U.S. Department of Homeland Security
FEMA Region I
99 High St., 5th Floor
Boston, MA 02110-2320

FEMA

January 25, 2011

NRC Headquarters Document Control Desk
US Nuclear Regulatory Commission
Washington, DC 20555-0001

Dear Sir/Madam:

Enclosed is a copy of the Final Report for the Millstone Plume and Post Plume Biennial Exercise, conducted on October 19-20, 2010.

The State of Connecticut and Local Emergency Response Organizations successfully demonstrated their capabilities to implement their off-site radiological emergency response plans and procedures based on the evaluation of this exercise by a team of Federal evaluators with final determinations made by the Regional Assistance Committee (RAC) Chairperson.

There were three Areas Requiring Corrective Action (ARCA) as a result of this exercise, two of which were successfully re-demonstrated during the exercise and closed. There were no deficiencies. There is one open ARCA as a result of this exercise due to miscommunication from DEMHS Region 4 to several communities of siren activation instructions. There were four open ARCAs from the March 18, 2008, Plume Biennial Exercise that have been cleared through a successful re-demonstration.

State and local preparedness remains adequate to protect the health and safety of the public living in the vicinity of the Millstone Nuclear Power Station and provides reasonable assurance that appropriate measures can be taken off-site in the event of a radiological emergency.

If you have any questions regarding this matter, please contact Steve Colman, RAC Chairperson, of my staff at (617) 832-4731.

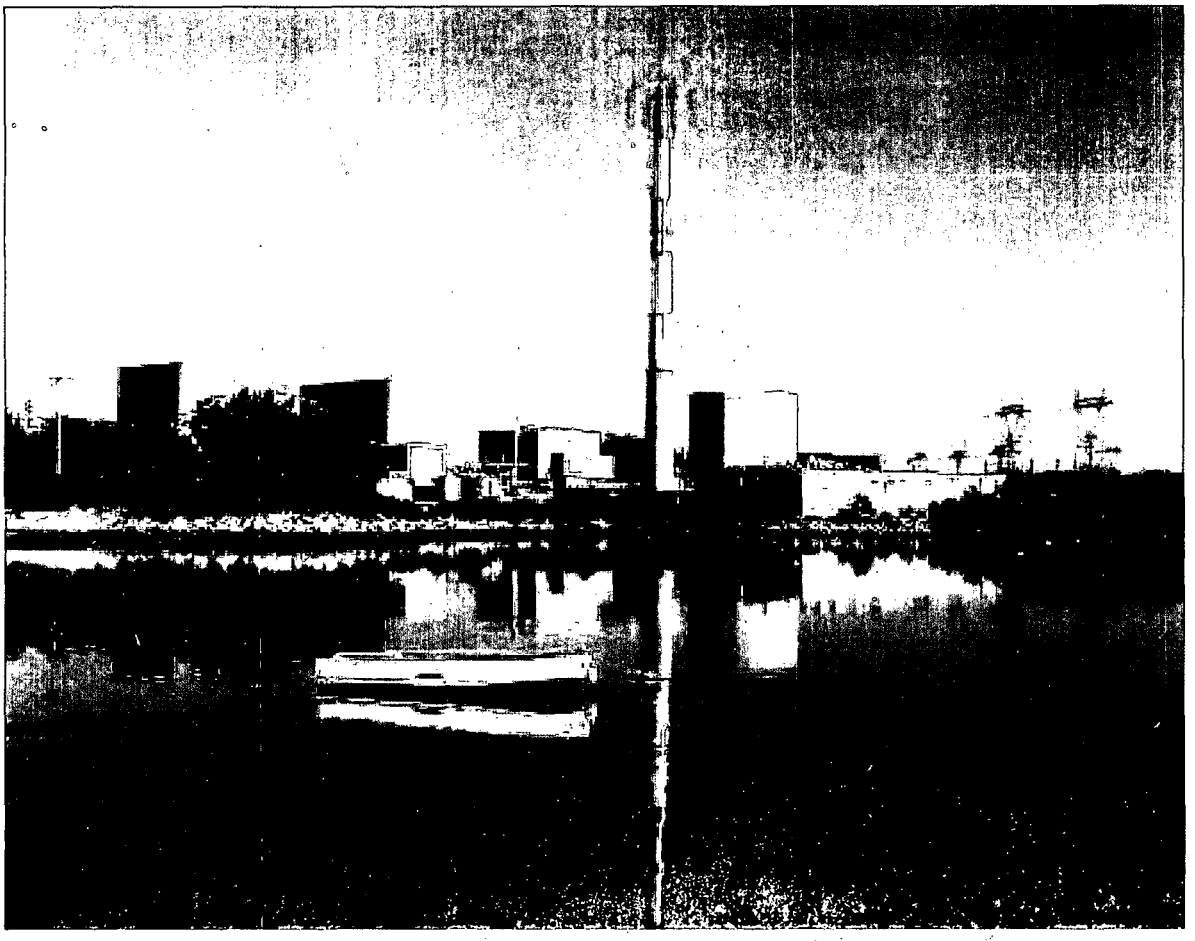
Sincerely,

Don R. Boyce
Regional Administrator

DRB:hcl

Enclosure

AX45
NRR



Millstone Power Station

After Action Report/ Improvement Plan

Exercise Date - October 19, 2010

Radiological Emergency Preparedness (REP) Program

FEMA

Published

This page is intentionally blank.

Millstone Power Station
After Action Report/Improvement Plan

Contents

Executive Summary 4
Section 1: Exercise Overview 5
1.1 Exercise Details 5
1.2 Exercise Planning Team Leadership 5
1.3 Participating Organizations 8
Section 2: Exercise Design Summary 12
2.1 Exercise Purpose and Design 12
2.2 Exercise Objectives, Capabilities and Activities 12
2.3 Scenario Summary 12
Section 3: Analysis of Capabilities 13
3.1 Exercise Evaluation and Results 13
3.2 Summary Results of Exercise Evaluation 13
3.3 Criteria Evaluation Summaries 18
3.3.1 Connecticut Jurisdictions 18
3.3.1.1 CT State Emergency Operations Center 18
3.3.1.2 CT SEOC Rumor Control 20
3.3.1.3 CT Department of Environmental Protection 20
3.3.1.4 CT Emergency Operations Facility 21
3.3.1.5 CT Field Monitoring Team - Alpha 21
3.3.1.6 CT Field Monitoring Team - Bravo 22
3.3.1.7 CT Field Relocation Team 1 23
3.3.1.8 CT Field Relocation Team 2 23
3.3.1.9 CT Field Sampling Team 1 (Agriculture) 23
3.3.1.10 CT Field Sampling Team 2 (Agriculture) 23
3.3.1.11 CT Field Sampling Team 3 (Department of Public Health) 24
3.3.1.12 CT Field Sampling Team 4 (Department of Public Health) 24

3.3.1.13 CT Field Sampling Team 5 (Consumer Protection) 24
3.3.1.14 CT Dept of Public Health 26
3.3.1.15 CT Joint Information Center 26
3.3.1.16 CT DEMHS Region 4 26
3.3.1.17 CT State Police Montville Troop E 28
3.3.1.18 CT Dept of Transportation 28
3.3.1.19 CT State TSA - Rocky Hill Veterans Home 28
3.3.1.20 CT State Laboratory 28
3.3.2 Risk Jurisdictions 30
3.3.2.1 East Lyme Local EOC 30
3.3.2.2 Fishers Island, NY EOC 31
3.3.2.3 City of Groton Local EOC 31
3.3.2.4 Town of Groton Local EOC 31
3.3.2.5 Ledyard Local EOC 31
3.3.2.6 Lyme Local EOC 32
3.3.2.7 Montville Local EOC 32
3.3.2.8 New London Local EOC 33
3.3.2.9 Old Lyme Local EOC 34
3.3.2.10 Waterford Local EOC 34
3.3.2.11 Old Lyme: Central Office Regional School District 18 34
3.3.2.12 East Lyme: Aces High Campground 34
3.3.2.13 East Lyme: Flanders Elementary School 35
3.3.2.14 Waterford: Bay View Nursing Home 35
3.3.2.15 Waterford: Fountain View/New London Rehab 35
3.3.2.16 Waterford: Green Tree Manor 35
3.3.3 Support Jurisdictions 36
3.3.3.1 Stonington EOC 36
Section 4: Conclusion 37
Appendix A: Improvement Plan 38
Appendix B: Exercise Timeline 40
Appendix C: Exercise Evaluators and Team Leaders 43
Appendix D: Exercise Plan 46
Appendix E: Strengths 90

This page is intentionally blank.

EXECUTIVE SUMMARY

On October 19-20, 2010, the Federal Emergency Management Agency (FEMA), Region I, conducted an exercise in the Plume/Ingestion Exposure Pathway emergency planning zone (EPZ) around the Millstone Power Station. The purpose of the exercise was to assess the level of State and local preparedness in responding to a radiological emergency. The exercise was held in accordance with FEMA's policies and guidance concerning the exercise of State and local radiological emergency response plans (RERP) and procedures.

Prior exercises at this site were most recently conducted on March 18, 2008, (plume exposure pathway) and September 14-16, 2004 (ingestion exposure pathway). The qualifying emergency preparedness exercise was conducted in 1982.

FEMA wishes to acknowledge the efforts of the many individuals who participated in this exercise. The various agencies, organizations, and units of government from the State and local jurisdictions within the State of Connecticut who participated in this exercise and are listed elsewhere in 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 truly evident during this exercise.

The State and local organizations, except where noted in this report, demonstrated knowledge of their emergency response plans and procedures and adequately implemented them.

There were no Deficiencies. There were three Areas Requiring Corrective Action (ARCA), two of which were redemonstrated during the exercise and closed. Four prior ARCAs from the 2008 Plume Exercise were resolved during the 2010 Plume and Post Plume Exercise or during the Combined Functional Drill preceding the exercise.

SECTION 1: EXERCISE OVERVIEW

1.1 Exercise Details

Exercise Name
Millstone Power Station

Type of Exercise
Ingestion

Exercise Date
October 19, 2010

Program
Department of Homeland Security/FEMA Radiological Emergency Preparedness Program

Scenario Type
Radiological Emergency

1.2 Exercise Planning Team Leadership

Steven L. Colman
RAC Chair
FEMA Region One
Technological Hazards Branch Chief
99 High Street, Fifth Floor
Boston, Massachusetts, 02110
617-956-7523
Steve.Colman@dhs.gov

Ingrid Bruns
Team Member
FEMA Region One
Senior Technological Hazards Program Specialist
99 High Street, Fifth Floor

Boston, Massachusetts, 02110
617-956-7641
Ingrid.Bruns@dhs.gov

Helen LaForge
Site Specialist
FEMA Region One
Technological Hazards Program Specialist
99 High Street, Fifth Floor
Boston, Massachusetts, 02110
617-956-7584
Helen.LaForge@dhs.gov

Deborah Ferrari
Radiological Emergency Preparedness Supervisor
CT Department of Emergency Management & Homeland Security
Radiological Emergency Preparedness Supervisor
25 Sigourney Street
Hartford, Connecticut, 06106
860-256-0873
deborah.ferrari@ct.gov

Cynthia Tangney
Lead Planner
CT Department of Emergency Management & Homeland Security
Emergency Management Program Specialist
25 Sigourney Street, Sixth Floor
Hartford, Connecticut, 06106
860-256-0874
Cynthia.Tangney@ct.gov

Daniel G. Casey
Licensee Offsite Lead

Dominion Nuclear Connecticut
Nuclear Emergency Preparedness Senior Specialist
360 Rope Ferry Road
Waterford, Connecticut, 06385
860-440-0336
Daniel.G.Casey@dom.com

Thomas Rigney
Dominion Exercise Manager
Dominion Nuclear Connecticut
Nuclear Emergency Preparedness Senior Specialist
360 Rope Ferry Road
Waterford, Connecticut, 06385
860-447-1791
thomas.a.rigney@dom.com

Dr. Edward Wilds
Technical Director
CT Department of Environmental Protection
Division Director
Bureau of Air Management Radiation Division
79 Elm Street
Hartford, Connecticut, 06106
860-424-3029
edward.wilds@ct.gov

Michael Firsick
Technical Supervisor
CT Department of Environmental Protection
Radiation Control Physicist Supervisor
79 Elm Street
Hartford, Connecticut, 06106
860-424-3517

michael.firscik@ct.gov

Gary McCahill
Technical Lead
CT Department of Environmental Protection
Radiation Control Physicist
79 Elm Street
Hartford, Connecticut, 06106
860-424-3691
gary.mccahill@ct.gov

1.3 Participating Organizations

Agencies and organizations of the following jurisdictions participated in the Millstone Power Station exercise:

State Jurisdictions

- Connecticut Area IV Amateur Radio Emergency Services
- Connecticut Commission on the Deaf and Hearing Impaired
- Connecticut Department of Agriculture
- Connecticut Department of Consumer Protection
- Connecticut Department of Correction
- Connecticut Department of Developmental Services
- Connecticut Department of Emergency Management and Homeland Security
- Connecticut Department of Environmental Protection
- Connecticut Department of Public Health
- Connecticut Department of Public Safety
- Connecticut Department of Transportation
- Connecticut Governor's Office
- Connecticut State Police
- Connecticut Network
- New York Department of Public Health
- New York State Office of Emergency Management
- New York State Police
- Rhode Island Office of Emergency Management

Risk Jurisdictions

- East Lyme Board of Selectman
- East Lyme Emergency Management
- East Lyme Fire Department
- East Lyme Fire Marshall
- East Lyme Police Department
- East Lyme School District
- East Lyme Public Volunteers
- East Lyme Visiting Nurse Association
- East Lyme Water Department
- Fishers Island Emergency Management
- Fishers Island Volunteer Fire Department
- Fishers Island School District
- Gales Ferry Fire Company
- Groton City Ambulance Service
- Groton City Department of Utilities
- Groton City Emergency Management
- Groton City Fire Department
- Groton City Police Department
- Groton City Public Works Department
- Montville Clerk's Office
- Montville Emergency Management
- Montville Police Department
- Montville School District
- Mystic Fire Department
- New London City Manager
- New London Emergency Management
- New London Fire Department
- New London Police Department
- New London Public Works
- New London School District
- Town of Groton 911 Center
- Town of Groton Emergency Management
- Town of Groton Parks and Recreation

Town of Groton Police Department
Town of Groton School District
Town of Ledyard 911 Dispatch Center
Town of Ledyard Ambulance
Town of Ledyard Director of Nursing
Town of Ledyard Emergency Management
Town of Ledyard Fire Company
Town of Ledyard Fire Marshall
Town of Ledyard Health Department
Town of Ledyard Mayor
Town of Ledyard Operations
Town of Ledyard Police Department
Town of Ledyard Public Works Department
Town of Ledyard Radiological Office
Town of Ledyard School District
Town of Lyme Ambulance Association
Town of Lyme Board of Selectmen
Town of Lyme Fire Company
Town Of Old Lyme Communications
Town Of Old Lyme Emergency Medical Services
Town Of Old Lyme Fire Department
Town Of Old Lyme Information Technology
Town Of Old Lyme Board of Selectman
Town of Southold Constables
Town of Waterford Board of Education
Town of Waterford Fire Department
Town of Waterford Emergency Management
Town of Waterford Parks and Recreation
Town of Waterford Police Department
Town of Waterford Public Works
Town of Waterford Senior Services
Town of Waterford Tax Collector's Office

Support Jurisdictions

Stonington Emergency Management Agency

- Stonington Police Department
- Stonington Public Works

Private Organizations

- Amateur Radio, HAM
- Amateur Radio Emergency Services
- American Red Cross
- Brookhaven National Laboratory
- Dominion Nuclear Connecticut
- Electric Boat Division of General Dynamics
- Ledge Light Health District
- M & J Bus Company
- Radio Amateur Civil Emergency Services
- Regional Health Agency
- United Way 211

Federal Jurisdictions

- United States Coast Guard
- United States Department of Energy
- United States Environmental Protection Agency
- United States Federal Bureau of Investigation
- United States Health and Human Services, Center for Disease Control
- United States Military
- United States National Guard
- United States Nuclear Regulatory Commission

SECTION 2: EXERCISE DESIGN SUMMARY

2.1 Exercise Purpose and Design

The purpose of this report is to present the results and findings on the performance of the offsite response organizations (OROs) during a simulated radiological emergency.

