

VERMONT YANKEE NUCLEAR POWER CORPORATION

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September 11, 2001
BVY 01-70

United States Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Reference: (a) Letter, VYNPC to USNRC, "2001 Vermont Yankee Emergency
Exercise Scenario," BVY 01-55, dated July 11, 2001.

Subject: **Vermont Yankee Nuclear Power Station**
License No. DPR-28 (Docket No. 50-271)
2001 Vermont Yankee Emergency Response Exercise Manual

In Reference (a), Vermont Yankee noted that a copy of the 2001 Vermont Yankee Emergency Response Exercise Manual would be forwarded to the Document Control Desk following the graded exercise that was held on September 5, 2001. The subject manual is attached.

Should you have questions, please contact Mr. Michael Empey at (802) 258-4174.

Sincerely,

VERMONT YANKEE NUCLEAR POWER CORPORATION



Gautam Sen
Licensing Manager

Attachment

cc: w/o Attachment

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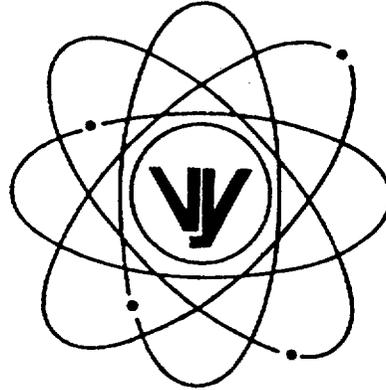
SUMMARY OF VERMONT YANKEE COMMITMENTS

BVY NO.: 01-70 "2001 Vermont Yankee Emergency Response Exercise Manual"

The following table identifies commitments made in this document by Vermont Yankee. Any other actions discussed in the submittal represent intended or planned actions by Vermont Yankee. They are described to the NRC for the NRC's information and are not regulatory commitments. Please notify the Licensing Manager of any questions regarding this document or any associated commitments.

COMMITMENT	COMMITTED DATE OR "OUTAGE"
NONE	N/A

**VERMONT YANKEE NUCLEAR POWER STATION
VERNON, VERMONT**



**EMERGENCY RESPONSE EXERCISE MANUAL
2001**

VERMONT YANKEE NUCLEAR POWER CORPORATION

VERMONT YANKEE NUCLEAR POWER STATION
EMERGENCY PREPAREDNESS EXERCISE
2001

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VERMONT YANKEE 2001 EXERCISE SCHEDULE OF EVENTS

PRE-EXERCISE SCHEDULE OF EVENTS

DESCRIPTION	DATE	TIME	PLACE
Lead Controllers: Initial Briefing	Thursday 8/23/01	1000-1230 (Lunch provided)	Training Center Conference Room A
All OSC Controllers: OSC Controller Training & Mini-Scenario Briefing (TSC Lead Controller included)	Monday 8/27/01	1000-1230 (Lunch provided)	Governor Hunt House
All Controllers: Full Controller organization Training and Briefing	Tuesday 8/28/01	1000-1230 (Lunch provided)	Governor Hunt House
Lead Controllers: Final Briefing	Tuesday 9/4/01	1200-1330 (Lunch provided)	Training Center Conference Room A

EXERCISE DATE (Wednesday, September 5)

DESCRIPTION	DATE	TIME	PLACE
Emergency Preparedness Exercise Players and Controllers	Wednesday 9/5/01	0730-1700 (Lunch provided)	Assigned Facility (OSC, TSC, EOF/RC, NMC, etc.)

POST-EXERCISE SCHEDULE OF EVENTS

DESCRIPTION	DATE	TIME	PLACE
Facility Critique and Debrief: Key Players and Controllers	Wednesday 9/5/01	Approximately 15 minutes after termination of exercise	Assigned location
Lead Controllers: Exercise Debrief	Thursday 9/6/01	0800-1200 (Lunch provided)	Training Center Conference Room A

VERMONT YANKEE NUCLEAR POWER STATION
EMERGENCY PREPAREDNESS EXERCISE
2001

1.2 PARTICIPATING CENTERS/AGENCIES

VERMONT YANKEE NUCLEAR POWER CORPORATION

Vermont Yankee Emergency Response Organization

Facilities

Vermont Yankee Nuclear Power Station - Vernon, Vermont

- Control Room (notification and communications functions only)
- Technical Support Center (2nd floor of Administration Building)
- Operations Support Center (1st floor of Administration Building)
- Energy Information Center (Governor Hunt House)

Vermont Yankee Training Center - Brattleboro, Vermont

- Simulator Room (Control Room functions, 1st floor of Training Center)
- Emergency Operations Facility/Recovery Center (1st floor of Training Center)
- News Media Center (1st and 2nd floor of Training Center)

