or her attention without delay.</p>		
<p><b>Schedule of Corrective Action:</b> This will be demonstrated during April 8th , 2003 exercise.</p>		
<b>3 -c - Implementation of Protective Actions for Special Populations</b>		
<p><b>Intent:</b></p> <p>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 population groups (hospitals, nursing homes, correctional facilities, schools, licensed day care centers, mobility impaired individuals, transportation dependent, etc). Focus is on those special population groups that are (or potentially will be) affected by a radiological release from a nuclear power plant.</p>		
<p><b>3 -c -1: Criterion:</b> Protective action decisions are implemented for special population groups within areas subject to protective actions. (NUREG-0654,J. 10.c.d.g.)</p>	X	X

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<b>Extent of Play:</b>  Applicable OROs should demonstrate the capability to alert and notify (e.g., provide protective action decisions 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.		
<b>State &amp; Local Extent of Play:</b>  EPZ EOCs will discuss their special needs list with the FEMA evaluators. Contact with special needs individuals will be simulated by making an entry in the appropriate log. No vehicles will be dispatched as that has already been demonstrated. State parks and summer camps will be demonstrated in the Summer of 2003 (to be scheduled) in a site visit when they are open. The contact with the camps and parks will be simulated by making an entry in the appropriate log.	X	X
VEM requests the implementation of on the spot corrections as outlined in Recommendation Initiative 1.5- Correct Issues Immediately.  NOTE: If during the exercise, a participant demonstrates this sub-element unsatisfactorily, the FEMA Evaluator will inform the participant. After an "on the spot" re-training, the FEMA Evaluator will provide the participant another opportunity to re-demonstrate the activity that same day.		
3 -c -2: <b>Criterion:</b> ORO/School officials decide upon and implement protective actions for schools. (NUREG-0654, j.10.c., J.10.d., and J.10.g.)	X	X

NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - <u>Version: 3.0</u>	STATE OF VERMONT	LOCAL JURISDICTIONS
<p><b>Extent of Play:</b></p> <p>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.</p> <p>In accordance with plans and/or procedures, OROs and/or officials of participating public and private schools should demonstrate the capability to make prompt decisions on protective actions for students. School 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).</p>		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
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 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 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 by 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 indicated in the extent-of-play agreement.		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<b>State &amp; Local Extent of Play:</b>  State and EPZ EOCs will contact schools, licensed childcare centers, nursing homes and hospitals according to their procedures. Students and patients/residents will not be involved. No vehicles will be dispatched for precautionary transfer or evacuation. A list of the special facilities to be interviewed by FEMA out of sequence is attached.		
<b>3 -d - Implementation of Traffic and Access Control</b>		
<b>Intent:</b>  This sub-element is derived from NUREG-0654, which provides that OROs have the capability to implement protective action plans, including relocation and restriction of access to evacuated areas. This sub-element focuses on selecting, establishing, and staffing traffic and access control points and removal of impediments to the flow of evacuation traffic.		
<b>3 -d -1: Criterion:</b> Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel. (NUREG-0654, J.10.g. and J.10.)	X	X

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<b>Extent of Play:</b> <p>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.</p>		
<p>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.</p>		
<p>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.</p>		
<p>All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless indicated in the extent-of-play agreement.</p>		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<b>State &amp; Local Extent of Play:</b> EPZ EOCs and the IFO will discuss their traffic and access control procedures with their respective FEMA Evaluators. Coordination will be demonstrated through discussion and phone calls which will be logged but no personnel or equipment will be dispatched. Interstate coordination of traffic at the State EOC will be demonstrated by phone calls and logging if appropriate.		
<b>3 -d -2: Criterion: Impediments to evacuation are identified and resolved.</b> (NUREG-0654, J.10.j. and J.10.k.)	X	X
<b>Extent of Play:</b> OROs should demonstrate the capability, as required by the scenario, to identify and take appropriate actions concerning impediments to evacuation. Actual dispatch of resources to deal with impediments, such as wreckers, need not be demonstrated; however, simulated contacts should be logged.		
All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless indicated in the extent-of-play agreement.		
<b>State &amp; Local Extent of Play:</b> Each affected EOC staff (the five towns, the IFO, and the state 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 deployed to the simulated scene but the EOC staff will demonstrate decision making and coordination with appropriate agencies and other EOCs as needed.		
<b>3 -e - Implementation of Ingestion Pathway Decisions</b>		



	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<b>Intent:</b>  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 (FDA) 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.		
<b>3 -e -1: Criterion:</b> 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. and J.11)	X	X
<b>Extent of Play:</b>  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'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 otherwise indicated in the extent-of-play agreement.		
<b>State &amp; Local Extent of Play:</b>  This sub element will be demonstrated in 2005.	X	X
<b>3 -e -2: Criterion:</b> 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., and J.11)	X	

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<b>Extent of Play:</b>  Development of measures and strategies for implementation of ingestion pathway zone (IPZ) protective actions should be demonstrated during exercise play 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 otherwise indicated in the extent-of-play agreement.		
<b>State &amp; Local Extent of Play:</b>  This sub element will be demonstrated in 2005.	X	
<b>3 -f - Implementation of Relocation, Re-entry, and Return Decisions</b>		
<b>Intent:</b>  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 protecting the public from direct long-term exposure to deposited radioactive materials remaining after a severe accident at a commercial nuclear power plant.		
<b>3 -f -1: Criterion:</b> Decisions regarding controlled re-entry or emergency workers and relocation and return of the public are coordinated with appropriate organizations and implemented. (NUREG-0654, M.1., and M.3)	X	X

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<p><b>Extent of Play:</b></p> <p><b>Relocation:</b> 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.</p> <p>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.</p>		
<p><b>Re-entry:</b> OROs should demonstrate the capability to control re-entry and exit of individuals who need to temporarily reenter the evacuated 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.</p> <p>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 time frames; (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.</p>		
<p><b>Return:</b> 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 and schools, and intermediate term housing for relocated persons.</p>		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
Communications among OROs 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 otherwise indicated in the extent-of-play agreement.		
<b>State &amp; Local Extent of Play:</b> This sub element will be demonstrated in 2005.	X	X
<b>4 - FIELD MEASUREMENT AND ANALYSIS</b>		
<b>4 -a - Plume Phase Field Measurement and Analyses</b>		
<b>Intent:</b> 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 detect 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.		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<b>4 -a -1:</b> <b>Criterion:</b> The field teams are equipped to perform field measurements of direct radiation exposure (cloud and ground shine) and to sample airborne radioiodine and particulates.  (NUGREG-0654, H.10., I.7., I.8., and I.9.)	X	
<b>Extent of Play:</b>  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.		
<b>State &amp; Local Extent of Play:</b>  Two field teams will each pick up a minimum of two complete samples.	X	
VEM requests the implementation of "on the spot corrections" as outlined in "Recommendation Initiative 1.5- Correct Issues Immediately."  <b>NOTE:</b> If during the exercise, a participant demonstrates this sub-element unsatisfactorily, the FEMA Evaluator will inform the participant. After an "on the spot" re-training, the FEMA Evaluator will provide the participant another opportunity to re-demonstrate the activity that same day.		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<b>4 -a -2: Criterion:</b> Field teams are managed to obtain sufficient information to help characterize the release and to control radiation exposure. (NUREG-0654, H.12, I.8., I.11., and J.10.a.)	X	
<b>Extent of Play:</b>  Responsible Offsite Response Organizations (ORO) should demonstrate the capability to brief teams on predicted plume location and direction, travel speed, and exposure control procedures before deployment.		
Field measurements are needed to help characterize the release and to support the adequacy of implemented protective actions or to be a factor in modifying protective actions. Teams should be directed to take measurements in such locations, at such times to provide information sufficient to characterize the plume and impacts.		
If the responsibility to obtain peak measurements in the plume has been accepted by licensee field monitoring teams, with concurrence from OROs, there is no requirement for these measurements to be repeated by State and local monitoring teams. If the licensee teams do not obtain peak measurements in the plume, it is the ORO's decision as to whether peak measurements are necessary to sufficiently characterize the plume. The sharing and coordination of plume measurement information among all field teams (licensee, Federal, and ORO) is essential. Coordination concerning transfer of samples, including a chain-of-custody form, to a radiological laboratory should be demonstrated.		
ORO's should use Federal resources as identified in the Federal Radiological Emergency Response Plan (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 must be completed as they would be in an actual emergency, unless otherwise indicated in the extent-of-play agreement.		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<b>State &amp; Local Extent of Play:</b> Coordination of the transfer of samples to a lab will be simulated and discussed in an interview with the FEMA Evaluator.	X	
<b>4 -a -3: Criterion:</b> 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.)	X	
<b>Extent of Play:</b> 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, 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 otherwise indicated in the extent-of-play agreement.		
<b>State &amp; Local Extent of Play:</b> There are no exceptions.	X	
<b>4 -b - Post Plume Phase Field Measurements and Sampling</b>		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<b>Intent:</b>  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.		
<b>4-b-1: Criterion:</b> 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. and J.11.)	X	
<b>Extent of Play:</b>  The ORO field teams should demonstrate the capability to take measurements and samples, at such times and locations as directed, to enable an adequate assessment of the ingestion pathway and to support re-entry, relocation, and return decisions. When resources are available, the use of aerial surveys and in-situ gamma measurement is appropriate. All methodology, including contamination control, instrumentation, preparation of samples, and a chain of custody form for transfer to a laboratory, will be in accordance with the ORO's plan and/or procedures.		
Ingestion pathway samples should be secured from agricultural products and water. Samples in support of relocation and return should be secured from soil, vegetation, and other surfaces in areas that received radioactive ground deposition.		
OROs should use Federal resources as identified in the FRERP, and other resources (e.g. compacts, nuclear insurers, etc), if available. Evaluation of this criterion will take into consideration the level of Federal and other resources participating in the exercise.		
All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless otherwise indicated in the extent-of-play agreement.		