FEMA Region I evaluated the October 19-20, 2010, exercise to assess the capabilities of local emergency preparedness organizations in implementing their Radiological Emergency Response Plans (RERPs) and procedures to protect the public health and safety during a radiological emergency involving Millstone Power Station.

2.2 Exercise Objectives, Capabilities and Activities

The exercise objectives, capabilities, and activities are noted in the extent of play agreement, included in Appendix D, Exercise Plan.

2.3 Scenario Summary

The exercise scenario was developed to evaluate the response of the exercise participants to a radiologically emergency.

The scenario is included in Appendix D, Exercise Plan.

SECTION 3: ANALYSIS OF CAPABILITIES

3.1 Exercise Evaluation and Results

This section contains the results and findings of the evaluation of all jurisdictions and functional entities that participated in the October 19-20, 2010, Plume and Post Plume Exercise, conducted to test the offsite emergency response capabilities of State and local governments in the Millstone Power Station 10-mile Emergency Planning Zone (EPZ) and 50-mile Ingestion Pathway.

Each jurisdiction and functional entity was evaluated on its demonstration of criteria contained in the exercise evaluation areas as outlined in the federal Register, Volume 67, No. 80 "FEMA - Radiological Emergency Preparedness: Exercise Evaluation Methodology" (April 25, 2002). Detailed information on the evaluation area criteria and the extent-of-play agreements for the drill are included as appendices to this report.

3.2 Summary Results of Exercise Evaluation

The matrix presented in the table on the following pages presents the status of all exercise evaluation
area criteria that were scheduled for demonstration during the exercise by all participating jurisdictions and functional entities.

Exercise criteria are listed by number, and the demonstration status of those criteria are indicated by the use of the following letters:

M - Met (No Deficiency or ARCAs assessed and no unresolved ARCAs from prior exercise)
A - ARCAs assessed or unresolved ARCAs from previous exercises
D - Deficiency assessed
P - Plan Issues
N - Not Demonstrated

Note: Blank fields indicate criterion was not evaluated at that location.

Table 3.1 - Summary of Exercise Evaluation (3 pages)

DATE: 2010-10-19 SITE: Millstone Power Station, CT M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		CT SEOC	State 211	CT DEP	CT EOF	CT FMT-A	CT FMT-B	CT FRT-1	CT FRT-2	CT FST-1Ag	CT FST-2Ag	CT FST-3DPH	CT FST-4DPH	CT FST-5CP
Emergency Operations Management														
Mobilization	1a1	M		M	M	M	M							
Facilities	1b1													
Direction and Control	1c1	M		M										
Communications Equipment	1d1	M	M	M	M	M	M			M	M	M	M	M
Equip & Supplies to support operations	1e1	M	M	M	M	M	M			M	M	M	M	M
Protective Action Decision Making														
Emergency Worker Exposure Control	2a1	M		M										
Radiological Assessment and PARs	2b1	M		M	M									
Decisions for the Plume Phase -PADs	2b2	M												
PADs for protection of special populations	2c1	M												
Rad Assessment and Decision making for the Ingestion Exposure Pathway	2d1	M		M										
Rad Assessment and Decision making concerning Relocation, Reentry, and Return	2e1	M		M										
Protective Action Implementation														
Implementation of emergency worker exposure control	3a1	P		M		M	M			M	M	M	M	M
Implementation of KI decision	3b1					M	M			M	M	M	M	M
Implementation of protective actions for special populations - EOCs	3c1	M												
Implementation of protective actions for Schools	3c2	M												
Implementation of traffic and access control	3d1	M												
Impediments to evacuation are identified and resolved	3d2													
Implementation of ingestion pathway decisions - availability/use of info	3e1	M												
Materials for Ingestion Pathway PADs are available	3e2	M												
Implementation of relocation, re-entry, and return decisions.	3f1	M		M										
Field Measurement and Analysis														
Adequate Equipment for Plume Phase Field Measurements	4a1					M	M							
Field Teams obtain sufficient information	4a2			P										
Field Teams Manage Sample Collection Appropriately	4a3					M	M							
Post plume phase field measurements and sampling	4b1							M	M	M	M	M	M	P
Laboratory operations	4c1													
Emergency Notification and Public Info														
Activation of the prompt alert and notification system	5a1	M												
Activation of the prompt alert and notification system - Fast Breaker	5a2													
Activation of the prompt alert and notification system - Exception areas	5a3													
Emergency information and instructions for the public and the media	5b1		M											
Emergency Worker Monitoring/Decontamination	6													
Mon / decon of evacuees and emergency workers, and registration of evacuees	6a1													
Mon / decon of emergency worker equipment	6b1													
Temporary care of evacuees	6c1													
Transportation and treatment of contaminated injured individuals	6d1													

Table 3.1 - Summary of Exercise Evaluation (Continued. page 2/3)

DATE: 2010-10-19 SITE: Millstone Power Station, CT M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		CT DOH	CT JIC	CT R4	CT SP Montville	CT DoT	CT STSA - Rocky Hill	CT Lab	E Lyme EOC	FI EOC	Groton CEOC	Groton TEOC	Ledyard EOC
Emergency Operations Management													
Mobilization	1a1	M	M	M	M	M	M		M	M	M	M	M
Facilities	1b1												
Direction and Control	1c1		M	M	M		M	M	M	M	M	M	M
Communications Equipment	1d1	M	M	M	M	M	M		M	M	M	M	M
Equip & Supplies to support operations	1e1		M	M	M	M	M		M	M	M	M	M
Protective Action Decision Making													
Emergency Worker Exposure Control	2a1												
Radiological Assessment and PARs	2b1								M	M	M	M	M
Decisions for the Plume Phase -PADs	2b2								M	M	M	M	M
PADs for protection of special populations	2c1								M	M	M	M	M
Rad Assessment and Decision making for the Ingestion Exposure Pathway	2d1												
Rad Assessment and Decision making concerning Relocation, Reentry, and Return	2e1												
Protective Action Implementation													
Implementation of emergency worker exposure control	3a1			M	M	M	M		M	M	M	M	M
Implementation of KI decision	3b1			M	M	M	M		M	M	M	M	M
Implementation of protective actions for special populations - EOCs	3c1	M		M					M	M	M	M	M
Implementation of protective actions for Schools	3c2	M		M			M						
Implementation of traffic and access control	3d1			M	M	M	M		M	M	M	M	M
Impediments to evacuation are identified and resolved	3d2				M				M	M	M	M	M
Implementation of ingestion pathway decisions - availability/use of info	3e1												
Materials for Ingestion Pathway PADs are available	3e2		M										
Implementation of relocation, re-entry, and return decisions.	3f1												
Field Measurement and Analysis													
Adequate Equipment for Plume Phase Field Measurements	4a1												
Field Teams obtain sufficient information	4a2												
Field Teams Manage Sample Collection Appropriately	4a3												
Post plume phase field measurements and sampling	4b1												
Laboratory operations	4c1							M					
Emergency Notification and Public Info													
Activation of the prompt alert and notification system	5a1			A					M	M	M	M	M
Activation of the prompt alert and notification system - Fast Breaker	5a2												
Activation of the prompt alert and notification system - Exception areas	5a3										M	M	
Emergency information and instructions for the public and the media	5b1		M						M	M	M	M	M
Emergency Worker Monitoring/Decontamination	6												
Mon / decon of evacuees and emergency workers, and registration of evacuees	6a1												
Mon / decon of emergency worker equipment	6b1												
Temporary care of evacuees	6c1												
Transportation and treatment of contaminated injured individuals	6d1												

Table 3.1 - Summary of Exercise Evaluation (Continued. page 3/3)

DATE: 2010-10-19 SITE: Millstone Power Station, CT M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		Lyme EOC	Montville EOC	New London EOC	Old Lyme EOC	Waterford EOC	Stonington EOC	Old Lyme Schools	Aces High Campground	Flanders Elementary	Bay View Nursing Home	Fountain View	Green Tree Manor
Emergency Operations Management													
Mobilization	1a1	M	M	M	M	M	M	M	M	M	M	M	M
Facilities	1b1												
Direction and Control	1c1	M	M	M	M	M	M						
Communications Equipment	1d1	M	M	M	M	M	M						
Equip & Supplies to support operations	1e1	M	M	M	M	M	M						
Protective Action Decision Making													
Emergency Worker Exposure Control	2a1												
Radiological Assessment and PARs	2b1	M	M	M	M	M							
Decisions for the Plume Phase -PADs	2b2	M	M	M	M	M							
PADs for protection of special populations	2c1	M	M	M	M	M							
Rad Assessment and Decision making for the Ingestion Exposure Pathway	2d1												
Rad Assessment and Decision making concerning Relocation, Reentry, and Return	2e1												
Protective Action Implementation													
Implementation of emergency worker exposure control	3a1	M	M	M	M	M							
Implementation of KI decision	3b1	M	M	M	M	M		M	M	M	M	M	M
Implementation of protective actions for special populations - EOCs	3c1	M	M	M	M	M					M	M	M
Implementation of protective actions for Schools	3c2							M	N	M			
Implementation of traffic and access control	3d1	M	M	M	M	M							
Impediments to evacuation are identified and resolved	3d2	M	M	M	M	M							
Implementation of ingestion pathway decisions - availability/use of info	3e1												
Materials for Ingestion Pathway PADs are available	3e2												
Implementation of relocation, re-entry, and return decisions.	3f1												
Field Measurement and Analysis													
Adequate Equipment for Plume Phase Field Measurements	4a1												
Field Teams obtain sufficient information	4a2												
Field Teams Manage Sample Collection Appropriately	4a3												
Post plume phase field measurements and sampling	4b1												
Laboratory operations	4c1												
Emergency Notification and Public Info													
Activation of the prompt alert and notification system	5a1	M	M	M	M	M							
Activation of the prompt alert and notification system - Fast Breaker	5a2												
Activation of the prompt alert and notification system - Exception areas	5a3		M										
Emergency information and instructions for the public and the media	5b1	M	M	M	M	M	M						
Emergency Worker Monitoring/Decontamination	6												
Mon / decon of evacuees and emergency workers, and registration of evacuees	6a1												
Mon / decon of emergency worker equipment	6b1												
Temporary care of evacuees	6c1												
Transportation and treatment of contaminated injured individuals	6d1												

3.3 Criteria Evaluation Summaries

3.3.1 Connecticut Jurisdictions

3.3.1.1 CT State Emergency Operations Center

a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.1, 2.b.2, 2.c.1, 2.d.1, 2.e.1, 3.c.1, 3.c.2, 3.d.1, 3.e.1, 3.e.2, 3.f.1, 5.a.1.
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. PLAN ISSUES: 3.a.1.

ISSUE NO.: 38-10-3a1-P-03

CRITERION: OROs issue appropriate dosimetry and procedures, and manage radiological exposure to emergency workers IAW plans and procedures. Emergency workers periodically and at the end of each mission read and record dosimeter reading. (NUREG-0654, K.3)

CONDITION: Briefings provided to emergency workers (EWs) by Radiological Officers (ROs) in multiple jurisdictions, including local EOCs and field teams, were inconsistent, often omitting details on dosimetry, instrumentation, exposure, and potassium iodide (KI) as identified in plans and procedures.

POSSIBLE CAUSE: Key information regarding radiological exposure control for EWs and KI, as well as use of dosimetry and instrumentation, are found in different appendixes in the Connecticut Radiological Emergency Response Plan. When conducting briefings to workers, ROs referred to multiple attachments (i.e., Dosimetry Briefing Sheet, Direct Reading Dosimetry Instructions, Potassium Iodide for State and Local EPZ Emergency Workers) to properly brief staff.

Because these attachments provide more detail than normally provided in most EW briefings, ROs may have individually selected material based on their experience instead of delivering consistent and correct information found in the plan. ROs not familiar with details in all appendices of the plan may have omitted key information found in body text. ROs who have completed briefings previously may have

delivered briefings ad-hoc without reading key information.

REFERENCE: NUREG-0654/FEMA-REP-1, K.3.a; Connecticut RERP 07/2010, Radiation Exposure Control, CTAP/LCP-4.2

EFFECT: Based on the content of EW briefings, EWs may not have obtained information to minimize harmful effects of radiation in mission areas.