STATE OF VERMONT

Key Participating State Agencies

- Vermont Emergency Management
- Vermont State Health Department

Facilities

- State Warning Point, Vermont State Police - Waterbury, Vermont
- Emergency Operations Center - Waterbury, Vermont
- Incident Field Office - Dummerston, Vermont
- Department of Health Laboratory - Burlington, Vermont
- Emergency Operations Facility/Recovery Center - Brattleboro, Vermont
- News Media Center, Vermont Yankee Training Center - Brattleboro, Vermont

Key Participating Local Agencies

- Brattleboro, Dummerston, Guilford, Halifax and Vernon Emergency Management Agencies

Facilities

- Brattleboro Emergency Operations Center (EOC) - Brattleboro Town Hall
- Dummerston EOC - Dummerston Town Office Building
- Guilford EOC - Guilford Fire Station
- Halifax EOC - Halifax Fire Station
- Vernon EOC - Vernon Fire Station

Miscellaneous Participants/Facilities

Schools

- Interviews with School/Daycare Principals and Directors
- Laidlaw Transportation

Special Population Center

- Linden Lodge
- Thompson House
- Brattleboro Retreat
- Rescue Inc.
- Brattleboro Memorial Hospital

Radio Station

- WTSA, Brattleboro, VT

STATE OF NEW HAMPSHIRE

Key Participating State Agencies

- New Hampshire Office of Emergency Management
- New Hampshire Division of Public Health Services

Facilities

- State Police Communications Center - Concord, New Hampshire
- State Police Troop C - Keene, New Hampshire
- Southwestern NH District Fire Mutual Aid - Keene, New Hampshire
- Emergency Operations Center - Concord, New Hampshire
- Incident Field Office - Keene, New Hampshire

- Emergency Operations Facility/Recovery Center - Brattleboro, Vermont
- News Media Center, Vermont Yankee Training Center - Brattleboro, Vermont

Key Participating Local Agencies

- Chesterfield, Hinsdale, Richmond, Swanzey and Winchester Emergency Management Agencies

Facilities

- Chesterfield Emergency Operations Center (EOC) - Chesterfield Fire Dept.
- Hinsdale EOC - Hinsdale Fire Station/Town Hall
- Richmond EOC - Richmond Civil Defense Building
- Swanzey EOC – Swanzey Police Station
- Winchester EOC - Winchester Emergency Service Building

Miscellaneous Participants/Facilities

Schools

- School Administration Interviews

Reception Center

- Keene State College Reception/Decon Center

Radio Station

- WKNE, Keene, NH

COMMONWEALTH OF MASSACHUSETTS

Key Participating State Agencies

- Massachusetts Emergency Management Agency
- Massachusetts Department of Public Health
- Nuclear Incident Advisory Team (field monitoring teams)
- Massachusetts State Police
- Dept. of Environmental Management, District 9 Fire Warden
- Dept. of Fish, Wildlife, & Environmental Law Enforcement

Facilities

- Emergency Operations Center - Framingham, Massachusetts
- Area III Emergency Operations Center - Belchertown, Massachusetts
- MA State Police Troop B Headquarters - Northampton, Massachusetts
- MA State Police Barracks Dispatch Center – Shelburne, Massachusetts

- Emergency Operations Facility/Recovery Center - Brattleboro, Vermont
- News Media Center, Vermont Yankee Training Center - Brattleboro, Vermont

Key Participating Local Agencies/Organizations

- Bernardston, Colrain, Gill, Greenfield, Leyden, Northfield and Warwick Emergency Management Agencies
- Franklin County Dispatch

Facilities

- Bernardston Emergency Operations Center (EOC) - Bernardston Fire Station
- Colrain EOC - Colrain Fire Station
- Gill EOC - Gill Fire Station
- Greenfield EOC - Greenfield Fire Station
- Leyden EOC - Leyden Fire Station
- Northfield EOC - Town Hall
- Warwick EOC - Warwick Fire Station

COMMONWEALTH OF MASSACHUSETTS

Miscellaneous Participants/Facilities

Schools

- The Giving Tree School, Gill

Host Facilities for School Children

- Orange Armory

Transportation Providers

- Greenfield-Montague Transportation Authority
- Wilson Bus Lines
- Liebenow, Inc.