	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<b>State &amp; Local Extent of Play:</b> This sub-element will be demonstrated in 2005.	X	
<b>4 -c - Laboratory Operations</b>		
<b>Intent:</b> 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.		
<b>4 -c -1: Criterion:</b> The laboratory is capable of performing required radiological analyses to support protective action decisions. (NUREG-0654, C.3., and J.11.)	X	
<b>Extent of Play:</b> 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.		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
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 otherwise indicated in the extent-of-play agreement.		
<b>State &amp; Local Extent of Play:</b>  The laboratory staff will demonstrate their ability to monitor samples in an area of the lab. No contaminated or "spiked" samples will be allowed in the lab. Staff will demonstrate their procedures in a "walking discussion" through the lab process with the FEMA evaluator. Eight samples will be made available: 2 Water (or melted snow), 2 Vegetation, 2 soil, and 2 milk. <b>This will be done out of sequence on April 9, 2003</b>	X	
<b>5 - EMERGENCY NOTIFICATION AND PUBLIC INFORMATION</b>		
<b>5 -a - Activation of the Prompt Alert and Notification System</b>		
<b>Intent:</b>  This sub-element is derived from NUREG-0654, which provides that offsite response organizations (ORO) 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."		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<b>5 -a -1: Criterion:</b> 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. Effective October 1, 2001: 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 or that the population tune to another station for additional information. (10 CFR Part 50, Appendix E IV.D & NUREG-0654, E. 1., 5., 6., 7.)	X	X
<b>Extent of Play:</b>  Responsible OROs should demonstrate the capability to sequentially provide an alert signal followed by an initial instructional message to populated areas (permanent residents and transients) 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 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.		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
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, unless otherwise indicated in the extent-of-play agreement.		
<b>State &amp; Local Extent of Play:</b>  Actions to demonstrate performance of the notifications of the public will be performed up to the point of actual transmission of the EAS message. In the initial notification the national weather service will be contacted and a "Test" message will actually be transmitted. The IFO and the five town EOCs will report receipt (or non receipt) of the test message. The three states (VT, NH, & MA) will coordinate each public notification. Brattleboro and Vernon will demonstrate all actions necessary to sound the sirens but will not activate the sirens.	X	X
<b>ARCA:</b>  <b>Issue No.: 67-01-11-A-03</b>  <b>Description:</b> The first EAS message included action taken for special populations such as schools, hospitals, nursing homes, and recreation areas in addition to the evacuation of Vernon. None of the following EAS messages contained any information for these special populations. The second and sixth messages did not contain the instruction for the evacuation of Vernon. (NUREG 0654 E.7)		
<b>Schedule of Corrective Action:</b> This will be demonstrated during the graded exercise in 2003.	X	X
<b>5-a -2: Criterion:</b> To be published by FEMA in the future.	X	X

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<b>Extent of Play:</b> To be published by FEMA in the Future.		
<b>State &amp; Local Extent of Play:</b> Not to be demonstrated in 2003.	X	X
<b>5 -a -3: Criterion:</b> 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 a 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., and NUREG-0654, Appendix 3, Section B.2.c.)	X	X
<b>Extent of Play:</b> 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.		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<p>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.</p>		
<p>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 otherwise indicated in the extent-of-play agreement.</p>		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<p><b>State &amp; Local Extent of Play:</b></p> <p>Each EPZ town using the NOAA weather alert radios as a primary means of alerting the public to a public notification sequence will demonstrate one alerting route as a back up means after the exercise has been concluded. The route alerting team will be placed on standby near the end of the exercise. At the conclusion of the exercise critique, the team will receive a briefing and be dispatched. (Normally this would occur during Site Area Emergency but the persons performing the demonstration may not participate in the earlier part of the exercise. If they do, the briefing will already be done. If not they will receive the briefing prior to the timed portion of the demonstration.) The equipment including PA system, maps, a copy of the alerting script, etc. will be reviewed by the FEMA Evaluator. The team with the FEMA evaluator will drive the route in accordance with the procedure. All alerting activities along the route will be simulated. The 45 minute clock will begin with the starting of the vehicle engine (Because all route alerting teams are briefed and made ready early in Site Area Emergency.) and end with the last location to be alerted on the route. Any equipment review or other demonstration (e.g. PA system operability) will occur before or after the timed portion of the demonstration. The Route Alerting Team Communicator will demonstrate satisfactory reading of the message once.</p>	X	X
<p>VEM requests the implementation of on the spot corrections as outlined in Recommendation Initiative 1.5- Correct Issues Immediately.</p> <p><b>NOTE:</b> If during the exercise, a participant demonstrates this sub-element unsatisfactorily, the FEMA Evaluator will inform the participant. After an "on the spot" re-training, the FEMA Evaluator will provide the participant another opportunity to re-demonstrate the activity that same day.</p>		
<b>5 -b - Emergency Information and Instructions for the Public and the Media</b>		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<p><b>Intent:</b></p> <p>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.</p>		
<p><b>5-b-1: Criterion:</b> OROs provide accurate emergency information and instructions to the public and the news media in a timely manner. (NUREG-0654, E.5., E.7., G.3.a., and G.4.c.)</p>	X	X
<p><b>Extent of Play:</b></p> <p>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.</p>		



	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
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 to assist the public in carrying out protective action decisions provided to them (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.		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<p>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 press 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 press 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 press releases) and media information kits should be available for dissemination to the media.</p>		
<p>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 press releases.</p>		
<p>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 otherwise indicated in the extent-of-play agreement.</p>		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<p><b>State &amp; Local Extent of Play:</b></p> <p>State EOC- Control cell personnel will make calls simulating members of the public and media personnel. The public Information staff will demonstrate receiving calls on the public information line. They will demonstrate identifying and properly handling at least one rumor trend (three or more calls of the same nature).</p> <p>Media Center- Controllers will act as media representatives and real media may either also participate or observe but not both. Information generated as a result of incoming calls to the Public Information staff at the state EOC will be included in a news briefing. At least one rumor trend will be included.</p> <p>EPZ EOCs- Controller injects will simulate calls to each town EOC simulating members of the public. Each EOC will demonstrate determining which call(s) may be handled by the town EOC (inquiries about town response actions) and which call(s) must be referred to the Information Officer staff at the State EOC.</p> <p>VEM requests the implementation of "on the spot corrections" as outlined in "Recommendation Initiative 1.5- Correct Issues Immediately."</p> <p><b>NOTE:</b> If during the exercise, a participant demonstrates this sub-element unsatisfactorily, the FEMA Evaluator will inform the participant. After an "on the spot" re-training, the FEMA Evaluator will provide the participant another opportunity to re-demonstrate the activity that same day.</p>	X	X
<p>ARCA:</p> <p>Issue No.: 67-01-02-A-04</p> <p><b>Description:</b> Occasionally the status board in the News Media Center maintained by the utility for media briefings was not updated promptly and all of the events were not shown in chronological order. This could prove confusing to media representatives. Further, there was no prominent display of the current emergency classification level or current meteorological conditions in the EPZ. (NUREG-0654, H.)</p>		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
Schedule of Corrective Action: This will be demonstrated during the graded exercise in 2003.		
<b>Issue No.: 67-99-12-A-01</b>  <b>Description:</b> During media briefing #4 the PIO was unsure on wind direction and the location of reception center for people that could have been contaminated. (Objective 12) (NUREG-0654, G.3.a, G.4.a, G.4.b)		
Schedule of Corrective Action: This will be demonstrated during the graded exercise in 2003.		
<b>6 - SUPPORT OPERATION/FACILITIES</b>		
<b>6 -a - Monitoring and Decontamination of Evacuees and Emergency Workers, and Registration of Evacuees</b>		
<b>Intent:</b>  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.		
<b>6 -a -1: Criterion:</b> 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., and K.5.a.)	X	X

NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0	STATE OF VERMONT	LOCAL JURISDICTIONS
<p><b>Extent of Play:</b></p> <p>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' vehicle. 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.</p>		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
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 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 vehicle contamination 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.		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
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.		
<b>State &amp; Local Extent of Play:</b> The Reception Center at Bellows Falls Union High School was demonstrated in 2002. The Emergency Worker Radiological Monitoring and Decontamination at the IFO was demonstrated in 2001.	X	X
<b>6 -b - Monitoring and Decontamination of Emergency Worker Equipment</b>		
<b>Intent:</b> 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.		
<b>6 -b -1: Criterion:</b> The facility/ORO has adequate procedures and resources for the accomplishment of monitoring and decontamination of emergency worker equipment including vehicles. (NUREG-0654, H.11., K.5.a., and K.5.b.)		
<b>Extent of Play:</b> 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 were 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.		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
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.		
<b>State &amp; Local Extent of Play:</b>  <b>The Emergency Worker Radiological Monitoring and Decontamination at the IFO was demonstrated in 2001.</b>	X	X
<b>6 -c - Temporary Care of Evacuees</b>		
<b>Intent:</b>  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.		



	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<b>6 -c -1: Criterion:</b> 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., and J.12.)		X
<b>Extent of Play:</b>  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(ies). 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 otherwise indicated in the extent-of-play agreement.		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
<b>State &amp; Local Extent of Play:</b>  Congregate care centers will not be activated. Current shelter surveys will be provided to FEMA for review. Based on FEMA's survey review, a tour of selected (some, all, or none) congregate care facilities that support the Bellows Falls reception center, visits will be conducted if needed with a controller and an American Red Cross representative out of sequence (TBD)		X
<b>6 -d - Transportation and Treatment of Contaminated Injured Individuals</b>		
<b>Intent:</b>  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.		
<b>6 -d -1: Criterion:</b> 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., K.5.b., L.1., and L.4.)		X
<b>Extent of Play:</b>  Monitoring, decontamination, and contamination control efforts will not delay urgent medical care for the 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. 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.		

	STATE OF VERMONT	LOCAL JURISDICTIONS
<b>NEW EVALUATION AREAS/SUB ELEMENT/CRITERION - Version: 3.0</b>		
Monitoring of the victim may be performed prior to transport, done en route, 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 otherwise indicated in the extent-of-play agreement.		
<b>State &amp; Local Extent of Play:</b>  The MS-1 Hospital in Brattleboro (Brattleboro Memorial Hospital) was demonstrated on November 14, 2002.		X

### SPECIAL FACILITY DEMONSTRATION LIST

The following locations will be interviewed by FEMA evaluators out of sequence in the year indicated. Past exercises have been shown to demonstrate the quantity of interviews conducted each exercise versus the totality of those required.

<b>ORGANIZATIONS/FACILITIES</b>					
<b>Brattleboro Campgrounds &amp; Summer Camps</b>					
Fort Dummer (August)					
Camp Waubanoag (August)					
<b>Dummerston Campgrounds &amp; Summer Camps</b>					
Hidden Acres (August)					
KOA (August)					
Green Mountain Camp for Girls (August)					
<b>Public Schools:</b>					
Superintendent of WWSU					
Superintendent of WSESU					
Brattleboro Middle School					
Brattleboro Union H.S.					
Academy School (Brattleboro)					
Canal Street School (Brattleboro)					
Green Street School (Brattleboro)					
Dummerston Elementary School					

<b>ORGANIZATIONS/FACILITIES</b>					
Guilford Central School					
Halifax West School					
Vernon Elementary					
<b>CHILD CARE FACILITIES:</b>					
Licensed Child Care Facilities (20)					
Registered Child Care Facilities (31)					
Private Schools : (8)					
The Austine School					
The Neighborhood School					
Christian Heritage School Inc					
Hilltop Montessori School (K-8) (At Austine)					
St Michael's Elementary School					
Meadows School (at The Brattleboro Retreat)					
Community House					
<b>COLLEGES AND POST SECONDARY EDUCATION:</b>					
World Learning and School for International					
<b>HEALTH CARE FACILITIES</b>					
Nursing Homes:					
Eden Park					

<b>ORGANIZATIONS/FACILITIES</b>					
<b>Thompson House</b>					
<b>Vernon Green</b>					
<b>Assisted Living Facilities:</b>					
<b>Hill Top House</b>					
<b>Holton Memorial Home</b>					
<b>Thompson House Residential Care</b>					
<b>Vernon Hall Retirement Residence</b>					
<b>The Birches (Independent Living)</b>					
<b>Housing For the Elderly:</b>					
<b>Samuel Elliot Apts.</b>					
<b>Melrose Terrace</b> Out of Sequence in September of 2003.					
<b>Garfield</b> Out of Sequence in September of 2003.					
<b>The Gathering Place</b> Out of Sequence in September of 2003.					
<b>Hospitals:</b>					
<b>Brattleboro Retreat</b>					
<b>Brattleboro Memorial Hospital (Excluding the MS-1 plan already demonstrated.)</b>					
<b>Congregate Care Facilities (ARC) Survey</b>					
<b>Local Alternate Warning Point (Rockingham VSP)</b>					

<b>ORGANIZATIONS/FACILITIES</b>					
<b>Special Facilities:</b>					
<b>Laidlaw Transportation (Brattleboro Terminal)</b>					
<b>Rescue INC</b>					
<b>Large Employers:</b>					
<b>Large Firms</b> Out of Sequence in September 2003.					
<b>Medium sized Firms</b> Out of Sequence in September 2003.					
<b>BFUHS Reception Center</b>					

# VERMONT YANKEE NUCLEAR POWER STATION

## CRITERION BY ORGANIZATION/LOCATION SUMMARY.

<u>ORGANIZATION/LOCATION</u>	<u>CRITERION</u>
Vermont State EOC	1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.1, 2.b.2, 2.c.1, 3.a.1, 3.b.1, 3.d.1, 5.a.1, 5.b.1
State Warning Point (Waterbury)	1.b., 1.c.1, 1.d.1, 1.e.1
Alternate State Warning Point (Rockingham)	
Department of Health Laboratory	1.b.1, 1.c., 1.d.1, 1.e.1, 4.c.1, (4.a.2 State Police delivery of samples)
Emergency Operations Facility (EOF)	1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 2.b.1, 3.a.1
News Media Center (JIC)-VT Staff	1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 5.b.1,
Field Monitoring Teams (2) (State)	1.a.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 4.a.1, 4.a.2, 4.a.3
Emergency Alert system Station (WTSA)	
Incident Field Office	1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 3.a.1, 3.b.1, 3.d.1, 3.d.2
State Transportation Staging Area (STSA)	
Emergency Worker Radiological Monitoring and Decontamination Unit	
Reception Center (Scheduled Tentatively for March of 2002.)(Limited involvement in 2001.)	