RECOMMENDATION: Attachment 2, Dosimetry Briefing Sheet, should be updated to include information clarifying sources regarding the precautions associated with ingestion of iodine. These precautions should also be identified in Attachment 12.

Radiological Officer procedures should be updated to ensure a consistent series of briefings (ie: Dosimetry, KI, Instrumentation Use) are read verbatim during emergency worker radiological protection briefings. In addition, ROs should be familiar with checklists to ensure consistent briefings.

e. NOT DEMONSTRATED: None

f. PRIOR ISSUES - RESOLVED: 1.a.1.

ISSUE NO.: 38-08-1a1-A-01

ISSUE: A Department of Emergency Management and Homeland Security (DEMHS) 24-hour staffing roster was provided for the Connecticut Emergency Operations Center; however, some personnel were scheduled to work both 12-hour shifts (but not necessarily in the same position).

CORRECTIVE ACTION DEMONSTRATED: A DEMHS staffing roster for two shifts was presented. Each shift consisted of a minimum of 18 persons. Names were entered for each line position on each shift. No name appeared twice. No one was scheduled to work both shifts.

g. PRIOR ISSUES - UNRESOLVED: None

3.3.1.2 CT SEOC Rumor Control

a. MET: 1.d.1, 1.e.1, 5.b.1.
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. PLAN ISSUES: None
e. NOT DEMONSTRATED: None
f. PRIOR ISSUES - RESOLVED: None
g. PRIOR ISSUES - UNRESOLVED: None

3.3.1.3 CT Department of Environmental Protection

a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.1, 2.d.1, 2.e.1, 3.a.1, 3.f.1.
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. PLAN ISSUES: 4.a.2.

ISSUE NO.: 38-10-4a2-P-01

CRITERION: 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)

CONDITION: At 1133 the Department of Environmental Protection (DEP) Field Monitoring Team Coordinator (FMTC) was notified of the General Emergency declaration. He briefed Field Monitoring Team B (FMT-B) but failed to notify Field Monitoring Team A (FMT-A). He corrected this omission at 1330.

POSSIBLE CAUSE: DEP-RD-3, Rev. 08/11/2010, Field Monitoring Team Coordinator Checklist, Attachment 1, step 17, states "NOTIFY FMTs of changing plant conditions." The FMTC may have either interpreted this as optional, or perhaps interpreted it to mean plant conditions other than Emergency Classification Levels.

REFERENCE: NUREG-0654 I.8; I.11; J.10.a; H.12; CTAP-3.3, DEP-RD-3, Rev. 08/11/2010, Field Monitoring Team Coordinator.

EFFECT: If procedures are unclear, FMTs could receive inconsistent information,

including when the plant condition has degraded to a more serious condition.

RECOMMENDATION: Field Monitoring Team Coordinator Checklist, DEP-RD-3, Rev. 08/11/2010, Attachment 1, step 17 "NOTIFY FMTs of changing plant conditions" should be revised to clarify intention to avoid misinterpretation.

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

3.3.1.4 CT Emergency Operations Facility

a. MET: 1.a.1, 1.d.1, 1.e.1, 2.b.1.
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. PLAN ISSUES: None
e. NOT DEMONSTRATED: None
f. PRIOR ISSUES - RESOLVED: None
g. PRIOR ISSUES - UNRESOLVED: None

3.3.1.5 CT Field Monitoring Team - Alpha

a. MET: 1.a.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 4.a.1, 4.a.3.
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. PLAN ISSUES: None
e. NOT DEMONSTRATED: None
f. PRIOR ISSUES - RESOLVED: 1.e.1.

ISSUE NO.: 38-08-1e1-A-02

ISSUE: Field monitoring team (FMT) kits include Potassium Iodide Tablets 130 mg (KI) for use by the field team members. The KI tablets in the kit were manufactured by Iosat, lot 20003A with an expiration date of August, 2005. There was no documentation of extension of the expiration date in the kit.

An extension letter dated 2/15/07 from the Food and Drug Administration to the Nuclear Regulatory Commission was provided to the evaluators after the exercise.

This letter authorizes an increase of the expiration date for two additional years for lots manufactured under Iosat's Abbreviated New Drug Application (ANDA) 18-664. As such, even with the extension, the Iosat Tablets included in the field monitoring team's dosimetry package were beyond their expiration date.

CORRECTIVE ACTION DEMONSTRATED: On September 14, 2010 during the Millstone Power Station Combined Functonal Drill it was verified that the KI ready for issue to the Field Teams had an expiration of 02/2014.

g. PRIOR ISSUES - UNRESOLVED: None

3.3.1.6 CT Field Monitoring Team - Bravo

a. MET: 1.a.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 4.a.1, 4.a.3.
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. PLAN ISSUES: None
e. NOT DEMONSTRATED: None
f. PRIOR ISSUES - RESOLVED: 3.a.1.

ISSUE NO.: 38-08-3a1-A-03

ISSUE: During the exercise the field team members did not read their self reading dosimeters at regular intervals (every 15 to 30 minutes) as instructed to during their pre-deployment briefing.

CORRECTIVE ACTION DEMONSTRATED: Field Team members read and recorded Direct Reading dosimeters every 15-30 minutes during the September 14, 2010 Combined Functional Drill.

g. PRIOR ISSUES - UNRESOLVED: None

3.3.1.7 CT Field Relocation Team 1

a. MET: 4.b.1.
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. PLAN ISSUES: None
e. NOT DEMONSTRATED: None
f. PRIOR ISSUES - RESOLVED: None
g. PRIOR ISSUES - UNRESOLVED: None

3.3.1.8 CT Field Relocation Team 2

a. MET: 4.b.1.
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. PLAN ISSUES: None
e. NOT DEMONSTRATED: None
f. PRIOR ISSUES - RESOLVED: None
g. PRIOR ISSUES - UNRESOLVED: None

3.3.1.9 CT Field Sampling Team 1 (Agriculture)

a. MET: 1.d.1, 1.e.1, 3.a.1, 3.b.1, 4.b.1.
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. PLAN ISSUES: None
e. NOT DEMONSTRATED: None
f. PRIOR ISSUES - RESOLVED: None
g. PRIOR ISSUES - UNRESOLVED: None

3.3.1.10 CT Field Sampling Team 2 (Agriculture)

a. MET: 1.d.1, 1.e.1, 3.a.1, 3.b.1, 4.b.1.
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. PLAN ISSUES: None
e. NOT DEMONSTRATED: None
f. PRIOR ISSUES - RESOLVED: None
g. PRIOR ISSUES - UNRESOLVED: None

3.3.1.11 CT Field Sampling Team 3 (Department of Public Health)

a. MET: 1.d.1, 1.e.1, 3.a.1, 3.b.1, 4.b.1.
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. PLAN ISSUES: None
e. NOT DEMONSTRATED: None
f. PRIOR ISSUES - RESOLVED: None
g. PRIOR ISSUES - UNRESOLVED: None

3.3.1.12 CT Field Sampling Team 4 (Department of Public Health)

a. MET: 1.d.1, 1.e.1, 3.a.1, 3.b.1, 4.b.1.
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. PLAN ISSUES: None
e. NOT DEMONSTRATED: None
f. PRIOR ISSUES - RESOLVED: None
g. PRIOR ISSUES - UNRESOLVED: None

3.3.1.13 CT Field Sampling Team 5 (Consumer Protection)

a. MET: 1.d.1, 1.e.1, 3.a.1, 3.b.1.
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. PLAN ISSUES: 4.b.1.

ISSUE NO.: 38-10-4b1-P-02

CRITERION: 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)

CONDITION: Ingestion Field Sampling Team #5 was not monitored for radioactive contamination after being in a potentially contaminated area and prior to entering the State Emergency Operation Center (EOC).

POSSIBLE CAUSE: All Field Sampling Teams were briefed prior to leaving the

State EOC. During the briefing, they were told that if they were contaminated in the field, they should report to a host community where they would be decontaminated. Field Sampling Team #5 obtained food samples in potentially contaminated areas. The team then transferred the samples to the State Radiological Laboratory for analysis and returned to the State EOC to turn in dosimetry and equipment.

Field Sampling Team #5 attempted to self-monitor but did not have the skills to conduct appropriate self monitoring for contamination. General provisions for contamination monitoring of Sampling Teams were not established. It is noted that Connecticut Agency Procedure 4.2, Radiation Exposure Control, requires that, "If emergency workers have been in potentially contaminated areas, INSTRUCT them to proceed to the nearest Host Community for monitoring and decontamination."

REFERENCE: NUREG-0654 K.5.a-b; Connecticut Agency Procedure (CTAP) 4.2, Radiation Exposure Control, Attachment 1, Radiation Exposure Control Checklist.

EFFECT: If Sampling Team personnel and their equipment are not surveyed for radiological contamination after completion of their assignment in a potentially contaminated area (and decontaminated, if needed), they could transfer contamination into the State EOC by tracking in radioactive contamination on their persons, dosimetry, vehicles and equipment.

RECOMMENDATION: Implement the most timely and effective way to monitor Field Sampling Team members and their equipment for radioactive contamination, for example:

- Follow CTAP 4.2 as written and have all Sample Teams that were in potentially contaminated areas report to a Host Community for monitoring; or
- Make provisions for a qualified survey team to monitor Sample Team personnel and equipment. Instruct the Sample Team to report to a defined location for decontamination only if needed; or
- Train Sample Team personnel to perform self monitoring for radioactive contamination. Instruct the Sample Team report to a defined location for decontamination only if needed.

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

3.3.1.14 CT Dept of Public Health

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

3.3.1.15 CT Joint Information Center

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

3.3.1.16 CT DEMHS Region 4

a. MET: 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.
b. AREAS REQUIRING CORRECTIVE ACTION: 5.a.1.

ISSUE NO.: 38-10-5a1-A-01

CRITERION: Activities associated with primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized offsite officials to notify the public of an emergency situation. (10 CFR Part 50, Appendix E & NUREG-0654, E.1.,4.,5.,6.,7.)

CONDITION: During the post exercise evaluator meeting the evaluators for the Towns of Groton, Montville and Ledyard discussed with the evaluators who were assigned to Department of Emergency Management and Homeland Security

(DEMHS) Region 4 that there was a miscommunication during the reading of the message for the first siren activation sequence. The Communications Officer at DEMHS Region 4 Office communicated that for the Towns of Groton, Ledyard and Montville the message was for "notification only". All other towns were instructed to simulate siren activation. The conference call with the State Emergency Operations Center, held at 1015, indicated that all towns were to simulate siren activation. The Emergency Management Director from Groton Town radioed DEMHS Region 4 to clarify the intent of the message. DEMHS Region 4's reply was that Groton Town should simulate activating the sirens, which was accomplished at 1107. The town of Ledyard overheard Groton Town's radio communication with Region 4 and simulated activating the sirens at 1109. The town of Montville did not simulate the sirens during the first siren activation sequence.

POSSIBLE CAUSE: The DEMHS Region 4 Communications Officer did not clearly communicate directions from the State EOC to activate the sirens in all communities.

REFERENCE: NUREG-0654 F.1.a

EFFECT: Miscommunication about activating sirens resulted in confusion, and resulted in an approximately 30 minute delay in the first notification of the public in Groton Town and Ledyard, and no first notification in Montville.

RECOMMENDATION: The radio operator reading the message should read the message as written and not add to or modify the written message.

c. DEFICIENCY: None
d. PLAN ISSUES: None
e. NOT DEMONSTRATED: None
f. PRIOR ISSUES - RESOLVED: None
g. PRIOR ISSUES - UNRESOLVED: None

3.3.1.17 CT State Police Montville Troop E

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

3.3.1.18 CT Dept of Transportation

a. MET: 1.a.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.d.1.
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. PLAN ISSUES: None
e. NOT DEMONSTRATED: None
f. PRIOR ISSUES - RESOLVED: None
g. PRIOR ISSUES - UNRESOLVED: None

3.3.1.19 CT State TSA - Rocky Hill Veterans Home

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

3.3.1.20 CT State Laboratory

a. MET: 1.c.1, 4.c.1.
b. AREAS REQUIRING CORRECTIVE ACTION: 4.c.1.

ISSUE NO.: 38-10-4c1-A-02

CRITERION: Laboratory is capable of performing required radiological analyses to support PADs

CONDITION: Contamination control during sample preparation was inadequate.

POSSIBLE CAUSE: Lack of radiological training for the laboratory staff preparing samples for analysis. The sample receipt and sample analysis staff performed contamination control correctly.

REFERENCE: NUREG-0654, C.3., I.8., 9., J.11; Department of Public Health procedure CTAP-3.7, DPH-3, "Laboratory Receipt and Analysis Protocol"

EFFECT: Potential for contamination of individuals preparing samples, cross contamination of samples and spread of contamination into other laboratory areas.

CORRECTIVE ACTION DEMONSTRATED: The controller stopped the individuals performing sample preparation and provided training in correct contamination controls for sample preparation. This was then successfully re-demonstrated on October 20, 2010.

Recommendation: Train sample preparation staff in correct contamination control techniques.

ISSUE NO.: 38-10-4c1-A-03

CRITERION: Laboratory is capable of performing required radiological analyses to support PADs

CONDITION: Radiological survey and contamination instruments did not have a source range available when performing source check; instead each instrument had a single numerical value for source check. Further, participants were not aware of the type of source to be used and probe orientation for conducting an operational check.

POSSIBLE CAUSE: Lack of radiological training for individuals performing pre-operational and source checks.

REFERENCE: NUREG-0654, C.3., I.8., 9., J.11; Department of Public Health procedure CTAP-3.7, DPH-3, "Laboratory Receipt and Analysis Protocol"

EFFECT: Potential exists that instrument may be placed out of service when actually fully operational.

CORRECTIVE ACTION DEMONSTRATED: The controller identified an opportunity to provide training on instrument pre-operational and source checks. Training was provided on the method to determine source range values, source to be used, and probe orientation for conducting the operational check. This was then successfully re-demonstrated on October 20, 2010.