Radiological Monitoring and Decontamination Station

- Colrain

Special Population Centers

- Massachusetts Department of Environmental Management District 9 Fire Warden (Northfield State Forest, Warwick Forest in Warwick, Warwick State Forest in Northfield, Mount Grace State Forest in Warwick, Leyden State Forest)
- Massachusetts Department of Fisheries, Wildlife, and Environmental Law Enforcement, Division of Law Enforcement (Bennet Meadow at Route 10 and Connecticut River Bridge in Northfield, Captain Kids Island Camping and Picnic Area in Northfield, Connecticut River Boat Ramp in Northfield, Munn's Ferry Camping and Picnic Area in Northfield, Pauchaug Meadow Wildlife Area in Northfield, Barton Cove Boat Ramp, Riverview Picnic Area in Northfield and Erving)

Radio Station

- WHYN, Springfield
- WHAI, Greenfield
- WRSI, Greenfield

VERMONT YANKEE NUCLEAR POWER STATION
EMERGENCY PREPAREDNESS EXERCISE

2001

2.0 EXERCISE OBJECTIVES AND EXTENT OF PLAY

- 2.1 Vermont Yankee
- 2.2 State of Vermont
- 2.3 State of New Hampshire
- 2.4 Commonwealth of Massachusetts

VERMONT YANKEE NUCLEAR POWER STATION
EMERGENCY PREPAREDNESS ANNUAL EXERCISE
2001

2.1 VERMONT YANKEE - EXERCISE OBJECTIVES AND EXTENT OF PLAY

2001 VERMONT YANKEE ANNUAL DRILL - OBJECTIVES AND EXTENT OF PLAY

A. Emergency Classification and Accident Assessment	Extent of Play
<p>1. Demonstrate the ability of Control Room personnel to recognize emergency initiating events and properly classify the condition in accordance with pre-established emergency action levels (EALs). (CORNERSTONE PERFORMANCE INDICATOR)</p>	<p>A.1 Scenario events initiated on the simulator will provide the operational and radiological data to allow personnel to demonstrate this objective in accordance with Procedure AP 3125, Emergency Plan Classification and Action Level Scheme.</p>
<p>2. Demonstrate the ability of Control Room personnel and Technical Support Center (TSC) staff to coordinate the assessment of plant conditions and corrective actions to mitigate accident conditions.</p>	<p>A.2 The scenario will provide technical information to players that will allow them to analyze plant conditions and initiate corrective actions in accordance with established procedures. Early in-plant actions normally performed by the Control Room support personnel may be controlled and performed by Simulator Controllers until after the Alert classification when the Emergency Response Organization (ERO) is fully activated. Demonstrations of in-plant corrective actions will be controlled in accordance with defined mini-scenarios and as specified in the ground rules (including extent of simulation, etc.).</p>
<p>3. Demonstrate that information concerning plant conditions can be transmitted between the Control Room and the TSC in a timely manner.</p>	<p>A.3 Telephone communications and the Simulated Plant Process Computer System (SPPCS) data link will be established between the Simulator Control Room and the various Emergency Response Facilities in order to transmit key information and data.</p>
<p>4. Demonstrate the ability of the TSC staff to initiate and coordinate corrective actions in an efficient and timely manner.</p>	<p>A.4 Scenario events will enable the TSC to coordinate in-plant corrective actions using Operations Support Center (OSC) personnel.</p>
<p>5. Demonstrate the ability of appropriate staff in the TSC, Simulator Control Room (SCR) and the Emergency Operations Facility/Recovery Center (EOF/RC) to discuss EALs and event classifications.</p>	<p>A.5 Scenario events will allow for discussion between SCR, TSC and EOF/RC staff regarding EALs and emergency classification decisions.</p>
<p>6. Demonstrate the ability to assess data from appropriate</p>	<p>A.6 Scenario events will allow Chemistry and Radiation Protection</p>

*Indicates an identified observation from the 1999 Exercise.

A. Emergency Classification and Accident Assessment	Extent of Play
chemistry samples and radiation protection surveys in support of accident assessment activities and plant conditions.	technicians to simulate taking reactor coolant, containment air, or plant vent stack samples to assess plant conditions. Actual sampling and manipulation of sampling system components will be simulated. Time frame to provide sample results will be controlled and compressed. Controllers will provide sample results after sampling activities are discussed by players.
7. Demonstrate the ability to effectively use the Emergency Response Facility Information System (ERFIS) in the assessment and trending of plant conditions.	A.7 ERFIS workstations in the TSC, EOF and ESC will be connected to the SCR using the SPPCS to receive and display scenario-related data. (Controllers may also provide additional data to players as necessary.) This will allow Emergency Response Facility (ERF) staff the opportunity to demonstrate the use of ERFIS under simulated emergency conditions.