<b><u>ORGANIZATION/LOCATION</u></b>	<b>CRITERION</b>
Vermont State EOC	1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.1 2.b.2, 2.c.1, 3.a.1, 3.b.1, 3.d.1, 5.a.1, 5.b.
State Warning Point (Waterbury)	1.b., 1.c.1, 1.d.1, 1.e.1
Alternate State Warning Point (Rockingham)	
Brattleboro EOC	1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 3.a.1 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.1, 5.a.2 5.b.1
Dummerston EOC	1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.1, 5.a.3, 5.b.1
Guilford EOC	1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.1, 5.a.3, 5.b.1
Halifax EOC	1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.1, 5.a.3, 5.b.1
Vernon EOC	1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.1, 5.a.3, 5.b.1
EAS Radio Stations (WTSA & WKVT)	

<b><u>ORGANIZATION/LOCATION</u></b>	<b><u>CRITERION</u></b>
Vermont State EOC	1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.1 2.b.2, 2.c.1, 3.a.1, 3.b.1, 3.d.1, 5.a.1, 5.b.1
State Warning Point (Waterbury)	1.b., 1.c.1, 1.d.1, 1.e.1
Alternate State Warning Point (Rockingham)	
<b><u>Special Population Centers</u></b>	
The Gathering Place	
<b><u>Nursing Homes &amp; Hospitals</u></b>	
Eden Park Nursing Homes	
Vernon Green Nursing Home & Vernon Hall Retirement Residence	
Host Health Care Facilities	
<b><u>Schools &amp; Child Care Centers</u></b>	
Private Schools without child care	3.b.1, 3.c.1, questionnaire
Private Schools with child care	3.b.1, 3.c.1, questionnaire
Licensed Child Care Centers	3.b.1, 3.c.1, questionnaire
Registered Child Care Centers	3.b.1, 3.c.1, questionnaire

## SPECIAL POPULATIONS FACILITIES SCHEDULE

ORGANIZATIONS/FACILITIES	2001	2003	2005
Brattleboro Campgrounds & Summer Camps			
Fort Dummer (August)		X	
Camp Waubanoag (August)		X	
Dummerston Campgrounds & Summer Camps		X	
Hidden Acres (August)			
KOA (August)		X	
Green Mountain Camp for Girls (August)		X	
Public Schools:			
Superintendent of WSWSU		X	
Superintendent of WSESU	X		
Brattleboro Middle School	X		
Brattleboro Union H.S.	X		
Academy School (Brattleboro)	X		
Canal Street School (Brattleboro)	X		
Green Street School (Brattleboro)	X		
Dummerston Elementary School		X	
Guilford Central School		X	
Halifax West School		X	

<b>ORGANIZATIONS/FACILITIES</b>	<b>2001</b>	<b>2003</b>	<b>2005</b>
Vernon Elementary	X		
<b>CHILD CARE FACILITIES:</b>			
Licensed Child Care Facilities (20)	8	8	4
Registered Child Care Facilities (31)	11	10	10
<b>Private Schools : (8)</b>			
The Austine School		X	
The Neighborhood School			X
Christian Heritage School Inc		X	
Hilltop Montessori School (K-8) (At Austine)	X		
St Michael's Elementary School	X		
Meadows School (at The Brattleboro Retreat)		X	
Community House			X
<b>COLLEGES AND POST SECONDARY EDUCATION:</b>			
World Learning and School for International Training (College)		X	
<b>HEALTH CARE FACILITIES</b>			
<b>Nursing Homes:</b>			
Eden Park			X
Linden Lodge { closed }	0	0	0
Thompson House		X	

<b>ORGANIZATIONS/FACILITIES</b>	<b>2001</b>	<b>2003</b>	<b>2005</b>
Vernon Green	X		
Assisted Living Facilities:			
Hill Top House	X		
Holton Memorial Home			X
Thompson House Residential Care		X	
Vernon Hall Retirement Residence	X		
The Birches (Independent Living)	X		
Housing For the Elderly:			
Samuel Elliot Apts.			X
Melrose Terrace		X	
Garfield		X	
The Gathering Place		X	
Hospitals:			
Brattleboro Retreat		X	
Brattleboro Memorial Hospital (Excluding the MS-1 plan already demonstrated.)		X	
Congregate Care Facilities (ARC) Survey	X		
Local Alternate Warning Point (Rockingham VSP)	X		
Special Facilities:			
Laidlaw Transportation (Brattleboro Terminal)	X		

<b>ORGANIZATIONS/FACILITIES</b>	<b>2001</b>	<b>2003</b>	<b>2005</b>
Rescue INC		X	
Large Employers:			
Large Firms	0	3	3
Medium sized Firms	0	5	5
BFUHS Reception Center (March 19, 2002)	(2002)		

**STATE OF NEW HAMPSHIRE**  
**2003 PLUME EXPOSURE PATHWAY EXERCISE**  
**VERMONT YANKEE**

**EXTENT OF PLAY**

**EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT**

**Sub-element 1.a – Mobilization**

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

**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):**

.....  
**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, MUNICIPAL EOCs: HINSDALE, WINCHESTER, CHESTERFIELD RICHMOND, SWANZEY, and KEENE (host).

**AREAS REQUIRING CORRECTIVE ACTION (ARCA):**

.....



### **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):**

.....

## **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):**

.....

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

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

### **INTENT**

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

### **EXTENT OF PLAY**

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

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

Dosimeters should be inspected for electrical leakage at least annually and replaced, if necessary. CDV-138s, due to their documented history of electrical leakage problems, should be inspected for electrical leakage at least quarterly and replaced 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 the equipment, maps, displays, dosimetry, potassium iodide (KI) and other supplies available to them.

### **AREAS REQUIRING CORRECTIVE ACTION (ARCA):**

Issue No.: 67-99-05-A-07: State EOC (Municipal EOCs) Dosimetry electrical leakage paper work not current (pg.41.)

.....

## **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**

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

### **AREAS REQUIRING CORRECTIVE ACTION (ARCA):**

.....

## **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.

Monitoring teams and accident assessors will be provided field radiological data by controllers in an appropriate sequence according to the scenario time line and the limitations of exercise play. 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.

### **AREAS REQUIRING PROTECTIVE ACTIONS: (ARCA<sub>s</sub>)**

**Issue No.: 67-01-07-A-07: EOC Accident Assessment Team did not incorporate field team data into PAR (pg.40.)**

.....

**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 Vermont and 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 persons and the general public will be demonstrated at the State EOC.

**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**

.....

## **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.

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

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

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

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

If scenario events do not require emergency workers to seek authorizations for additional exposure, evaluators should interview at least two emergency workers, to determine their knowledge of whom to contact in the event authorization is needed and at what exposure levels. Emergency workers may use any available resources (e.g. written procedures and/or co-workers) in providing responses.

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

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

#### **NEW HAMPSHIRE EXTENT OF PLAY**

The RADEF Officer in each facility will issue appropriate dosimetry in accordance with the NHRERP. The following facilities will demonstrate their ability to meet this criteria: MUNICIPAL EOCs: HINSDALE, WINCHESTER, CHESTERFIELD RICHMOND, SWANZEY , Field Teams and NHSP Troop C.

.....

#### **AREAS REQUIRING CORRECTIVE ACTION (ARCA):**

.....



### **Sub-element 3.b – Implementation of KI Decision**

Criterion 3.b.1: KI and appropriate instructions are available should a decision to recommend use of KI be made. Appropriate record keeping of the administration of KI for emergency workers and institutionalized individuals (not the general public) is maintained. (NUREG-0654, E. 7., J. 10. e., f.)

#### **INTENT**

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

#### **EXTENT OF PLAY**

ORO's 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, Troop C 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):**

.....

### **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 EOC in Concord.

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 the new Hampshire State Transportation Staging Area will take place to demonstrate the ability to distribute transportation resources to support the risk municipalities in New Hampshire and the Vermont State Transportation Staging area

with appropriate transportation resources .One simulated bus will be dispatched to Hinsdale, Winchester, Chesterfield and the Vermont STSA.

.....

**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. Schools and special facilities in Hinsdale, Winchester and Chesterfield will be interviewed out of sequence.

#### **AREA REQUIRING CORRECTIVE ACTION (ARCA)**

Issue No.: 67-99-16-A-09: Winchester: School Official did not demonstrate a familiarity with protective action implementation. (Pg.47)

Issue No.: 67-99-16-A-12: Schools Day Care and Transportation: Bus Driver did not have a map with directions from Hinsdale High School To Keene State College Reception Center.

.....

### **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 C New Hampshire State Police will describe the state access control plan at troop Headquarters in Keene.

These demonstrations will occur during plume exposure pathway phase of the exercise at times to be coordinated between the Keene EOC 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**

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

**NEW HAMPSHIRE EXTENT OF PLAY**

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

.....