Recommendation: Calculate source range value for each instrument, place label on each instrument stating range, probe orientation and correct source to be used.

c. DEFICIENCY: None
d. PLAN ISSUES: None
e. NOT DEMONSTRATED: None
f. PRIOR ISSUES - RESOLVED: None
g. PRIOR ISSUES - UNRESOLVED: None

3.3.2 Risk Jurisdictions

3.3.2.1 East Lyme Local EOC

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

3.3.2.2 Fishers Island, NY EOC

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

3.3.2.3 City of Groton Local EOC

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

3.3.2.4 Town of Groton Local EOC

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

3.3.2.5 Ledyard Local EOC

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

d. PLAN ISSUES: None
e. NOT DEMONSTRATED: None
f. PRIOR ISSUES - RESOLVED: None
g. PRIOR ISSUES - UNRESOLVED: None

3.3.2.6 Lyme Local EOC

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

ISSUE NO.: 38-08-3a1-A-04

ISSUE: KI was not issued to the Town of Lyme emergency workers with their dosimetry kits. This issue is identical to issue 38-04-3.a.1-A-01, which had been resolved in 2006 in Lyme.

CORRECTIVE ACTION DEMONSTRATED: Potassium iodide was issued with all dosimetry kits.

g. PRIOR ISSUES - UNRESOLVED: None

3.3.2.7 Montville Local EOC

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

3.3.2.8 New London Local EOC

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

ISSUE NO.: 38-08-1c1-A-05

ISSUE: After the Governor proclaimed a "State of Civil Preparedness Emergency" (at 0929) and a declaration of a General Emergency by the Millstone Power Plant (at 1040), the New London Emergency Operations Center pre-empted Region 4 and the Connecticut Department of Emergency Management and Homeland Security and sounded the sirens and issued an Emergency Alert System message on their own at 1121.

CORRECTIVE ACTION DEMONSTRATED: During the Alert phase, two Precautionary Actions were initiated: the City Manager, Emergency Management Director (EMD) and School Superintendent implemented an early dismissal of schools. The City Manager and EMD also determined it necessary to close all parks.

Per the City of New London Radiological Emergency Response Plan, after the Governor declared a State of Emergency at 1015, the New London Emergency Operations Center officials deferred all other Precautionary and Protective Action Decisions to the State of Connecticut authorities, including the development, and issuance, of an Emergency Alert System message. When requested by the State, the New London EMD immediately concurred upon the Protective Action Recommendations provided to the affected towns during a conference call and the City implemented those Protective Actions.

g. PRIOR ISSUES - UNRESOLVED: None

3.3.2.9 Old Lyme Local EOC

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

3.3.2.10 Waterford Local EOC

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

3.3.2.11 Old Lyme: Central Office Regional School District 18

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

3.3.2.12 East Lyme: Aces High Campground

a. MET: 1.a.1, 3.b.1.
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. PLAN ISSUES: None
e. NOT DEMONSTRATED: 3.c.2.

f. PRIOR ISSUES - RESOLVED: None
g. PRIOR ISSUES - UNRESOLVED: None

3.3.2.13 East Lyme: Flanders Elementary School

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

3.3.2.14 Waterford: Bay View Nursing Home

a. MET: 1.a.1, 3.b.1, 3.c.1.
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. PLAN ISSUES: None
e. NOT DEMONSTRATED: None
f. PRIOR ISSUES - RESOLVED: None
g. PRIOR ISSUES - UNRESOLVED: None

3.3.2.15 Waterford: Fountain View/New London Rehab

a. MET: 1.a.1, 3.b.1, 3.c.1.
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. PLAN ISSUES: None
e. NOT DEMONSTRATED: None
f. PRIOR ISSUES - RESOLVED: None
g. PRIOR ISSUES - UNRESOLVED: None

3.3.2.16 Waterford: Green Tree Manor

a. MET: 1.a.1, 3.b.1, 3.c.1.
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. PLAN ISSUES: None

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

3.3.3 Support Jurisdictions

3.3.3.1 Stonington EOC

a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 5.b.1.
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. PLAN ISSUES: None
e. NOT DEMONSTRATED: None
f. PRIOR ISSUES - RESOLVED: None
g. PRIOR ISSUES - UNRESOLVED: None

SECTION 4: CONCLUSION

The State and local organizations, except where noted in this report, demonstrated knowledge of their emergency response plans and procedures and adequately implemented them.

As a result of this exercise, there were no Deficiencies. There were three Areas Requiring Corrective Action (ARCA), two of which were redemonstrated during the exercise and closed. There were four prior ARCAs open from the 2008 Plume Exercise. These ARCAs were redemonstrated correctly during the 2010 Plume and Post Plume Exercise and closed.

APPENDIX A: IMPROVEMENT PLAN

Issue Number: 38-10-5a1-A-01	**Criterion: 5a1**
ISSUE: During the post exercise evaluator meeting the evaluators for the Towns of Groton, Montville and Ledyard discussed with the evaluators who were assigned to Department of Emergency Management and Homeland Security (DEMHS) Region 4 that there was a miscommunication during the reading of the message for the first siren activation sequence. The Communications Officer at DEMHS Region 4 Office communicated that for the Towns of Groton, Ledyard and Montville the message was for "notification only". All other towns were instructed to simulate siren activation. The conference call with the State Emergency Operations Center, held at 1015, indicated that all towns were to simulate siren activation. The Emergency Management Director from Groton Town radioed DEMHS Region 4 to clarify the intent of the message. DEMHS Region 4's reply was that Groton Town should simulate activating the sirens, which was accomplished at 1107. The town of Ledyard overheard Groton Town's radio communication with Region 4 and simulated activating the sirens at 1109. The town of Montville did not simulate the sirens during the first siren activation sequence.	
RECOMMENDATION: The radio operator reading the message should read the message as written and not add to or modify the written message.	
CORRECTIVE ACTION DESCRIPTION:	
CAPABILITY:	PRIMARY RESPONSIBLE AGENCY:
CAPABILITY ELEMENT:	START DATE:
AGENCY POC:	ESTIMATED COMPLETION DATE:

Issue Number: 38-10-4a2-P-01	**Criterion: 4a2**
ISSUE: At 1133 the Department of Environmental Protection (DEP) Field Monitoring Team Coordinator (FMTC) was notified of the General Emergency declaration. He briefed Field Monitoring Team B (FMT-B) but failed to notify Field Monitoring Team A (FMT-A). He corrected this omission at 1330.	
RECOMMENDATION: Field Monitoring Team Coordinator Checklist, DEP-RD-3, Rev. 08/11/2010, Attachment 1, step 17 "NOTIFY FMTs of changing plant conditions" should be revised to clarify intention to avoid misinterpretation.	
CORRECTIVE ACTION DESCRIPTION:	
CAPABILITY:	PRIMARY RESPONSIBLE AGENCY:
CAPABILITY ELEMENT:	START DATE:
AGENCY POC:	ESTIMATED COMPLETION DATE:

Issue Number: 38-10-4b1-P-02	**Criterion: 4b1**
ISSUE: Ingestion Field Sampling Team #5 was not monitored for radioactive contamination after being in a potentially contaminated area and prior to entering the State Emergency Operation Center (EOC).	
RECOMMENDATION: Implement the most timely and effective way to monitor Field Sampling Team members and their equipment for radioactive contamination, for example: • Follow CTAP 4.2 as written and have all Sample Teams that were in potentially contaminated areas report to a Host Community for monitoring; or • Make provisions for a qualified survey team to monitor Sample Team personnel and equipment. Instruct the Sample Team to report to a defined location for decontamination only if needed; or • Train Sample Team personnel to perform self monitoring for radioactive contamination. Instruct the Sample Team report to a defined location for decontamination only if needed.	
CORRECTIVE ACTION DESCRIPTION:	
CAPABILITY:	PRIMARY RESPONSIBLE AGENCY:
CAPABILITY ELEMENT:	START DATE:
AGENCY POC:	ESTIMATED COMPLETION DATE:

Issue Number: 38-10-3a1-P-03	**Criterion: 3a1**
ISSUE: Briefings provided to emergency workers (EWs) by Radiological Officers (ROs) in multiple jurisdictions, including local EOCs and field teams, were inconsistent, often omitting details on dosimetry, instrumentation, exposure, and potassium iodide (KI) as identified in plans and procedures.	
RECOMMENDATION: Attachment 2, Dosimetry Briefing Sheet, should be updated to include information clarifying sources regarding the precautions associated with ingestion of iodine. These precautions should also be identified in Attachment 12. Radiological Officer procedures should be updated to ensure a consistent series of briefings (ie: Dosimetry, KI, Instrumentation Use) are read verbatim during emergency worker radiological protection briefings. In addition, ROs should be familiar with checklists to ensure consistent briefings.	
CORRECTIVE ACTION DESCRIPTION:	
CAPABILITY:	PRIMARY RESPONSIBLE AGENCY:
CAPABILITY ELEMENT:	START DATE:
AGENCY POC:	ESTIMATED COMPLETION DATE:

APPENDIX B: EXERCISE TIMELINE

The table on the following pages represents the times at which key events and activities occurred during the Millstone Power Station Plume/Ingestion Exposure Pathway exercise on October 19-20, 2010. Also included are times notifications were made to the participating jurisdictions/functional entities.

Table 1 - Exercise Timeline
DATE: 2010-10-19, SITE: Millstone Power Station, CT

Emergency Classification Level or Event	Time Utility Declared	CT SEOC	CT EOF	CT JIC	CT R4	E Lyme EOC	FI EOC
Unusual Event	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alert	0745	0809	0755	0810	0804	0800	0841
Site Area Emergency	0933	0948	0935	0948	0950	0941	0946
General Emergency	1122	1133	1124	1133	1138	1129	1135
Simulated Rad. Release Started	1122	1133	1127	1133	1138	1143	1135
Simulated Rad. Release Terminated	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Facility Declared Operational		0916	0827	0916	0833	0906	0917
Declaration of Emergency: State		1015	1043	1015	1015	1015	1017
Declaration of Emergency: Local		N/A	N/A	N/A	N/A	N/A	N/A
Exercise Terminated		1355	1343	1355	1355	1353	1353
Early Precautionary Actions: Close Parks and Beaches		1020	N/A	1020	1019	0951	1017
Early Precautionary Actions: School Transfer		1020	N/A	1008	1019	1001	1017
Early Precautionary Actions: Shelter Livestock		1020	N/A	1008	1019	1015	1017
EAS "Heads Up" Message		1032	N/A	1042	1144	1036	1017
1st Siren Activation		1041	N/A	1042	1038	1036	1039
1st EAS Message		1044	N/A	1042	1041	1043	1041
Protective Action Decision: Evacuate A, B, C, E; Shelter D, F and Plum Island		1150	N/A	1151	N/A	N/A	1143
2nd Siren Activation		1200	N/A	1151	1156	1154	1159
2nd EAS Message		1202	N/A	1151	1159	1154	1203
KI Administration Decision: No KI for Emergency Workers and General Public		N/A	N/A	N/A	N/A	N/A	N/A

Table 1 - Exercise Timeline
DATE: 2010-10-19, SITE: Millstone Power Station, CT

Emergency Classification Level or Event	Time Utility Declared	Groton CEOC	Groton TEOC	Ledyard EOC	Lyme EOC	Montville EOC	New London EOC
Unusual Event	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alert	0745	0757	0758	0804	0803	0807	0756
Site Area Emergency	0933	0949	0946	0957	0942	0955	0941
General Emergency	1122	1144	1137	1148	1150	1141	1137
Simulated Rad. Release Started	1122	1144	1150	1148	1150	1144	1137
Simulated Rad. Release Terminated	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Facility Declared Operational		0951	0815	0850	0832	0850	0840
Declaration of Emergency: State		1017	1018	1019	1015	1018	1015
Declaration of Emergency: Local		N/A	N/A	N/A	N/A	N/A	N/A
Exercise Terminated		1354	1355	1350	1354	1345	1354
Early Precautionary Actions: Close Parks and Beaches		1020	1025	1025	1032	1035	0905
Early Precautionary Actions: School Transfer		0955	0947	1025	0955	0925	0839
Early Precautionary Actions: Shelter Livestock		1020	N/A	1025	1032	1035	1018
EAS "Heads Up" Message		1037	N/A	1036	1036	1037	1037
1st Siren Activation		1042	1105	1109	1038	N/A	1038
1st EAS Message		1040	1043	N/A	N/A	1037	1039
Protective Action Decision: Evacuate A, B, C, E; Shelter D, F and Plum Island		1150	1150	1150	1150	1152	1150
2nd Siren Activation		1155	1158	1159	1154	1159	1155
2nd EAS Message		1156	1207	N/A	N/A	1159	1156
KI Administration Decision: No KI for Emergency Workers and General Public		N/A	N/A	N/A	N/A	N/A	N/A

Table 1 - Exercise Timeline
DATE: 2010-10-19, SITE: Millstone Power Station, CT

Emergency Classification Level or Event	Time Utility Declared	Old Lyme EOC	Waterford EOC
Unusual Event	N/A	N/A	N/A
Alert	0745	0806	0758
Site Area Emergency	0933	0943	0941
General Emergency	1122	1130	1137
Simulated Rad. Release Started	1122	1133	1137
Simulated Rad. Release Terminated	N/A	N/A	N/A
Facility Declared Operational		0841	0915
Declaration of Emergency: State		0945	1015
Declaration of Emergency: Local		1018	N/A
Exercise Terminated		1355	1356
Early Precautionary Actions: Close Parks and Beaches		1020	1039
Early Precautionary Actions: School Transfer		1000	1008
Early Precautionary Actions: Shelter Livestock		1020	1028
EAS "Heads Up" Message		N/A	1028
1st Siren Activation		1035	1036
1st EAS Message		1043	1039
Protective Action Decision: Evacuate A, B, C, E; Shelter D, F and Plum Island		1150	1150
2nd Siren Activation		1156	1156
2nd EAS Message		1214	N/A
KI Administration Decision: No KI for Emergency Workers and General Public		N/A	N/A