B. Notification and Communication	Extent of Play
1. Demonstrate the ability of Control Room personnel to complete timely plant announcements of declared emergency classifications.	B.1 Scenario events will allow Control Room personnel to make plant announcements for declared emergency classifications.
2. Demonstrate that messages are transmitted in an accurate and timely manner and that decisions, information and messages are properly logged and documented.*	B.2 Various communications links will be established between emergency response facilities in order to transmit information and data. Record keeping and documentation will be demonstrated in accordance with established procedures.
3. Demonstrate the capability to notify federal and state authorities of emergency classification and significant changes in plant status in accordance with established procedures. (CORNERSTONE PERFORMANCE INDICATOR)	B.3 Vermont Yankee staff, NRC, and state authorities shall be notified in accordance with established procedures. NRC will be notified by using the FTS 2001 ENS telephone. The State authorities will be notified through the Nuclear Alert System (Orange Phone).
4. Demonstrate that appropriate status boards are used to display pertinent accident information at various emergency	B.4 Status Boards (where provided) will be used by response personnel to display pertinent information. Status Board Caretakers will be

*Indicates an identified observation from the 1999 Exercise.

B. Notification and Communication	Extent of Play
response facilities.	assigned by facility coordinators to maintain the status boards with current information.
5. Demonstrate that adequate emergency communication systems are in place to facilitate transmittal of data between emergency response facilities and federal and state authorities.	B.5 Communications will be demonstrated between the various Emergency Response Facilities using established communications systems as described in Procedure OP 3504, "Emergency Communications."
6. Demonstrate that off-site monitoring teams can appropriately identify their location when reporting sample results to the EOF.	B.6 Off-site Monitoring Teams will be dispatched to the field and directed to specific sample locations for monitoring activities.
7. Demonstrate the ability to provide adequate briefings to off-site monitoring teams as conditions and information change.	B.7 During the period that the Off-Site Monitoring Teams will be in the field, scenario events may require that periodic updates be provided to them.
8. Demonstrate the ability to adequately communicate plant updates to plant personnel (including ERF Staff) as plant conditions and status information change.*	B.8 Scenario events will allow the TSC to update plant personnel on changing plant conditions and plant status information. Periodic plant announcements should be made to brief plant personnel on plant conditions and emergency status information. Each ERF coordinator should provide periodic general information status updates to their respective ERF Staff.

1999 Exercise Observation - SCR-1:

The primary and alternate auto ring down communication circuit continues to be unreliable and difficult to use for the CR, TSC, OSC, EOF/RC communication purposes. ER-99-0510 was initiated to evaluate situation and recommend alternatives.

1999 Exercise Observation - OSC-3:

Plant Gai-tronics system hard to hear within certain areas of the OSC and the TSC.

1999 Exercise Observation (NRC Report 50-271/99-04), item b.3:

The OSCC provided periodic briefings to his immediate staff, but did not give overall status briefings to OSC personnel.

1999 Exercise Observation - EOF-1:

*Indicates an identified observation from the 1999 Exercise.

General Drillsmanship - During communications of drill information, the ERO did not always use "This is a Drill". In addition, three-part communications were not always used.

C. Direction and Control	Extent of Play
1. Demonstrate the proper transfer of responsibilities from Shift Supervisor/Plant Emergency Director (SS/PED) to the Duty & Call Officer (DCO), and subsequently to the TSC Coordinator and Site Recovery Manager (SRM) as appropriate.	C.1 Scenario events require the activation of the Emergency Response Organization. As each position of authority is activated, responsibilities associated with that position will be transferred from the SS/PED eventually to the SRM.
2. Demonstrate the capability of key ERF management staff to direct and coordinate their respective emergency response activities in an efficient and timely manner.	C.2 All emergency response facilities have designated coordinators who will direct and coordinate emergency response activities in their particular area of responsibility.
3. Demonstrate appropriate coordination of activities with federal and state government agencies.	C.3 The SCR will initially contact the federal and state agencies, providing them with appropriate information on plant conditions and emergency status. This function will pass to the TSC and EOF/RC when those facilities are activated. Communications will only be attempted with those organizations that have agreed to participate in the drill. This information will be provided to the ERO as necessary.

D. Emergency Response Facilities	Extent of Play
1. Demonstrate the ability of station personnel to activate and staff the emergency response facilities in a timely manner. *	D.1 Scenario events will require activation, in real time, of each ERF. Each facility will be fully staffed in accordance with the Emergency Plan. Timely activation should be accomplished within 60 minutes of being notified of the Alert (or higher EAL). The SCR, Control Room (communication functions only), TSC, OSC, EOF/RC, News Media Center and Engineering Support Center will be activated in accordance with established procedures. Designated plant and

*Indicates an identified observation from the 1999 Exercise.