### **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'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.

#### **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

Monitoring teams and accident assessors will be provided field radiological data by controllers in an appropriate sequence according to the scenario time line and the limitations of exercise play.

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.

### **AREAS REQUIRING CORRECTIVE ACTION (ARCA):**

**Issue No.:67-01-05-A-06:**

**State EOC(Municipal EOCs) CDV 700,CDV 715 instruments not calibrated (annually) contested.**

.....

**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.

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.

## **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.

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.

#### 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 activation of NOAA tone alert radios, 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 Vermont and Massachusetts officials. WKNE 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**

ORO's 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**

Each risk municipality will demonstrate one route-alerting route in their jurisdiction at the end of the plume phase demonstration.

.....

## **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, ORO's 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 ORO's should demonstrate the capability to respond appropriately to inquiries from the news media. All information presented in media briefings and media releases should be consistent with protective action decisions and other emergency information provided to the public.

Copies of pertinent emergency information (e.g., EAS messages and media releases) and media information kits should be available for dissemination to the media.

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

### **NEW HAMPSHIRE EXTENT OF PLAY**

The primary responsibility for briefing the media with respect to off site activities in New Hampshire lies with the state. The State EOC, 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 Vermont, Massachusetts and Vermont Yankee 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.

**NEW HAMPSHIRE EXTENT OF PLAY (cont.)**

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. WKNE 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):**

**Issue No.: 67-01-11-A-08: State EOC: EPI did not contain information on what to take or leave behind in an evacuation. (pg.40.)**

**Issue No.: 67-01-12-A-09: Joint Information Center: Media briefing did not provide information on evacuation routes or location of reception centers (pg. 42.)**

.....

## **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**

Reception Center Activity will be simulated during this exercise..

### **AREAS REQUIRING CORRECTIVE ACTION (ARCA):**

Issue No.: 67-01-05-A-10: Keene Reception Center: Operational checks were not preformed on CDV 700s (pg. 49-50.)

Issue No.: 67-010-18-A-11: Keene Reception Center Vehicle Monitoring: Radiation Background reading was not established. (pg. 50.)

**AREAS REQUIRING CORRECTIVE ACTION (ARCA): (cont.)**

**AREAS REQUIRING CORRECTIVE ACTION (ARCA): (continued)**

## **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**

#### **AREAS REQUIRING CORRECTIVE ACTION (ARCA):**

## **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. Based on FEMA's survey review, a tour of selected (some, all, or none) congregate care facilities that support the Keener reception center will be conducted with a controller and an American Red Cross representative 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.**

ORO's 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 2004 MS-1 Drill

**MASSACHUSETTS  
EVALUATION AREAS AND EXTENT OF PLAY  
VERMONT YANKEE POWER STATION EXERCISE  
APRIL 8, 2003**

**Overview**

The following organizations/locations will demonstrate in 2003:

**State Emergency Operations Center**

Massachusetts Emergency Management Agency  
Massachusetts Department of Public Health  
Massachusetts State Police  
Massachusetts Highway Department  
American Red Cross  
Massachusetts National Guard  
Federal Emergency Management Agency (Region I)  
Massachusetts Department of Mental Health  
Massachusetts Emergency Animal Response Team

**Region III Emergency Operations Center**

Massachusetts Emergency Management Agency Region III  
Massachusetts State Police  
Massachusetts Highway Department  
Department of Environmental Management, District 9 Fire Warden  
Department of Fish, Wildlife and Environmental Law Enforcement  
Massachusetts Department of Public Health  
RACES

**Emergency Operations Facility**

Vermont Yankee Nuclear Power Station  
Massachusetts Emergency Management Agency  
Massachusetts Department of Public Health

**Radiological Field Monitoring and Sampling Teams**

Massachusetts Department of Public Health  
Vermont Yankee Nuclear Power Station

**Media Center**

Massachusetts Emergency Management Agency  
Vermont Yankee Nuclear Power Station

**Massachusetts State Police, Troop B, Headquarters in Northampton**

**Massachusetts State Police Shelburne Barracks Dispatch Center**

**Massachusetts Highway Department District 2**

**Department of Fish, Wildlife and Environmental Law Enforcement (out of sequence)**

**Department of Environmental Management, District 9 Fire Warden (out of sequence)**

### **Risk Jurisdictions**

**Bernardston EOC**

**Colrain EOC**

**Gill EOC**

**Greenfield EOC**

**Leyden EOC**

**Northfield EOC**

**Warwick EOC**

### **Radiological Monitoring and Decontamination Station (out of sequence)**

**Warwick**

**Colrain**

### **Transportation Providers**

**Greenfield Montague Transit Authority (GMTA)**

### **Schools**

**Bernardston - Bernardston Elementary School  
Full Circle School**

**Northfield - Linden Hill School**

### **Day Care Centers**

**N/A**

### **Special Facilities/Nursing Homes**

**N/A**

**Host Facilities for School & Day Care (out of sequence)**

**University of Massachusetts - Amherst**

**Turner Falls High School**

**Girl's Club of Greenfield**

**Mass Care Shelters (out of sequence)**

**Greenfield Middle School**

The following organizations/locations will not demonstrate in 2003:

**Schools**

Northfield – Mt. Hermon School (Northfield Campus)  
Mt. Hermon School (Gill Campus)

**Greenfield Community College Reception Center**

Radiological Monitoring and Decontamination Station

Greenfield Community College

## **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 (OROs) 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**—State EOC emergency staff who normally work at other locations will arrive at the EOC at the times they normally report for work, unless they are paged/called and directed to report for duty at an earlier time.

Operations/communications staff will show call down and computerized lists to the FEMA evaluator.

**EOF**—MEMA and MDPH personnel will be in the area awaiting notification.

**Media Center**—MEMA personnel will be in the area awaiting notification.

**Region III - Emergency staff** who normally work at other locations will arrive at the EOC at the times they normally report for work, unless they are paged/called and directed to report for duty at an earlier time.

Operations/communications staff will show call down and computerized lists to the FEMA evaluator.

**NIAT Field Monitoring Team Personnel**—Will be in the area awaiting notification.

**State Police Troop B** – Will assign personnel for one state traffic and access control point, however no mobilization will occur.

**School Superintendents' Office – Will make the initial and subsequent calls to participating EPZ schools and only initial call to non-participating schools in their jurisdictions. Will contact transportation providers according to implementation procedures to request availability and ETAs. No deployment of vehicles and drivers will occur during the exercise.**

#### **Sub-element 1.b—Facilities**

##### **Intent**

This sub-element is derived from NUREG-0654, which provides that OROs 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 as they would be in an actual emergency, unless 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.

MEMA requests the implementation of on the spot corrections as outlined in Recommendation Initiative 1.5- Correct Issues Immediately.

**NOTE:** If during the exercise, a participant demonstrates this sub-element unsatisfactorily, the FEMA Evaluator will inform the participant. After an "on the spot" re-training, the FEMA Evaluator will provide the participant another opportunity to re-demonstrate the activity that same day.

#### **Sub-element 1.c—Direction and Control**

##### **Intent**

This sub-element is derived from NUREG-0654, which provides that OROs 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., 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 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**

**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 III will be fully demonstrated.

#### **Sub-element 1.d—Communications Equipment**

##### **Intent**

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

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

##### **Extent of Play**

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

Responsible OROs should demonstrate the capability to manage the communication systems and ensure that all message traffic is handled without delays that might disrupt the conduct of emergency operations. OROs should ensure that a coordinated communication link for fixed and mobile medical support facilities exists. The specific communications capabilities of OROs should be commensurate with that specified in the response plan and/or procedures. Exercise scenarios could require the failure of a communications system and the use of an alternate system, as negotiated in the extent of play agreement.

All activities associated with the management of communications capabilities must be 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**

The State EOC and EPZ communities have been supplied with new communication equipment, which will be demonstrated during the exercise. All EOCs will demonstrate that a primary and at least one backup system are fully functional at the beginning of the exercise.

For all locations, contact with locations/organizations that are not demonstrating in 2003 or

demonstration out of sequence will be simulated by logging a contact at the appropriate time(s) in the exercise unless otherwise noted.