APPENDIX C: EXERCISE EVALUATORS AND TEAM LEADERS

DATE: 2010-10-19, SITE: Millstone Power Station, CT

LOCATION	EVALUATOR	AGENCY
CT State Emergency Operations Center	*Helen LaForge Dave Petta Lou Sosler	FEMA - RI ICFI ICFI
CT SEOC Rumor Control	Wayne Wylie	FEMA - HQ
CT Department of Environmental Protection	Reggie Rodgers	ICFI
CT Emergency Operations Facility	Brad McRee	ICF
CT Field Monitoring Team - Alpha	*Marty Vyenielo	FEMA - R3
CT Field Monitoring Team - Bravo	John Wills	ICFI
CT Field Relocation Team 1	*Marty Vyenielo	FEMA - R3
CT Field Relocation Team 2	John Wills	ICFI
CT Field Sampling Team 1 (Agriculture)	Mike Howe	FEMA - HQ
CT Field Sampling Team 2 (Agriculture)	John Wills	ICFI
CT Field Sampling Team 3 (Department of Public Health)	*Andrew Hower	FEMA - R3
CT Field Sampling Team 4 (Department of Public Health)	*Andrew Hower	FEMA - R3
CT Field Sampling Team 5 (Consumer Protection)	*Marcy Campbell	ICFI
CT Dept of Public Health	Ingrid Bruns	FEMA - RI
CT Joint Information Center	*Don Carlton Henry Christiansen	FEMA - RI ICFI
CT DEMHS Region 4	*Robert Swartz Bruce Swiren	FEMA - RI ICFI
CT State Police Montville Troop E	Marcy Campbell	ICFI
CT Dept of Transportation	Marcy Campbell	ICFI
CT State TSA - Rocky Hill Veterans Home	*Helen LaForge	FEMA - RI
CT State Laboratory	Marty Vyenielo	FEMA - R3
East Lyme Local EOC	Karl Fippinger *Bud Iannazzo	ICFI ICFI
Fishers Island, NY EOC	Gary Bolender *Brian Hasemann	ICFI FEMA R2
City of Groton Local EOC	Gary Goldberg *Paul J Nied	ICFI ICFI
Town of Groton Local EOC	*Deborah Blunt Wes Ryals	ICFI ICF
Ledyard Local EOC	*James McClanahan Betsy Snell Cheryl Weaver	ICFI FEMA - RI ICF
Lyme Local EOC	*Rebecca Fontenot Wendy Swygert	FEMA - HQ ICF
Montville Local EOC	Sonia Eischen *Lisa Rink	ICF FEMA R4
New London Local EOC	Steve Chambers David Jeremy *Richard Kinard	ICF FEMA - HQ FEMA - R3
Old Lyme Local EOC	*Andrew Hower Joe Lischinsky	FEMA - R3 ICFI
Waterford Local EOC	Jill Leatherman Timothy Looby *Roy Smith	ICFI FEMA - RI ICFI
Old Lyme: Central Office Regional School District 18	*Helen LaForge	FEMA - RI

East Lyme: Aces High Campground	*Helen LaForge	FEMA - RI
East Lyme: Flanders Elementary School	*Helen LaForge	FEMA - RI
Waterford: Bay View Nursing Home	*Helen LaForge	FEMA - RI
Waterford: Fountain View/New London Rehab	*Helen LaForge	FEMA - RI
Waterford: Green Tree Manor	*Helen LaForge	FEMA - RI
Stonington EOC	Mark Dalton	ICFI
* Team Leader		

APPENDIX D: EXERCISE PLAN

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated Plume Pathway Exercise- October 19, 2010 Ingestion Pathway Exercise – October 20, 2010

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

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

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

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

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

EXTENT OF PLAY – SPECIFIC

Due to travel time and a compressed time line for the exercise, New York SEMO liaisons may pre-stage for all locations: Fishers Island, NY, Southold NY, and CT State EOC.

Due to travel time and a compressed time line for the exercise, Rhode Island EMA liaisons may pre-stage to staff the CT State EOC.

Due to travel time and a compressed time line for the exercise, the USCG liaison may pre-stage to staff the CT State EOC.

Plume Exposure Pathway – October 19, 2010
1. State Department of Environmental Protection (DEP) Field Teams will be pre-staged at Troop E in Montville.
2. A roster and/or procedures indicating 24-hour staffing capability for key positions (those emergency personnel necessary to carry out critical functions), as indicated in the plan and/or procedures, will be provided to the evaluator (demonstration of a shift change is not required). This criterion is expected of the local EOCs as well.
3. The State Transportation Staging Area at the Veterans Home in Rocky Hill, CT will demonstrate mobilization as per the plan.

Ingestion Pathway – October 20, 2010

N/A

Areas Requiring Corrective Action (ARCA) -RESOLVED
38-08-1.a.1-A-01: A Department of Emergency Management and Homeland Security (DEMHS) 24-Hour staffing roster was provided for the Connecticut Emergency Operations Center; however, some personnel were scheduled to work both 12-hour shifts (but not necessarily in the same position).

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated
Plume Pathway Exercise- October 19, 2010
Ingestion Pathway Exercise – October 20, 2010

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

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

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

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

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

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway – October 19, 2010

N/A

Ingestion Pathway – October 20, 2010

N/A

Areas Requiring Corrective Action (ARCA)

N/A

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated Plume Pathway Exercise- October 19, 2010 Ingestion Pathway Exercise – October 20, 2010

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

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

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

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

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

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway – October 19, 2010

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

Ingestion Pathway – October 20, 2010

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

Areas Requiring Corrective Action (ARCA)

38-08-1.c.1-A-05: In New London: After the Governor proclaimed a "State of Civil Preparedness Emergency" (at 0929) and a declaration of a General Emergency by the Millstone Power Plant (at 1040), the New London Emergency Operations Center pre-empted Region 4 and the Connecticut Department of Emergency Management and Homeland Security and sounded the sirens and issued an Emergency Alert message on their own at 1121.

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated
Plume Pathway Exercise- October 19, 2010
Ingestion Pathway Exercise – October 20, 2010

Evaluation Area 1 – Emergency Operations Management
Sub-element 1.d.1. **Communications and Equipment.** (Sub Element 1.d.1 has been approved for an On-the-Spot Correction.)

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

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

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

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

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

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway – October 19, 2010
1. Web EOC may be used but is not subject to evaluation
2. Everbridge ® public alert system may be used but is not subject to evaluation
3. Other alert systems like "reverse 911" may be used at the local level but are not subject to evaluation

Ingestion Pathway – October 20, 2010

N/A

Areas Requiring Corrective Action (ARCA)

N/A

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated Plume Pathway Exercise- October 19, 2010 Ingestion Pathway Exercise – October 20, 2010

Evaluation Area 1 – Emergency Operations Management
Sub-element 1.e.1. **Equipment And Supplies To Support Operations.** (Sub Element 1.e.1 has been approved for an On-the-Spot Correction.)

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

Intent

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

EXTENT OF PLAY - GENERAL

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

All instruments, including air sampling flow meters (field teams only), should be inspected, inventoried, and operationally checked before each use. They should be calibrated in accordance with the manufacturer's recommendations (or at least annually for the unmodified CDV-700 series or if there are no manufacturer's recommendations for a specific instrument; modified CDV-700 instruments should be calibrated in accordance with the recommendation of the modification manufacturer.). A label indicating such calibration should be on each instrument or verifiable by other means. Note: Field team equipment is evaluated under 4.a.1; radiological laboratory equipment under 4.c.1; reception center and emergency worker facilities' equipment is evaluated under 6.a.1; and ambulance and medical facilities' equipment is evaluated under 6.d.1.

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

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

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

Quantities of dosimetry and KI available and storage locations(s) will be confirmed by physical inspection at storage location(s) or through documentation of current inventory submitted during the exercise, provided in the Annual Letter of Certification submission, and/or verified during a Staff Assistance Visit. Available supplies of KI should be within the expiration date indicated on KI bottles or blister packs. As an alternative, the ORO may produce a letter from FEMA indicating that the KI supply remains potent, in accordance with Food and Drug Administration (FDA) guidance. FEMA issues these letters based upon the findings of the certified independent laboratory that performed the analysis at the ORO's request and expense.

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

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

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated
Plume Pathway Exercise- October 19, 2010
Ingestion Pathway Exercise – October 20, 2010

Evaluation Area 1 – Emergency Operations Management
Sub-element 1.e.1. Equipment And Supplies To Support Operations. **(Sub Element 1.e.1 has been approved for an On-the-Spot Correction.)**

EXTENT OF PLAY - SPECIFIC

Plume Exposure pathway – October 19, 2010
N/A

Ingestion Pathway – October 20, 2010
N/A

Areas Requiring Corrective Action (ARCA) - CORRECTED

38-08-1.e.1-A-02: Field Monitoring Team Alpha and Bravo – Field monitoring team (FMT) kits include Potassium Iodide Tablets 130 mg (KI) for use by the field team members. The KI tablets in the kit were manufactured by Iosat, lot 2003A with an expiration date of August, 2005. There was no documentation of extension of the expiration date in the kit. An extension letter dated 2/15/07 from the Food and Drug Administration to the Nuclear Regulatory Commission was provided to the evaluators after the exercise. This letter authorizes an increase of the expiration date for two additional years for lots manufactured under Iosat's Abbreviated New Drug Application (ANDA) 18-664. As such, even with the extension, the Iosat Tablets included in the field monitoring team's dosimetry package were beyond their expiration date.

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated
Plume Pathway Exercise- October 19, 2010
Ingestion Pathway Exercise – October 20, 2010

Evaluation Area 2 – Protective Action Decision-Making Sub-element 2.a.1. **Emergency Worker Exposure Control.**

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

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

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

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

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

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

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

EXTENT OF PLAY – SPECIFIC

Plume Exposure pathway – October 19, 2010

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

Ingestion Pathway – October 20, 2010
N/A

Areas Requiring Corrective Action (ARCA)
N/A

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated
Plume Pathway Exercise- October 19, 2010
Ingestion Pathway Exercise – October 20, 2010

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

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

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

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

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

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

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

EXTENT OF PLAY – SPECIFIC

Plume Exposure pathway – October 19, 2010
1. This is primarily a State objective however, until a Governor's State of Emergency Declaration is made, local officials may make decisions concerning their communities' protective and precautionary actions.

Ingestion Pathway – October 20, 2010
N/A

Areas Requiring Corrective Action (ARCA)
NONE

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated
Plume Pathway Exercise- October 19, 2010
Ingestion Pathway Exercise – October 20, 2010

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

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

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

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

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

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

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

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

EXTENT OF PLAY – SPECIFIC

Plume Exposure pathway – October 19, 2010
1. This is primarily a State objective. However, until a Governor's State of Emergency Declaration is made, local officials may make decisions concerning their communities' protective and precautionary actions.

Ingestion Pathway – October 20, 2010
N/A

Areas Requiring Corrective Action (ARCA)
N/A

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated
Plume Pathway Exercise- October 19, 2010
Ingestion Pathway Exercise – October 20, 2010

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

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

Intent

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

EXTENT OF PLAY - GENERAL

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

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

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

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

EXTENT OF PLAY - SPECIFIC

Plume Exposure pathway – October 19, 2010
N/A

Ingestion Pathway – October 20, 2010
N/A

Area Requiring Corrective Action (ARCA)
N/A

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated Plume Pathway Exercise- October 19, 2010 Ingestion Pathway Exercise – October 20, 2010

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

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

Intent

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

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

EXTENT OF PLAY - GENERAL

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

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

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

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

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

EXTENT OF PLAY – SPECIFIC

Plume Exposure pathway – October 19, 2010

N/A

Ingestion Pathway – October 20, 2010

N/A

Areas Requiring corrective Action (ARCA)

N/A

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated Plume Pathway Exercise- October 19, 2010 Ingestion Pathway Exercise – October 20, 2010

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

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

Intent

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

EXTENT OF PLAY - GENERAL

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

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

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

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

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

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

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

EXTENT OF PLAY - SPECIFIC

Plume Exposure pathway – October 19, 2010

N/A

Ingestion Pathway – October 20, 2010

N/A

Areas Requiring corrective Action (ARCA)

N/A

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated Plume Pathway Exercise- October 19, 2010 Ingestion Pathway Exercise – October 20, 2010

Evaluation Area 3 – Protective Action Implementation
Sub-element 3.a.1. **Implementation of Emergency Worker Exposure Control.** (Sub Element 3.a.1 has been approved for an On-the-Spot Correction.

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

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

EXTENT OF PLAY - GENERAL

OROs should demonstrate the capability to provide appropriate direct-reading and permanent record dosimetry, dosimetry chargers, and instructions on the use of dosimetry to emergency workers. For evaluation purposes, appropriate direct-reading dosimetry is defined as dosimetry that allows individual(s) to read the administrative reporting limits (that are pre-established at a level low enough to consider subsequent calculation of Total Effective Dose Equivalent) and maximum exposure limits (for those emergency workers involved in life saving activities) contained in the OROs plans and procedures.
Each emergency worker should have the basic knowledge of radiation exposure limits as specified in the ORO's plan and/or procedures. Procedures to monitor and record dosimeter readings and to manage radiological exposure control should be demonstrated.
During a plume phase exercise, emergency workers should demonstrate the procedures to be followed when administrative exposure limits and turn-back values are reached. The emergency worker should report accumulated exposures during the exercise as indicated in the plans and procedures. OROs should demonstrate the actions described in the plan and/or procedures by determining whether to replace the worker, to authorize the worker to incur additional exposures or to take other actions. If scenario events do not require emergency workers to seek authorizations for additional exposure, evaluators should interview at least two emergency workers, to determine their knowledge of whom to contact in the event authorization is needed and at what exposure levels. Emergency workers may use any available resources (e.g. written procedures and/or co-workers) in providing responses.
Although it is desirable for all emergency workers to each have a direct-reading dosimeter, there may be situations where team members will be in close proximity to each other during the entire mission and adequate control of exposure can be effected for all members of the team by one dosimeter worn by the team leader. Emergency workers who are assigned to low exposure rate areas, e.g., at reception centers, counting laboratories, emergency operations centers, and communications centers, may have individual direct-reading dosimeters or they may be monitored by dosimeters strategically placed in the work area. It should be noted that, even in these situations, each team member must still have their own permanent record dosimeter.
Individuals without specific radiological response missions, such as farmers for animal care, essential utility service personnel, or other members of the public who must re-enter an evacuated area following or during the plume passage, should be limited to the lowest radiological exposure commensurate with completing their missions.
All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated
Plume Pathway Exercise- October 19, 2010
Ingestion Pathway Exercise – October 20, 2010

Evaluation Area 3 – Protective Action Implementation
Sub-element 3.a.1. **Implementation of Emergency Worker Exposure Control.** (Sub Element 3.a.1 has been approved for an On-the-Spot Correction.

EXTENT OF PLAY - SPECIFIC

When Issuing Dosimetry, copies may be made of appropriate current forms and used during the exercise, in order to conserve actual carbonless forms.

Plume Exposure pathway – October 19, 2010

1. One dosimetry packet will be issued to each individual in the local EOCs.
2. Emergency workers will read dosimetry at regular intervals or as instructed.
3. FEMA evaluator(s) will also evaluate dosimetry briefing and issue at Troop E in Montville.

Ingestion Pathway – October 20, 2010

1. Field Sample Team personnel may simulate the use of protective clothing in public areas.
2. DEP Field Sample Teams, Access Control Points, State & Local Police, and DOT directed into the field will be issued individual dosimetry.

Areas Requiring Corrective Action (ARCA)

38-08-3.a.1-A-03: During the exercise the field team members did not read their self reading dosimeters at regular intervals (every 15 to 30 minutes) as instructed to during their pre-deployment briefing.

38-08-3.a.1-A-04: KI was not issued to the Town of Lyme emergency workers with their dosimetry kits. This issue is identical to issue 38-04-3.a.1-A-01, which had been resolved in 2006 in Lyme.

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated
Plume Pathway Exercise- October 19, 2010
Ingestion Pathway Exercise – October 20, 2010

Evaluation Area 3 – Protective Action Implementation
Sub-element 3.b.1. **Implementation of KI Decision.**

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

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

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

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

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

EXTENT OF PLAY - SPECIFIC

When Issuing Dosimetry, copies may be made of appropriate current forms and used during the exercise, in order to conserve actual carbonless forms.

Plume Exposure pathway – October 19, 2010
N/A

Ingestion Pathway – October 20, 2010
N/A

Areas Requiring Corrective Action (ARCA)
N/A

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated
Plume Pathway Exercise- October 19, 2010
Ingestion Pathway Exercise – October 20, 2010

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

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

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

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

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

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

EXTENT OF PLAY - SPECIFIC

Plume Exposure pathway – October 19, 2010

1. The State Public Health Department will demonstrate initial contact with nursing facilities and L & M Hospital from the DPH Command Center.
2. Communities will demonstrate this objective by discussion to include: identification of special needs populations, transportation requirements and the coordination of activities with the State EOC to obtain additional transportation resources as necessary.
3. Pre-designated nursing care facilities will be surveyed out of sequence (90 days before and 30 days after) to discuss their emergency procedures. The designated nursing homes in Waterford include: Bayview Health Care, Fountain View and Greentree Nursing and Rehab. Nursing Home Review will be conducted on 10/15/2010.

Ingestion Pathway – October 20, 2010
N/A

Area Requiring Corrective Action (ARCA)
N/A

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated Plume Pathway Exercise- October 19, 2010 Ingestion Pathway Exercise – October 20, 2010

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

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

Intent

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

EXTENT OF PLAY - GENERAL

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

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

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

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

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

EXTENT OF PLAY - SPECIFIC

Plume Exposure pathway – October 19, 2010

1. The following two selected communities will discuss the ability and resources necessary to implement protective actions for school children:
   - East Lyme
   - Old Lyme
   - Within the time frame of 90 days before, and 30 days after the exercise, East Lyme and Old Lyme will conduct a discussion of their plans with the respective school superintendents and one designated school principal in each district. School Reviews will be conducted on 10/15/2010.
2. The State Public Health Department will demonstrate contacting licensed day care providers/facilities within the plume EPZ from the DPH Command Center.

Ingestion Pathway – October 20, 2010

N/A

Area Requiring Corrective Action (ARCA)

N/A

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated
Plume Pathway Exercise- October 19, 2010
Ingestion Pathway Exercise – October 20, 2010

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

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

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

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

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

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

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

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway – October 19, 2010
1. Traffic access and control points will be demonstrated through interview in each of the EPZ towns.
2. Actual/physical implementation of traffic control points (TCPs) will not be demonstrated, evaluation will be accomplished through discussion with FEMA Evaluators and appropriate law enforcement officials.
3. FEMA evaluators will observe barrier materials at the State DOT District II Office.

Ingestion Pathway October 20, 2010
1. The establishing of access control points will be demonstrated at the State EOC by responsible agencies (ie Agriculture, State Police, DPH, etc) through discussion.

Area Requiring Corrective Action (ARCA)

N/A

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated
Plume Pathway Exercise- October 19, 2010
Ingestion Pathway Exercise – October 20, 2010

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

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

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

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

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

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway October 19, 2010
N/A

Ingestion Pathway October 20, 2010
N/A

Area Requiring Corrective Action (ARCA)
N/A

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated
Plume Pathway Exercise- October 19, 2010
Ingestion Pathway Exercise – October 20, 2010

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

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

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

EXTENT OF PLAY - GENERAL

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

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

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

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway – October 19, 2010
N/A

Ingestion Pathway – October 20, 2010
1. The implementation process of the State's decisions will be demonstrated through discussion.

Areas Requiring corrective Action (ARCA)
N/A

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated
Plume Pathway Exercise- October 19, 2010
Ingestion Pathway Exercise – October 20, 2010

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

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

Intent

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

EXTENT OF PLAY - GENERAL

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

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

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

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway – October 19, 2010

N/A

Ingestion Pathway – October 20, 2010

1. The implementation process of the State's decisions will be demonstrated through discussion.

Areas Requiring Corrective Action (ARCA)

N/A

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated
Plume Pathway Exercise- October 19, 2010
Ingestion Pathway Exercise – October 20, 2010

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

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

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

EXTENT OF PLAY - GENERAL

Relocation: OROs should demonstrate the capability to coordinate and implement decisions concerning relocation of individuals, not previously evacuated, to an area where radiological contamination will not expose the general public to doses that exceed the relocation PAGs. OROs should also demonstrate the capability to provide for short-term or long-term relocation of evacuees who lived in areas that have residual radiation levels above the (first-, second-, and fifty-year) PAGs.
Areas of consideration should include the capability to communicate with OROs regarding timing of actions, notification of the population of the procedures for relocation, and the notification of, and advice for, evacuated individuals who will be converted to relocation status in situations where they will not be able to return to their homes due to high levels of contamination. OROs should also demonstrate the capability to communicate instructions to the public regarding relocation decisions.
Re-entry: OROs should demonstrate the capability to control re-entry and exit of individuals who need to temporarily re-enter the restricted area, to protect them from unnecessary radiation exposure and for exit of vehicles and other equipment to control the spread of contamination outside the restricted area. Monitoring and decontamination facilities will be established as appropriate.
Examples of control procedure subjects are: (1) the assignment of, or checking for, direct-reading and non-direct-reading dosimeters for emergency workers; (2) questions regarding the individuals' objectives and locations expected to be visited and associated timeframes; (3) maps and plots of radiation exposure rates; (4) advice on areas to avoid; and procedures for exit, including monitoring of individuals, vehicles, and equipment, decision criteria regarding contamination, proper disposition of emergency worker dosimeters, and maintenance of emergency worker radiation exposure records.
Return: OROs should demonstrate the capability to implement policies concerning return of members of the public to areas that were evacuated during the plume phase. OROs should demonstrate the capability to identify and prioritize services and facilities that require restoration within a few days, and to identify the procedures and resources for their restoration. Examples of these services and facilities are medical and social services, utilities, roads, schools, and intermediate term housing for relocated persons.
Communications among OROs for relocation, re-entry, and return may be simulated; however all simulated or actual contacts should be documented. These discussions may be accomplished in a group setting.
OROs should use Federal resources as identified in the FRERP, and other resources (e.g. compacts, nuclear insurers, etc), if available. Evaluation of this criterion will take into consideration the level of Federal and other resources participating in the exercise.

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

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway – October 19, 2010
N/A

Ingestion Pathway – October 20, 2010
1. The implementation process of the State's decisions will be demonstrated through discussion.

Areas Requiring corrective Action (ARCA)
N/A

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated
Plume Pathway Exercise- October 19, 2010
Ingestion Pathway Exercise – October 20, 2010

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

Criterion 4.a.1: **The field teams are equipped to perform field measurements of direct radiation exposure (cloud and ground shine) and to sample airborne radioiodine and particulates.** (NUREG-0654, H.10, I.8., 9., 11.)

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

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

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

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

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway – October 19, 2010
1. Air sample cartridges used during the exercise have been specifically designated for drill or exercise use only. These cartridges may be used more than once during the exercise. The inventory of air sample cartridges to be used in an actual emergency is located at the DEP in Hartford, Troop C in Colchester, Marine HQ in Old Lyme, and at Troop E in Montville. The actual inventory list will be made available.

Ingestion Pathway – October 20, 2010
N/A

Area Requiring Corrective Action (ARCA)
N/A

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated
Plume Pathway Exercise- October 19, 2010
Ingestion Pathway Exercise – October 20, 2010

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

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

Intent

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

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

EXTENT OF PLAY - GENERAL

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

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

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

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

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

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway – October 19, 2010
N/A

Ingestion Pathway – October 20, 2010
N/A

Area Requiring Corrective Action (ARCA)
N/A

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated Plume Pathway Exercise- October 19, 2010 Ingestion Pathway Exercise – October 20, 2010

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

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

Intent

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

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

EXTENT OF PLAY - GENERAL

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

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

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway – October 19, 2010

1. Based upon the compressed timeframe of the plume exercise, DEP field air monitoring teams will be dispatched from State Police Troop E (Montville) barracks.
2. DEP will deploy 2 field teams, to three locations each, who will determine plume characteristics by field measurements.
   - 2a. Each DEP Field Monitoring Team will be dispatched to three sampling points each, where they will take radiation (dose rate) measurements at each of the three locations and report them to their Field Team Controller (FTC). Each DEP Team will take at least one (particulate & iodine) air sample.

Ingestion Pathway – October 20, 2010

N/A

Area Requiring Corrective Action (ARCA)

N/A

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated
Plume Pathway Exercise- October 19, 2010
Ingestion Pathway Exercise – October 20, 2010

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

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

Intent
This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to assess the actual or potential magnitude and locations of radiological hazards in the ingestion emergency planning zone (IPZ) and for relocation, re-entry and return measures.
This sub-element focuses on the collection of environmental samples for laboratory analyses that are essential for decisions on protection of the public from contaminated food and water and direct radiation from deposited materials.
EXTENT OF PLAY - GENERAL
The ORO field teams should demonstrate the capability to take measurements and samples, at such times and locations as directed, to enable an adequate assessment of the ingestion pathway and to support re-entry, relocation, and return decisions. When resources are available, the use of aerial surveys and in-situ gamma measurement is appropriate. All methodology, including contamination control, instrumentation, preparation of samples, and a chain-of-custody form for transfer to a laboratory, will be in accordance with the ORO's plan and/or procedures.
Ingestion pathway samples should be secured from agricultural products and water. Samples in support of relocation and return should be secured from soil, vegetation, and other surfaces in areas that received radioactive ground deposition.
OROs should use Federal resources as identified in the FRERP, and other resources (e.g. compacts, nuclear insurers, etc), if available. Evaluation of this criterion will take into consideration the level of Federal and other resources participating in the exercise.
All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway – October 19, 2010

Post Plume Pathway– October 19, 2010

1. 3 Soil Samples will be collected by DEP field teams at one location.
2. Two (2) DEP Relocation Teams (same players as Monitoring Teams) will collect two smear samples each, at two different locations each.
3. Smear samples will be packaged but will not be delivered to the DPH LAB for analysis.

Ingestion Pathway – October 20, 2010 (continued)

1. Five (5) Sampling Teams will be assembled at the CT State Armory in Hartford to demonstrate equipment and procedures for the collection and transport of IP samples:
2. Two (2) Department of Public Health Team will collect 2 water samples each. (Each of these teams will do sampling at only one reservoir.)
3. One (1) Consumer Protection Team will collect 2 samples from one location.
4. Two (2) Agriculture teams will collect 4 samples each, to include soil, milk, eggs, green chop or other vegetation in season. These samples may be collected at one location per team, if available. However, if all required samples are not available at one location per team, a second location must be visited to collect the balance samples

Areas Requiring corrective Action (ARCA)
N/A

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated
Plume Pathway Exercise- October 19, 2010
Ingestion Pathway Exercise – October 20, 2010

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

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

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

EXTENT OF PLAY - GENERAL
The laboratory staff should demonstrate the capability to follow appropriate procedures for receiving samples, including logging of information, preventing contamination of the laboratory, preventing buildup of background radiation due to stored samples, preventing cross contamination of samples, preserving samples that may spoil (e.g., milk), and keeping track of sample identity. In addition, the laboratory staff should demonstrate the capability to prepare samples for conducting measurements.
The laboratory should be appropriately equipped to provide analyses of media, as requested, on a timely basis, of sufficient quality and sensitivity to support assessments and decisions as anticipated by the ORO's plans and procedures. The laboratory(ies) instrument calibrations should be traceable to standards provided by the National Institute of Standards and Technology. Laboratory methods used to analyze typical radionuclides released in a reactor incident should be as described in the plans and procedures. New or revised methods may be used to analyze atypical radionuclide releases (e.g. transuranics or as a result of a terrorist event) or if warranted by circumstances of the event. Analysis may require resources beyond those of the ORO.
The laboratory staff should be qualified in radioanalytical techniques and contamination control procedures.
OROs should use Federal resources as identified in the FRERP, and other resources (e.g. compacts, nuclear insurers, etc), if available. Evaluation of this criterion will take into consideration the level of Federal and other resources participating in the exercise
.All activities must be based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway –October 19, 2010
N/A

Ingestion Pathway – October 20, 2010

1. Laboratory operations will be demonstrated out of sequence with the main scenario timeline.
2. The CT DPH Laboratory will demonstrate sample radioanalysis, using controller-provided samples and sample data.
3. The State DPH Lab will set up a sample receipt area and demonstrate receipt of (10) samples delivered by controller, out-of-sequence from Field Team demonstration.
   The lab will prepare to analyze:
   - Two parts of the iodine field sample from the plume phase, including the filter.
   - One crop sample in season.
   - Milk (if there are any dairies with grazing cows within the affected area).
   - Surface water if used for drinking (after treatment).
   - Vegetation.
4. The laboratory will demonstrate initial counting of the samples, however, full counting periods will be truncated to facilitate exercise play. Laboratory personnel will discuss appropriate count times for samples to be processed.
5. The laboratory has set a new sample receipt survey limit of 2.5 mr/hr. If the survey result with the CDV-700 is less than 2.5 mr/hr, the DPH Lab will accept it for analysis. If the survey result is greater than or equal to 2.5 mr/hr, the Lab will not accept the sample

Areas Requiring corrective Action (ARCA)
N/A

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated
Plume Pathway Exercise- October 19, 2010
Ingestion Pathway Exercise – October 20, 2010

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

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

Intent

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

EXTENT OF PLAY - GENERAL

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

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

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

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

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

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway – October 19, 2010

1. Activation of the public alerting systems (PAS) (sirens) will be simulated.
2. Alert and notification activities leading to Emergency Alerting System (EAS) activation simulation and the release of EAS messages will be demonstrated.