### **Sub-element 1.e—Equipment and Supplies to Support Operations**

#### **Intent**

This sub-element is derived from NUREG-0654, which provides that OROs 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., 11, K.3.a.)**

#### **Extent of Play**

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

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

Dosimeters should be inspected for electrical leakage at least annually and replaced, if necessary. CDV-138s, due to their documented history of electrical leakage problems, should be inspected for electrical leakage at least quarterly and replaced if necessary. This leakage testing will be verified during the exercise, through documentation submitted in the Annual Letter of Certification, 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, the ORO may produce a letter 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 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 through site visits. FEMA will have available for the evaluators a copy of the letter.

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.

MEMA requests the implementation of on the spot corrections as outlined in Recommendation Initiative 1.5- Correct Issues Immediately.

**NOTE:** If during the exercise, a participant demonstrates this sub-element unsatisfactorily, the FEMA Evaluator will inform the participant. After an "on the spot" re-training, the FEMA Evaluator will provide the participant another opportunity to re-demonstrate the activity that same day.

### **ARCA**

#### **Bernardston**

**Issue No: 67-01-02-A-13**

**Description:** Bernardston EOC does not have an AM/FM radio in their equipment suite; consequently, they are unable to monitor the transmissions of EAS information to the public. (NUREG-0654 H)

**Recommendation:** Provide EOC with an AM/FM radio.

**Schedule Corrective Action:** The EOC does have an AM/FM radio for monitoring the transmissions of EAS information, but the radio was not used during the exercise. The Bernardston Emergency management Director's implementing procedure does state that he should monitor "the EAS radio to ensure instructions for the public are broadcast." The State will address this issue through training.

**This will be demonstrated on April 8<sup>th</sup> in the 2003 graded 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 an offsite response organization (ORO) have the capability to assess and control the radiation exposure received by emergency workers and have a decision chain in place as specified in the ORO's plans and procedures to authorize emergency worker exposure limits to be exceeded for specific missions. Radiation exposure limits for emergency workers are the recommended accumulated dose limits or exposure rates that emergency workers may be permitted to incur during an emergency. These limits include any pre-established administrative reporting limits (that take into consideration Total Effective Dose Equivalent or organ-specific limits) identified in the ORO's plans and procedures.

---

Criterion 2.a.1: OROs use a decision-making process, considering relevant factors and appropriate coordination, to 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, J.10. e, f)

#### **Extent of Play**

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

Responsible ORO's 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, ORO's 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 otherwise indicated in the extent of play agreement.

#### **Massachusetts Extent of Play**

Massachusetts, through the Massachusetts Department of Public Health, will provide to FEMA documentation on follow up to persons exposed to radiation. This will be provided at the evaluator briefing.

### **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 indicates that ORO's 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. ORO's 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 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 on-site and off-site environmental conditions. (NUREG-0654, I.8., 10., & 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 (PARs) for decision-makers based on available information and recommendations from the licensee and field monitoring data, if available.

When release and meteorological data are provided by the licensee, the ORO also considers these data. The ORO should demonstrate a reliable capability to 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.

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**

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 (PADs) for the general public (including the recommendation for the use of KI, if ORO policy). (NUREG-0654, J.9., 10.f.m.)**

#### **Extent of Play**

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

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

There will be no exceptions to this sub-element in the Massachusetts extent of play.

#### **Sub-element 2.c—Protective Action Decisions Considerations or Protection of Special Populations**

##### **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.

---

**Criterion 2.c.1: Protective action decisions are made, as appropriate, for special population groups. (NUREG-0654, J.9., 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, 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 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 OROs have the means to assess the radiological consequences for the ingestion exposure pathway, relate them to the appropriate protective action guides (PAG), 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 planning criteria. (NUREG-0654, J.11)**

#### **Extent of Play**

It is expected that the ORO(s) 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 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 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 otherwise indicated in the extent of play agreement.

#### **Massachusetts Extent of Play**

Precautionary action recommendations made during the plume phase of the emergency (i.e., shelter milk-producing animals) will be recommended, as appropriate. Post-plume sampling will not occur, as this is not an ingestion exercise.

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

##### **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.

**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)**

##### **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 2003.

### **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 offsite emergency response organizations (ORO) 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.

---

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

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

During a plume phase exercise, emergency workers should demonstrate the procedures to be followed when administrative exposure limits and turn-back values are reached. The emergency worker should report accumulated exposures during the exercise as indicated in the plans and procedures. ORO's should demonstrate the actions described in the plan and/or procedures by determining whether to replace the worker, to authorize the worker to incur additional exposures or to take other actions. If scenario events do not require emergency workers to seek authorizations for additional exposure, evaluators should interview at least two emergency workers, to determine their knowledge of whom to contact in the event authorization is needed and at what exposure levels. Emergency workers may use any available resources (e.g. written procedures and/or co-workers) in providing responses.

Although it is desirable for all emergency workers to each have a direct-reading dosimeter, there may be situations where team members will be in close proximity to each other during the entire mission and adequate control of exposure can be affected for all members of the team by one dosimeter worn by the team leader. Emergency workers who are assigned to low exposures 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 mission.

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**

In an interview with the FEMA evaluator, an emergency worker from each facility will discuss per procedure reporting levels. EOCs will demonstrate the actions described in the plan to determine whether to replace the worker or to get authorization for the worker to incur additional exposures.

MEMA requests the implementation of on the spot corrections as outlined in Recommendation Initiative 1.5- Correct Issues Immediately.

**NOTE:** If during the exercise, a participant demonstrates this sub-element unsatisfactorily, the FEMA Evaluator will inform the participant. After an "on the spot" re-training, the FEMA Evaluator will provide the participant another opportunity to re-demonstrate the activity that same day.

## **ARCA**

### **Media Center**

**Issue No.:** 67-01-05-A-12

**Description:** 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)

**Recommendation:** Public information staff should take their dosimeters into the MA JIC to ensure that exposure records are accurate.

**Schedule of Corrective Action:** The State concurs. This will be addressed through clarification of the implementing procedure and training.

This was demonstrated and resolved in the 2002 Seabrook Station graded exercise.

### **Sub-element 3.b—Implementation of KI Decision**

#### **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.

**Criterion 3.b.1: KI and appropriate instructions are available should a decision to recommend use of KI be made. Appropriate record keeping of the administration of KI for emergency workers and institutionalized individuals is maintained.**  
(NUREG-0654, J. 10. e.)

#### **Extent of Play**

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 ingestion 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 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.

KI is pre-distributed to members of the general public who wish to have it residing in the EPZ communities.

The Massachusetts state plan will be submitted in February 2003.

### **Sub-element 3.c—Implementation of Protective Actions for Special Populations**

#### **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 population groups (hospitals, nursing homes, correctional facilities, schools, licensed day care centers, mobility impaired individuals, transportation dependent, etc). Focus is on those special population groups 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 population groups 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 decisions 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.

**Massachusetts Extent of Play**

Massachusetts Department of Environmental Management (DEM)—The District 9 Fire Warden will dispatch one alerting person/team to each of the following areas:

- Northfield State Forest
- Warwick State Forest in Northfield
- Mount Grace State Forest in Warwick
- Leyden State Forest

The actual alert and notification will be simulated by displaying appropriate equipment and pre-scripted messages to the evaluator. Members of the public in the vicinity will not be affected. A FEMA evaluator will be present at District 9 Fire Warden's Office to observe communications, dosimetry distribution, equipment, maps, and pre-scripted messages and to interview the DEM field personnel. The FEMA evaluator will accompany one of field personnel/teams dispatched. This will be demonstrated out of sequence on March 25, 2003. As per procedures, the team alerting Erving State Forest are not required to wear dosimetry, as the forest is outside of the EPZ.

Massachusetts Department of Fisheries, Wildlife, and Environmental Law Enforcement, Division of Law Enforcement—Will dispatch two teams to alert, notify, and clear persons from the Connecticut River, including the areas listed below. One team will consist of one person in a vehicle (to handle land operations) and the other team will consist of two persons with a boat (to handle river operations).

- Bennett Meadow on Rte. 10 at the Connecticut River Bridge in Northfield
- Captain Kids Island Camping and Picnic Area in Northfield
- Connecticut River Boat Ramp in Northfield
- Munn's Ferry Camping and Picnic Area in Northfield
- Pauchaug Meadow Wildlife Area in Northfield
- Barton Cove Boat Ramp by Rte. 2 in Gill
- Riverview Picnic Area in Northfield and Erving

The actual alert and notification will be simulated by displaying appropriate equipment to the evaluator. Members of the public in the vicinity will not be affected; no boats will be launched. Instead, a FEMA evaluator will observe arrival of the personnel at the location, check equipment, maps, pre-scripted messages, and dosimetry, and will interview the personnel on their procedures. This will be demonstrated out of sequence on March 25, 2003.