Ingestion Pathway – October 20, 2010

N/A

Area Requiring Corrective Action (ARCA)

N/A

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated Plume Pathway Exercise- October 19, 2010 Ingestion Pathway Exercise – October 20, 2010

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

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

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

EXTENT OF PLAY - GENERAL

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

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

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

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway – October 19, 2010
The following towns and sirens (with their associated routes) will be demonstrated OOS of the exercise, but on the exercise day: Groton Town: G-51, Groton City: G-1, Montville: MV-52

Ingestion Pathway – October 20, 2010
N/A

Area Requiring Corrective Action (ARCA)
N/A

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated Plume Pathway Exercise- October 19, 2010 Ingestion Pathway Exercise – October 20, 2010

Evaluation Area 5 – Emergency Notification and Public Information
Sub-element 5.b.1 **Notification of Information to Public in a Timely Manner**. (Sub Element 5.b.1 has been approved for an On-the-Spot Correction.)

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

Intent

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

EXTENT OF PLAY - GENERAL

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

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

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

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

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

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

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

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

Extent of Play for State of Connecticut & Millstone Station FEMA Evaluated
Plume Pathway Exercise- October 19, 2010
Ingestion Pathway Exercise – October 20, 2010

Evaluation Area 5 – Emergency Notification and Public Information
Sub-element 5.b.1 **Notification of Information to Public in a Timely Manner**. (Sub Element 5.b.1 has been approved for an On-the-Spot Correction.)

EXTENT OF PLAY - SPECIFIC

Plume Exposure Pathway – October 19, 2010
Public Instructions and Emergency Communications:

1. Activation of a joint media center at the State Armory will be demonstrated by using mock media.

Public Inquiry/Rumor Control (Informational Call Line):

1. A control cell will initiate rumors and make calls to the 211 Infoline.
2. Since actual EAS broadcasts will not be made, monitoring of the EAS stations and EAS operability testing will be demonstrated/simulated in the EAS room (operability testing) and the State Joint Media Center (monitoring).
3. CT-N will broadcast a webstream of the exercise.

Ingestion Pathway – October 20, 2010

1. The issue of Press Releases to agencies outside exercise play will be simulated.
2. JIC operations will include at least one preliminary notification briefing/news conferences and one Protective Action briefing/news conference.
3. Reproduction and distribution of protective action information materials to individuals and businesses will be simulated.
4. Instructional or informational messages on ingestion pathway protective measures will be developed for news briefings although actual broadcast of messages will be simulated.
5. Rumor Control/Public Inquiry will not be demonstrated during the Ingestion Pathway portion of the exercise.
6. CT-N will broadcast a webstream of the exercise.

Areas Requiring Corrective Action (ARCA)
N/A

Millstone Exercise – Plume and Post Plume
October 19 – 20, 2010

DAY ONE - PLUME PHASE, Tuesday 10/19/2010

This is a Drill

Approx. TIME	ACTIVITY/EVENT	MSG #	EOP ACTIONS TO BE OBSERVED
Wednesday 10/19/10 Day 1 Plume -	**Plume Exercise Start** • Millstone Station EOF • CT State EOC • Region 4 Office, Colchester • CSP Barracks, Troop E, Montville • EPZ Town EOCs	1.a 1.b 1.c	The State National Guard will be responsible for providing the security at the EOC/JMC.
Day 1 Plume -	Plant Event		The 142' wind direction is FROM 165° (SSE) at a wind speed of ≈ 7.2 mph. It is currently a sunny day with no expected precipitation in the forecast.
Day 1 Plume – 0740	A seismic event is reported at Millstone and is felt by East Lyme and Waterford residents		There are no reports of damage in any location outside of Millstone.
Day 1 Plume – By 0755	Plant Event		Millstone declares Alert, C-1 based on TA-2, Seismic Event > 0.09 g ZPA
Day 1 Plume – 0805	Plant Event		Unable to close isolation valves from containment
Day 1 Plume -	Mobilization, activation and operation of the State and local EOC's.	2,4	On Day One only, mobilization of emergency response organizations will be initiated by radio pager message. During activation the Facility (1.b.1), Direction and Control (1.c.1), Communications Equipment (1.d.1) and Supplies (1.e.1) will be demonstrated.
Day 1 Plume – 0830	Plant Event		damage (breach) in enclosure building identified
Day 1 Plume – 0925	Plant Event		Loose parts alarm for Reactor Coolant System, Reactor Coolant Pump vibration, Anticipated Transient Without Scram (ATWS),
Day 1 Plume – 0927	Plant Event		Operators recognize loss of bus 24C (vital electrical bus)

DAY ONE - POST-PLUME – RELOCATION - PHASE, Tuesday 10/19/2010

Approx. TIME	ACTIVITY/EVENT	MSG #	EOP ACTIONS TO BE OBSERVED
Following the plume phase, simulate several hours have passed. Note: If time of sample or lab analysis is required for calculation purposes, a collection time of 2000 may be used with a count time of 2200			
Tuesday 10/19/2010 Day 1 Relocation – 1430	POST PLUME Relocation Activities Begin With a licensee / DEP / Federal Team Briefing	PP 1-1	DEP, DEMHS, Federal Team members reconvene at the State EOC. Clock is reset.
Day 1 Relocation – 1430	Advance Party Team meeting. The FRMAC will support DEP in dose assessment activities.	PP 1-2	2 FRMAC representatives arrive at State EOC to assist CT with an environmental monitoring plan based on DOE flyover results. Includes EPA and CDC, conference call with NRC and CDC Dose rates, release characterization, isotopic analysis and in-situ gamma results provided to identify plume footprint.
Day 1 Relocation – 1500	DOE provides dose projection maps. DOE provides Flyover maps	PP 1-3 PP 1-8	Maps are provided by FRMAC. Relocation Survey Plan developed.
Day 1 Relocation	Additional field teams arrive.	PP 1-4(b)	Additional field teams have arrived from DOE

DAY ONE - POST-PLUME – RELOCATION - PHASE, Tuesday 10/19/2010

Approx. TIME	ACTIVITY/EVENT	MSG #	EOP ACTIONS TO BE OBSERVED
1500			and from throughout New England. Ten additional teams are available.
Day 1 Relocation – 1530	DEP- Dose Assessment staff begins the review of RAD Consequence Assessment data for the Relocation Phase.	PP 1-4a PP 1-4b	Smear lab analysis results provided to Dose Assessment for calculations. Smear data will be presented to players on a representative number of Smear Analysis Results Forms from the DPH Lab. (calculations may be accomplished out of sequence at any convenient time prior to 1000) The DEP Dose Assessment staff will evaluate smear sample results to determine **1/2/50 year doses for relocation zone definition**, Points above and below Relocation PAGs will be plotted on a map.
Day 1 Relocation – 1530	Relocation Maps developed by CT GIS staff	PP 1-4c	GIS staff will demonstrate the ability to delineate areas that show areas to be relocated. Once the ability is demonstrated, complete pre-drawn maps may be provided.

DAY ONE - POST-PLUME – RELOCATION - PHASE, Tuesday 10/19/2010			
Approx. TIME	**ACTIVITY/EVENT**	**MSG #**	**EOP ACTIONS TO BE OBSERVED**
Day 1 – Relocation – 1600	Prepare for Day 2	PP 1-8a	DEP, DEMHS, Gov, DPH, leadership provided instruction to prepare briefing for Day 2 activities
1620	Drill Termination except for DEP and Feds	PP 1-9	
Day 1 Relocation – 1630	DEP- Dose Assessment staff will develop the PARs for relocation / return / re-entry based on the available smear data.		**Relocate, Return, Re-entry** decision making in consultation with FRMAC / NRC Team
Day 1 Relocation – 1700	FRMAC provides Ingestion Projection maps to DEP - completes DAY 1 Post-Plume activities in preparation for Day 2 - Ingestion Pathway.	PP 1-8	
Day 1 Relocation – 1730	Terminate Day 1 activities for DEP and Feds	PP 1-9	

DAY TWO - INGESTION PHASE, Wednesday 10/20/2010 These activities would take place in the days and weeks following the event			
Approx. TIME	**ACTIVITY/EVENT**	**MSG #**	**EOP ACTIONS TO BE OBSERVED**
Day 2 Ingestion - 0800	CT State and Federal agencies start in place at the State EOC.		Staffing - prepositioned: State EOC: CT Dept of Emergency Management and Homeland Security CT Dept of Environmental Protection* CT Dept of Public Health CT Dept of Agriculture CT Dept of Consumer Protection CT State Police NY SEMO Liaison RI RIEMA Liaison FRMAC USNRC, CDC, EPA Representative sample of EPZ EMDs and/or PDs CT-DPH Command Center will be staffed for communications with teams following deployment. CT – DPH Lab
Day 2 Ingestion - 0800	Lead Controllers provide greeting and briefing for all participants on time jump	PP 2-1	Participants will have been told in advance when to pre-stage at the State EOC.

DAY TWO - INGESTION PHASE, Wednesday 10/20/2010 These activities would take place in the days and weeks following the event			
Approx. TIME	**ACTIVITY/EVENT**	**MSG #**	**EOP ACTIONS TO BE OBSERVED**
	simulation		
Day 2 Ingestion - 0830	Director(s) - brief EOC on previous day's Post Plume data—Relocate, Return, Re-Entry.	PP 2-2	In preparation for developing a Sampling Plan.
Day 2 Ingestion - 00845	DEP- requests AG, CP, DPH develop a sampling plan based on deposition footprint exclusive of relocated areas.		Sampling plan/strategies are developed for preparation of Field Sampling Team deployment.
Day 2 **Relocation** – 0855	DEP- provide the PARs for relocation / return / re-entry		**Communicate Relocate, Return, Re-entry** to decision makers
Day 2 **Relocation** – 0900	Implementation of Relocation Decision		State of Connecticut, Towns of Waterford and East Lyme decision makers will implement (by discussion) the controls required to restrict access to the relocation area and allow reentry for returning evacuees outside the relocation area.
Day 2 **Relocation** – 0900	Implementation of Traffic/Access Control as it applies to Post Plume.		**Relocation, Re-Entry, and Return** Implementation will be simulated - accomplished by discussion.
Day 2 **Ingestion** - 0900	Implement Exposure Control for Sampling Teams.	PP 2-4	Teams are issued dosimetry, survey meters by the DPH Coordinator. Teams are provided

DAY TWO - INGESTION PHASE, Wednesday 10/20/2010 These activities would take place in the days and weeks following the event			
Approx. TIME	**ACTIVITY/EVENT**	**MSG #**	**EOP ACTIONS TO BE OBSERVED**
			communication equipment.
Day 2 Ingestion - By 0900	Field Sampling Teams are assembled at the State armory, briefed and prepared for deployment	PP 2-5 PP 2-6 PP 2-7a PP 2-7b PP 2-7c	**CT—Sampling Teams** Five Sampling teams will be deployed out of sequence to pre-designated nearby locations: (2) Dept of Agriculture (2) Dept. of Health-Water Division (1) Dept of Consumer Protection **Teams will deliver samples to the DPH lab at 1300**
Day 2 Ingestion 1000	**CT DPH Laboratory** The CT DPH Lab will set up a sample receipt area.	PP 2-16 PP 2-17	**CT DPH Laboratory** The Lab will demonstrate the set up and analysis procedures for the following types of samples: milk, soil, grass, water
Day 2 Ingestion - 1000	Dose Assessment staff are provided with laboratory sample analysis results to evaluate.	PP 2-19a PP 2-19b PP 2-19c	Several sample analysis sheets will be provided (simulated to be faxed to DEP from the State

DAY TWO - INGESTION PHASE, Wednesday 10/20/2010 These activities would take place in the days and weeks following the event			
Approx. TIME	**ACTIVITY/EVENT**	**MSG #**	**EOP ACTIONS TO BE OBSERVED**
			DPH Lab, per their procedure). Results will be plotted on a map. (calculations may be accomplished out of sequence at any convenient time prior to 1000)
Day 2 Ingestion – 1000	Ingestion Maps developed by CT GIS staff		GIS staff will demonstrate the ability to delineate areas that show areas where DILs are exceeded. Once the ability is demonstrated, complete pre-drawn maps may be provided.
Day 2 Ingestion – 1000	Determine **Precautionary Actions** to prevent or minimize potential contamination of food.	PP 2-14	State agencies will discuss and determine **Precautionary Actions** to be communicated to public and media.
Day 2 Ingestion – 1030 - 1200	Sample Collection	PP 2-8, PP 2-9, PP 2-10 PP 2-11 PP 2-12 PP 2-13	Field sampling teams from Agriculture, Health and Consumer Protection collect and package samples from pre-designated sample locations
Day 2 Ingestion 1100	Information and instructions to adjacent state EOC, the public and news media are prepared and presented on **Precautionary Actions.**	PP 2-15	A presentation for **mock media** and a **news release** will be developed. Farm community information is available. EAS and rumor control will not be demonstrated in the IP portion of the exercise. State PIO's will participate and will be available if