**Bernardston EOC**—EOC staff will simulate contacting persons on their special needs lists by logging the calls at the appropriate time. The list of special needs individuals will be shown to the FEMA evaluator; however the information is confidential so copies of the list will not be provided to the evaluator.

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

The Fire Liaison will dispatch personnel to alert, notify, and clear persons from the Travelers Woods (KOA) Campground and the Purple Meadow Campground. Actual notification will be simulated; campers will not be affected

**Colrain EOC**—EOC staff will simulate contacting persons on their special needs lists by logging the calls at the appropriate time. The list of special needs individuals will be shown to the FEMA evaluator; however the information is confidential so copies of the list will not be provided to the evaluator.

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

The Fire Liaison will dispatch personnel to alert, notify, and clear persons from the vicinity of the Green River. Actual notification will be simulated; members of the public will not be affected.

**Gill EOC**—EOC staff will simulate contacting persons on their special needs lists by logging the calls at the appropriate time. The list of special needs individuals will be shown to the FEMA evaluator; however the information is confidential so copies of the list will not be provided to the evaluator.

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

The Fire Liaison will notify the Franklin County Boat Club and the Oak Ridge Golf Club. No personnel will be dispatched to clear the Oak Ridge Golf Club. The Barton Cove Camp Ground will not be notified because it opens for the season in May.

**Greenfield EOC**—EOC staff will simulate contacting persons on their special needs lists by logging the calls at the appropriate time. The list of special needs individuals will be shown to the FEMA evaluator; however the information is confidential so copies of the list will not be provided to the evaluator.

The Police Liaison will not make notification to the Boy Scout Camp, Camp Keewanee, and Camp Lion Knoll, as all three are closed for the season during the exercise.

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

The capability to correctly operate a TTY will be demonstrated in Greenfield by sending and

receiving a test message to/from a TTY at the Massachusetts Commission for the Deaf and Hard of Hearing.

**Leyden EOC**—EOC staff will simulate contacting persons on their special needs lists by logging the calls at the appropriate times. The list of special needs individuals will be shown to the FEMA evaluator; however the information is confidential so copies of the list will not be provided to the evaluator.

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

**Northfield EOC**—EOC staff will simulate contacting persons on their special needs lists by logging the calls at the appropriate time. The list of special needs individuals will be shown to the FEMA evaluator; however the information is confidential so copies of the list will not be provided to the evaluator.

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

The EOC will demonstrate contacting Northfield Mountain Recreational Area, according to procedure. Members of the public will not be affected.

The EOC will not contact Camp Northfield, as Camp Northfield is closed during the exercise.

**Warwick EOC**—EOC staff will simulate contacting persons on their special needs lists by logging the calls at the appropriate time. The list of special needs individuals will be shown to the FEMA evaluator; however the information is confidential so copies of the list will not be provided to the evaluator.

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

MEMA requests the implementation of on the spot corrections as outlined in Recommendation Initiative 1.5- Correct Issues Immediately.

**NOTE:** If during the exercise, a participant demonstrates this sub-element unsatisfactorily, the FEMA Evaluator will inform the participant. After an "on the spot" re-training, the FEMA Evaluator will provide the participant another opportunity to re-demonstrate the activity that same day.

---

**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 participating public and private schools should demonstrate the capability to make prompt decisions on protective actions for students. School 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). 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 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 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 by 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 specified above or indicated in the extent of play agreement.

### **Massachusetts Extent of Play**

**Area III EOC**—Contact with the University of Massachusetts campus police will be demonstrated once, at the time of initial notification, but all other calls to the University of Massachusetts will be simulated by logging the call(s) at the appropriate time(s). The UMass host facility will not be activated.

The University of Massachusetts will be visited at a time to be determined out of sequence.

**EPZ EOCs**—Initial notification will be made to all public school superintendents' offices, private schools, and day care centers. Subsequent calls will be made to the

- Pioneer Valley Regional School District Superintendent's Office to notify Bernardston Elementary School
- Full Circle School in Bernardston
- Linden Hill School in Northfield

No further calls will be made to other schools; instead, calls will be simulated and logged at the appropriate times during the exercise.

Those schools participating will be interviewed by phone with a FEMA evaluator the day after the exercise on April 9, 2003.

Assignments and dispatching of school bus escorts will not be demonstrated this exercise. They demonstrated in 2001.

Participating schools will be interviewed regarding knowledge of their plan by a FEMA evaluator



prior to the exercise on March 25, 2003.

### **Northfield**

During the exercise, a Controller message will direct the Northfield EOC to dispatch an escort vehicle with dosimetry to the Linden Hill School.

The escort vehicle driver will discuss the route with a FEMA Evaluator. The escort vehicle will not travel to the school nor to the host facility.

Students will not be involved. No vehicles will be dispatched for precautionary transfer or evacuation.

### **ARCA**

#### **Schools**

##### **Issue No.: 67-01-16-A-15**

**Description:** The Pioneer Valley Regional School District, Pearl Rhodes Elementary School, Mohawk Regional School District, and both preschools (Giving Tree and Otter Pond) said that they had tone alert radios and that they tested them regularly. Gill-Montague Regional School District Superintendent is presently looking into buying radios or cell phones for back-up. All other schools, including the superintendent, did not know where the tone alert radios were and what they were used for. (NUREG-0654, J.9, 10.c.,d,g) (Colrain Central School, Gill Elementary, Northfield Elementary, Pioneer Valley Regional School, Warwick Community School)

**Recommendation:** The utility and MEMA should install tone alert radios in all schools and brief school officials on the purpose of the radios.

**Schedule of Corrective Action:** State concurs with the recommendation. Once the tone alert radios are in place, site visit by FEMA would resolve the issue.

This will be demonstrated on the day of the exercise. A FEMA evaluator will make a follow up call on April 9, 2003 to discuss the test results.

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

#### **Intent**

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

**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**

ORO should demonstrate the capability to select, establish, and staff appropriate traffic and access control points consistent with protective action decisions (for example, evacuating, sheltering, and relocation), in a timely manner. OROs should demonstrate the capability to

provide instructions to traffic and access control staff on actions to take when modifications in protective action strategies necessitate changes in evacuation patterns or in the area(s) where access is controlled.

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

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

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

### **Massachusetts Extent of Play**

**State EOC**—State Police and Highway Department liaisons will demonstrate coordination of traffic and access control, but no personnel or equipment will actually be deployed in sequence. The demonstration will include interstate coordination of traffic and access control, if appropriate.

**Area III EOC**—The Massachusetts State Police liaison will demonstrate coordination of traffic and access control through discussion and communication, but no personnel or equipment will be deployed to field locations.

**Massachusetts State Police, Troop B, Northampton**—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, procedures for operating an access control point.

**All Local EPZ EOCs** will demonstrate through discussions and communications the ability to direct and monitor traffic and access control operations with the town. No personnel or equipment will be deployed. Instead, Police and Highway representatives in the EOC will be interviewed by the evaluator regarding procedures; placement of cones and barricades and use of dosimetry, KI, etc., and basic information on the Reception Center in the event of an evacuation. At a time to be determined, the FEMA evaluator will visit the local highway garage to inspect equipment that would be used for traffic control.

---

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

### **Extent of Play**

ORO's should demonstrate the capability, as required by the scenario, to identify and take

appropriate actions concerning impediments to evacuation. Actual dispatch of resources to deal with impediments, such as wreckers, need not be demonstrated; however, simulated contacts should be logged.

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

### **Massachusetts Extent of Play**

Each EOC staff 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 resources lists, contact numbers and communication with 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 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.

**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'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 otherwise indicated in the extent of play agreement.

### **Massachusetts Extent of Play**

This sub-element will not be evaluated in 2003.

**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 ingestion pathway zone (IPZ) protective actions should be demonstrated during exercise play 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 otherwise indicated in the extent of play agreement.

#### **Massachusetts Extent of Play**

This sub-element will not be evaluated in 2003.

#### **Sub-element 3.f.—Implementation of Relocation, Re-entry, and Return Decisions**

##### **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.

---

**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 reenter the evacuated 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 and schools, and intermediate term housing for relocated persons.

Communications among OROs 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 otherwise indicated in the extent of play agreement.

### **Massachusetts Extent of Play**

This sub-element will not be evaluated in 2003.

## **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 detect 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.

MEMA requests the implementation of on the spot corrections as outlined in Recommendation Initiative 1.5- Correct Issues Immediately.

**NOTE:** If during the exercise, a participant demonstrates this sub-element unsatisfactorily, the FEMA Evaluator will inform the participant. After an "on the spot" re-training, the FEMA Evaluator will provide the participant another opportunity to re-demonstrate the activity that same day.

---

**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 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, 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 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

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.

---

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

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

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

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

**Massachusetts Extent of Play**

This sub-element will not be evaluated in 2003.

**Sub-element 4.c—Laboratory Operations**

**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.

---

**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 otherwise indicated in the extent of play agreement.

#### **Massachusetts Extent of Play**

This sub-element will not be exercised in 2003.

## **EVALUATION AREA 5: Emergency Notification & 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 offsite response organizations (ORO) 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. Effective October 1, 2001: 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 or that the population tune to another station for additional information. (10 CFR Part 50, Appendix E IV.D & NUREG-0654, E. 1., 5., 6., 7.)**

#### **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.

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 will be contacted. A standard test message will be faxed to WHYN and WHAI and broadcast once at approximately the time of initial notification to the public. WRSI will pick up the message from WHYN over the EAS. Following the initial alert and notification, subsequent contacts to the EAS stations will be simulated.

The Massachusetts State EOC will coordinate with the Vermont and New Hampshire State EOCs on activation the NOAA tone-alert radios throughout the EPZ. Activation of the NOAA tone-alert radios will be demonstrated using a test message.

**Bernardston, Colrain and Northfield EOCs**— EOCs will demonstrate all actions necessary up to the point of actual sounding of the sirens. Actual sounding of the sirens will not be performed. Other towns do not have sirens, but rely on NOAA weather-alert radios.

### **ARCA**

#### **Colrain**

**Issue No.:** 67-01-10-A-14

**Description:** Even though it was not in the extent of play, the actual sounding of sirens was attempted. At 1044 and again at 1120, attempts were made and both times the sirens failed.

**Recommendation:** The sirens must be maintained properly in order to notify the public if an incident occurs at the plant.

**Schedule of Corrective Action:** The State concurs with the recommendation. Once the siren is fixed, a site visit by FEMA would resolve the issue.

This will be demonstrated in a visit by FEMA prior to the graded exercise in 2003.

### **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**

ORO's 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. 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.

**ALL EPZ EOCs** – Will demonstrate at least one alerting route at the conclusion of the exercise. The alert routing team will be put on standby during the exercise. At the conclusion of the exercise the team will receive a briefing and be dispatched. The equipment (i.e. public address system, maps and a copy of the script) will be reviewed by the FEMA evaluator. All activities along the route will be simulated. The 45 minute clock will begin with the briefing. MEMA requests the implementation of on the spot corrections as outlined in Recommendation Initiative 1.5- Correct Issues Immediately.

**NOTE:** If during the exercise, a participant demonstrates this sub-element unsatisfactorily, the FEMA Evaluator will inform the participant. After an "on the spot" re-training, the FEMA Evaluator will provide the participant another opportunity to re-demonstrate the activity that same day.

### **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 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.

---

#### **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)**

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

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

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

ORO'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.

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 press 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 press 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 press 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 press 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 otherwise indicated in the extent of play agreement.

Media Center - Controllers will act as media representatives and real media personnel may be present and participate.

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

State EOC - Control cell personnel will make calls simulating members of the public and media personnel. The public information staff will demonstrate the ability to handle calls on the public information line. Handling at least 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 each local EOC simulating members of the public. Each EOC will demonstrate determining which call(s) may be handled by the EOC (queries about town response) and which call(s) must be referred to the State Public Information Line.

MEMA requests the implementation of on the spot corrections as outlined in Recommendation Initiative 1.5- Correct Issues Immediately.

**NOTE:** If during the exercise, a participant demonstrates this sub-element unsatisfactorily, the FEMA Evaluator will inform the participant. After an "on the spot" re-training, the FEMA Evaluator will provide the participant another opportunity to re-demonstrate the activity that same day.

## **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 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.

**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)**

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' vehicle. 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 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 vehicle contamination 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.

The Reception Center at Greenfield Community College will demonstrate in 2005.

#### **Sub-element 6.b—Monitoring and Decontamination of Emergency Worker Equipment 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.

---

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

The 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 were 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.



The Radiological Monitoring and Decontamination Stations located at Warwick and Colrain will demonstrate out of sequence on April 8, 2003 after the graded exercise.

#### **Sub-element 6.c—Temporary Care of Evacuees**

##### **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.

---

**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.)**

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(ies). 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

The mass care shelter located at the Greenfield Middle School will demonstrate out of sequence.

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

##### **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.

---

**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.)**

Monitoring, decontamination, and contamination control efforts will not delay urgent medical care for the 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. 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 en route, 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 otherwise indicated in the extent of play agreement.

The MS-1 hospital in Greenfield, Franklin Medical Center, demonstrated on October 10, 2002. A separate report has been prepared for this exercise.

**APPENDIX 4**  
**EXERCISE SCENARIO**

**VERMONT YANKEE NUCLEAR POWER STATION  
EMERGENCY PREPAREDNESS EXERCISE  
2003**

The event commenced at 08:40 by a phone call into the control room from the Vernon fire department about a train derailment 1.5 to 2 miles north of the power station site, likely cause was an earthquake. Multiple tanks cars were on their sides and a plume of gas was headed down river along the shoreline. The indications were that a tank car containing a toxic and flammable gas was leaking. The fire department was evacuating all areas near the accident site. The recommendation from the fire department and the State was to evacuate all non-essential personnel from the site. Route 142 was closed just north of the intersection of Tyler Road (simulated). Meteorology indications in the control room showed the wind was from 326 degrees and was about two miles per hour.

The Shift Manager discussed the precautionary evacuation with the Operations Manager and decided to declare an ALERT per on-site procedures. The option existed for conducting only a precautionary evacuation of non-essential onsite personnel without declaring an ALERT. This action would not be allowed by the Simulator CR Exercise Controller intervention. The appropriate notifications of the offsite authorities were made. The TSC, OSC and EOF staff would be notified to report and activate the facilities.

The control room used their procedures to prepare for the entry of toxic gas onsite. The Control Room Manager would address securing all ventilation and the storing of breath-able air for the control room.

Discussions with the TSC and control room did occur. Potential for relocation of the TSC was discussed. This was acknowledged and simulated but the TSC Exercise Controller did not allow actual relocation.

The Lead Exercise Controller in the Simulator Control Room ensured that the declaration of ALERT was completed versus conducting only a precautionary site evacuation of nonessential personnel.

The declaration of the ALERT initiated the evacuation onsite and accountability determined by Security.

At approximately 10:15 after the earthquake and ATWAS the operators noticed the flow rate through the SBTG was 1700 cfm (normal was 1500 cfm). The filters were dislodged during the earthquake and flow was bypassing the filters. Site Area Alert was declared at this time. A repair team got to the SBTG filter beds by 11:15 and the dose rates were too high to allow the team to enter. The repair effort was not corrected to reduce the SBTG flow until after 1300 hours. At approximately the same time, operators attempted to control the Torus pressure with the Torus spray system, however, they discover a partial failure of the system. The reduction of

the Torus spray capability was significantly reduced the wash out of iodine in the Torus air space.

A number of fuel rods also failed to insert properly and power was greater than 25 percent.

At approximately 11:15 SRV failed with breaks in the tailpiece causing a release to the air space within the Torus and then out through the Torus vent. The site boundary team provided measurement data that indicated greater than 1 rem TEDE.

By approximately 11:30, a declaration of General Emergency was initiated because of a loss of two fission barriers with the potential loss of the third. An anticipated protective action recommendation was for the evacuation of the towns Vernon, VT, Hinsdale, NH and out five miles for the town of Winchester, NH, Northfield, MA and Bernardston, MA.

At 12:00 an extended protective action recommendation was made for the evacuation out to 10 miles for the towns of Northfield, Bernardston and Gill, MA.

By 12:15 the stack release began to decrease.

The Exercise terminated by 14:30.