DAY TWO - INGESTION PHASE, Wednesday 10/20/2010 These activities would take place in the days and weeks following the event			
Approx. TIME	**ACTIVITY/EVENT**	**MSG #**	**EOP ACTIONS TO BE OBSERVED**
			needed.
Day 2 Ingestion 1300	Samples delivered to CT DPH Lab	PP 2-18	Sample teams deliver packaged samples to the DPH Lab for the demonstration of sample receipt, chain-of-custody and contamination control.
Day 2 Ingestion 1300	State EOC decision makers develop measures, strategies and preprinted instructional material for implementing PADS.	PP 2-20	
Day 2 Ingestion – 1330	Lab analysis demonstration		CT DPH Lab will analyze an iodine cartridge, a particulate air sample, a smear, a liquid sample, a vegetation sample, a soil sample. Methods for analyzing additional samples may be discussed
Day 2 Ingestion 1430	Determine **IPZ Protective Actions** to isolate or contain food and prevent its introduction into commerce and to determine whether further actions are appropriate.	PP 2-21	Based on evaluation of various samples, agricultural **Protective Action Decisions** (PADs) will be developed. **IPZ** PADs may be coordinated and discussed with participating EPZ town officials and IPZ States.
Day 2 Ingestion	**News Briefing**	PP 2-22	All **IPZ PADS will be communicated at the JMC**

DAY TWO - INGESTION PHASE, Wednesday 10/20/2010 These activities would take place in the days and weeks following the event			
Approx. TIME	**ACTIVITY/EVENT**	**MSG #**	**EOP ACTIONS TO BE OBSERVED**
1500	Information and instructions to the public and news media are prepared and presented on the **IPZ Protective Actions**.		to a simulated media. The State PIO's at the State EOC/JMC will be receiving the State **IPZ** PADs and at least one press briefing will be conducted.
Day 2 Ingestion ~1600	Exercise Terminated	PP 2-23	

Out of Sequence (within 30 days of Exercise)			
Separate Day -	Implementation of protective actions for Special Populations, Schools, Day Care facilities		Appointments for interviews with affected nursing facilities and schools.
Separate Day -	TSA (Rocky Hill)		Emergency Worker exposure control, simulated dispatch of busses
Separate Day -	Day Care Center		Day Care Centers were evaluated in 2007, next due in 2013

APPENDIX E: STRENGTHS

Strengths

1.0 State of Connecticut

1.1 State Emergency Operations Center

The level of engagement and commitment to this exercise was outstanding. The Department of Emergency Management and Homeland Security (DEMHS) demonstrated excellent overall coordination and management of an extremely complex exercise. DEMHS did an outstanding job in fulfilling their mission of coordinating multiple state and federal agencies.

Communication among staff members was excellent throughout the exercise at the State Emergency Operations Center (EOC), and included timely situation briefings for all staff and regularly-held senior level meetings.

The Commissioner of the Department of Emergency Management and Homeland Security also served as the Governor's Authorized Representative during day one of the exercise. At the request of the Governor's Chief of Staff, the Commissioner kept the Governor's Office apprised of situations and events (such as Emergency Classification Level (ECL) changes, precautionary measures taken, and Protective Action Recommendations) throughout the exercise.

Real world events took place within the Emergency Planning Zone during the exercise, but no interruptions in play resulted. This demonstrated the ability of all involved to handle multiple incidents involving several agencies simultaneously.

The Director of the Radiation Division of the Department of Environmental Protection (DEP) was technically knowledgeable and demonstrated strong leadership skills. The DEP Radiation Division staff demonstrated good team work and compliance with procedures.

During the post plume phase the State Geographic Information System was used quite effectively to present data on maps to the decision makers and to prepare a map of the protective action decision for the briefings of the State EOC and the media.

1.2 State 211

The United Way 211 team showed an exemplary level of preparedness to address the public inquiry and rumor control function. The call center has six bi-lingual staff members. Additionally, they have the capability to reach back and translate over 100 languages. The staff demonstrated they are up for the challenge of adequately addressing the public inquiry and rumor control function for any disaster in Connecticut. Many of their processes could easily assist other 211 call centers in communities around the nation through the sharing of best practices.

1.3 Emergency Operations Facility

The State of Connecticut DEP Liaison to the Millstone Power Station Emergency Operations Facility was technically capable and competent. He proactively sought and verified information that would be of value to his DEP colleagues in the State EOC. As a result of the process of

gathering pertinent information, the DEP Liaison also served as an information link between the utility Information Coordinator and the Radiological Assessment Engineer.

1.4.1 Field Monitoring Team 1 (DEP) and 1.5.1 Field Relocation Team 1 (DEP)
The members of the team were highly experienced and very knowledgeable of radiation protection. They displayed excellent professionalism and skills, and they were open to new ideas and other methods of performing tasks.

1.4.2 Field Monitoring Team 2 (DEP) and 1.5.2 Field Relocation Team 2 (DEP)
The DEP Division of Radiation Protection employee and the DEP Environmental Conservation Police officer had worked with each other as members of the State Field Monitoring Team for several years and were very familiar with each other and cooperated to accomplish tasks.

1.6.2a Field Sampling Team No. 1 (Agriculture)
Field Sampling Team Number 1 exhibited teamwork and professionalism throughout the exercise. They followed a number of best practices, including establishing background readings on their CD V-700s before departing the mobilization point at the State EOC. This assured that the team had an established background prior to entering a potentially contaminated area.

1.6.2b Field Sampling Team No. 2 (Agriculture)
The field sampling team members were intimately familiar with the types of crops/food samples available at specific farms, as well as being on a first name basis with the farmers. When the DoAg Liaison at the State EOC dispatched the sample team to a particular farm to obtain milk and egg samples, the team was able to indicate that particular farm did not have cattle or chickens and was able to recommend an alternative farm in that area.

1.6.3 Field Sampling Team No. 1 (Department of Public Health) and 1.6.4 Field Sampling Team No. 2 (Department of Public Health)
The Connecticut Field Sampling Teams did an excellent job in maintaining contamination control for personnel and for samples, as well as timely checks of personal dosimetry during field sampling activities. Field Team members set audible alarms to ensure that dosimetry was checked every 20 minutes or sooner and to track cumulative dose while on assignment. Glove changes occurred often, contamination surveys were conducted of samples, and reentry into vehicles was systematic to ensure no accidental cross contamination would occur.

1.6.5 Field Sampling Team No. 1 (Consumer Protection)
The Sampling Team Lead was very knowledgeable of the farm stands where locally grown consumer products could be obtained for testing. The sampling team members worked well together to ensure that appropriate contamination controls were implemented while packaging food product samples.

1.7 Media Center

The activation of the Media Center was efficient and setup went quickly. They "hit-the-ground-running" and made good use of checklists. There was continuous communication and coordination within the Media Center team, as well as good coordination with other State EOC entities, as needed. The news releases were comprehensive and extensive. The Connecticut Network was used in an outstanding manner as the Media Briefings were televised and web-streamed.

1.8 Connecticut Department of Public Health (Emergency Command Center)

The entire staff of the Department of Public Health Emergency Command Center (ECC) displayed dedication, enthusiasm, and high quality performance in accomplishing tasks. They cooperated to ensure the ECC ran smoothly throughout the day, and demonstrated detailed knowledge of their areas of expertise. The Incident Commander demonstrated excellent leadership and fostered an atmosphere in which staff were encouraged to ask questions to ensure proper understanding of instructions.

1.9 CT DEMHS Region 4

The Region IV Coordinator and staff clearly demonstrated their knowledge of plans and procedures. Several staff members have been working at Region IV for over twenty years, and their experience was clear. The Regional Coordinator directed well and staff members understood when things needed to be completed. This was truly an efficient team.

1.10 Montville State Police Troop E

The State Police Officer who did the radiological briefing did a thorough job of briefing the troopers assigned to staff Traffic Control Points (TCP)/Access Control Points (ACP). The State Police Troop E Commander was well organized, knew the requirements of the Traffic Management Plan, and knew how to obtain and manage resources so he could effectively support a timely evacuation of the public.

The Department of Transportation (DOT) Maintenance Supervisor demonstrated a team player attitude as he assisted with traffic management set-up and control. He demonstrated a willingness to supplement State Police staffing.

1.11 Connecticut Department of Transportation

The individual acting as Radiological Officer conducted a thorough dosimetry and exposure control briefing, answering emergency workers' questions regarding radiation exposure.

The DOT management staff was very professional and organized. They demonstrated that they could quickly and effectively assist the State Police in setting up and staffing TCPs/ACPs. The Maintenance Supervisor was well-versed in the requirements of the Traffic Management Plan.

1.13 Connecticut State Laboratory

The Connecticut State Lab had modified their procedures since September 14, 2010 to allow for samples with greater radioactivity to be analyzed at the lab. This worked well and provided more support for Protective Action Decision making.

The highly experienced, professional staff demonstrated superb teamwork and excellent command and control.

2.0 Risk Jurisdictions

2.1 East Lyme EOC

The Emergency Management Director (EMD) demonstrated her ability to gather, manage, and pass along vital information to her staff. She was perceptive and sought clarification when needed in order to carry out all necessary procedures, and did an excellent overall job.

2.2 Fishers Island EOC

For his very first exercise as the Fishers Island EMD, the EMD displayed remarkable knowledge of plans and procedures and executed his duties like an experienced pro rather than someone who was new to the job. He set a take-charge tone from the very beginning of the exercise that was maintained throughout, resulting in an efficient and thorough job by him and his staff.

2.3 City of Groton EOC

The City of Groton, Chief Executive Officer (CEO) provided an effective demonstration of direction and control of EOC staff. It was obvious that the EOC staff was a professional, knowledgeable, and well-trained team. The CEO conducted timely and thorough situational update briefings. During EOC briefings the CEO led discussions relative to precautionary and protective actions demonstrating a working knowledge of other EOC position requirements.

The EOC utilized an innovative notification system to advise of the receipt of State messages.

The EOC CEO and his assistant CEO took advantage of the training opportunity the exercise offered, demonstrating a shift change at the beginning of the General Emergency. The management transition was seamless and the Assistant CEO proved capable of handling the job should the necessity arise. The entire EOC performed admirably, despite real-world events going on simultaneously.

2.4 Town of Groton EOC

The Town of Groton EOC demonstrated excellent direction and control throughout the exercise, despite the occurrence of two real-life emergency events in the community. The Emergency Management Director and Deputy handled the incidents without impacting the exercise. While real-life events take precedence over exercise play, the EOC management demonstrated that they were capable of handling multiple events at the same time.

2.5 Ledyard EOC

The most impressive aspect of the Town of Ledyard's emergency response was its professional personnel, from the EOC Director to every one of his staff. The involvement of the Mayor was commendable. Town of Ledyard Departments reflected outstanding knowledge of plans and procedures and their emergency assignments.

The Town's Emergency Management Director demonstrated outstanding leadership by providing continuous direction and control, and is to be commended for his training efforts with

town employees. The EMD coordinated activities related to each staff member's respective area, demonstrated knowledge of their procedures, and worked together to resolve concerns.

Town officials realize the importance of the EOC, and its facilities and equipment are state-of-the-art.

2.6 Lyme EOC
The Emergency Management Director was proactive in anticipating potential obstacles and identifying ways to address them if necessary. For example, in anticipation of the incident at Millstone he ran a silent test to ensure that the sirens were functioning. He explained that if he received an indication of siren failure he would have an alert team ready to perform back-up route alerting.

2.7 Montville EOC
The EOC staff was knowledgeable on their respective positions and were an impressive group who worked together efficiently to accomplish the mission at hand. Players were fully engaged in their roles and took their positions seriously. Communication volunteers were also engaged and knew their responsibilities in detail.

2.8 City of New London EOC
The direct participation of senior officials was noteworthy. The City Manager led the EOC, and the Fire Chief, Police Chief and Deputy Police Chief were in attendance and directly involved in every applicable response activity. The attention to detail by the EMD was evident, not only in his intimate knowledge of the Radiological Emergency Response Plan, but also during the State conference calls.

2.9 Old Lyme EOC
The senior EOC staff ensured all individuals were aware of their duties and responsibilities. Senior EOC officials also augmented gaps in staff by drawing resources from other available town agencies. Regular briefings were given to EOC staff and the Chief Executive kept the two town selectmen informed of involvement in the emergency response through regular briefings.

The Special Needs coordinator was able to quickly meet transportation requirements of special populations.

2.10 Waterford EOC
The overall team in the EOC was exceptional at managing the emergency response to an incident at Millstone. The EMD gave very detailed accounts of what was happening throughout the exercise and prompted rapid informational flow at each ECL change. The EOC team's knowledge of their own individual responsibilities and ability to facilitate the proper responses as the emergency increased yielded a calm EOC operation. The Staff methodically worked through issues as they were received, thus offering new staff an outstanding hands-on training opportunity.

Communications and Traffic Control personnel worked together in a timely manner to implement backup route alerting should it have been necessary.

2.11 Schools: Towns of East Lyme and Old Lyme

The Superintendent Office Regional School District 18 Plans and Procedures are very thorough and comprehensive. The Superintendent displayed excellent knowledge of her District's plans and procedures without hesitation during an evaluated interview from daily student rosters to each level of protective action scenarios.

The Flanders School Plan is thorough and comprehensive and in coordination with the East Lyme School District Plan. The Principal interviewed knew without hesitation the school's plans and procedures. Full team involvement of the plans and procedures for the students was evident with the presence of the East Lyme School Superintendent as well as the Business Manager at this out of sequence interview.

2.12 Special Populations - Nursing Homes

Each of the four nursing homes interviewed had their current plans and procedures readily available. The interview questions posed at each location were answered without any delay that included Potassium Iodide (KI) forms, current KI tablets, transportation needs, protective actions, and communication contacts and roles. It is impressive to see the level of commitment to their residents' safety in addition to their day-to-day responsibilities.

2.13 Special Populations - Parks

Staff interviewed at the Aces High Campground in East Lyme displayed excellent knowledge of their procedures. They is public emergency information signage on the entryway door and current Millstone Power Station Public Emergency Information brochures stocked on their display case for easy access. Additionally, they maintain a current supply of Potassium Iodide (KI). A public alert notification siren is located across the road from their office with regular audible tests conducted by the town. They did a superb job answering all interview questions.

3.0 Support Jurisdictions

3.1 Stonington EOC

The Stonington Police Department, in conjunction with the EMD, developed an internet-based system that will ensure contact with nearly 75% of the population in a very short period of time. This system makes contact via email, texts and telephone voice messages, ensuring numerous means of communication are utilized.

This page is intentionally blank.