D. Emergency Response Facilities	Extent of Play
	<p>corporate emergency response personnel will participate in the drill. "Pre-staging" of facility staff should not be encouraged, unless agreed upon in advance with the E-Plan organization.</p>
<p>2. Demonstrate and test the adequacy and effectiveness of emergency response facilities, operations, and equipment. *</p>	<p>D.2 Each ERF has been designed/arranged to provide adequate space for assigned staff to perform their respective tasks. Equipment is available to fulfill the various functions of each facility.</p>

1999 Exercise Observation - TSC -3 (facility activation)

Although the TSC was activated and staffed within 1 hour of the Alert classification, the facility activation and set up took too long considering the majority of TSC staff were present at the plant site. (Also NRC observation)

1999 Exercise Observation - TSC-4 (facility operations):

OP 3533 and 3534 procedure requirements appear to cause unnecessary burdensome actions to coordinate chemistry sample requests directly with the Control Room crew instead of the OSC.

1999 Exercise Observation - TSC-1 (facility equipment):

The TSC CAM did not operate properly during the exercise. This item is identified for NRC Inspector Follow-up Item.

1999 Exercise Observation - EOF-1 (exercise gamesmanship):

The EOF area was set-up and pre-staged before the start of the exercise. Controllers had to re-arrange the facility to its normally configured state.

E. Plant Augmentation and Staffing	Extent of Play
<p>1. Demonstrate the adequacy of plant emergency notification methods and procedures to augment plant staff and resources.</p>	<p>E.1 Shift personnel will demonstrate the use of the emergency call-in system to augment plant staff as may be required by scenario events. Community Alert Network (CAN) will not be activated, PAGERS will be activated for this drill.</p>
<p>2. Demonstrate the ability to use outside resources to provide technical assistance and logistical support.</p>	<p>E.2 The Duke Engineering & Services Engineering Support Center (ESC) will not be activated for this drill. ESC activities may be simulated through a control cell, based on scenario conditions.</p>

*Indicates an identified observation from the 1999 Exercise.

<p>3. Demonstrate the ability to coordinate available resources to meet current and protracted ERO operations. This includes establishing a relief schedule for ERO positions and addressing logistical considerations for extended operations.*</p>	<p>E.3 Available resources will be evaluated and assigned to support extended operations. Discussions regarding logistical considerations for maintaining the ERO operational will be conducted, relative to ERO staffing and plant operations.</p>
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1999 Exercise Observation - TSC-7

The implementation of the ERO shift change process needs improvement.

F. Radiological Exposure Control	Extent of Play
<p>1. Demonstrate the ability to provide adequate radiation protection controls for on-site emergency response personnel including exposure limits, dosimetry, equipment, and protective clothing.*</p>	<p>F.1 Scenario events will allow OSC On-Site Assistance Teams to be F.2 dispatched to investigate problems with associated plant equipment. Investigation and repair activities in the plant will require implementation of radiation controls which include authorizing, monitoring and tracking of radiation exposure of OSC On-site Assistance Teams. (Refer to Procedure OP 3507, " Emergency Radiation Exposure Control.") In addition, the exposure of the Off-Site Monitoring Teams will be monitored and tracked in the EOF.</p>
<p>2. Demonstrate the ability to monitor and track radiation exposure of on-site emergency response personnel.</p>	

1999 Exercise Observation - TSC-2

It appears there are no access controls in place to prevent unlimited access from leaving the TSC envelope to the second floor hallway and I/C shop area in the Admin Building. This is outside the TSC habitability envelope and outside the TSC controlled boundary area.

1999 Exercise Observation - OSC-6

Initial dose limits for repair teams were too conservative for the tasks to be completed. Team had to turn back to receive emergency dose authorization to complete a critical assignment.

*Indicates an identified observation from the 1999 Exercise.

G. In-Plant Corrective and Repair Actions	Extent of Play
1. Demonstrate the ability to dispatch and deploy on-site assistance teams in a timely fashion, consistent with plant conditions and assigned function.	G.1 OSC On-site Assistance Teams should be dispatched to investigate G.2 problems associated with plant equipment. Briefings should be conducted with emergency teams to ensure job requirements are clear and understood. OSC Team Work Status Forms (VYOPF 3501.06) should be used to keep track of team assignments and work tasks.
2. Demonstrate the ability to provide adequate briefings to on-site assistance teams on job assignments and tasks.	
3. Demonstrate the capability of on-site assistance teams to perform corrective actions on plant equipment during emergency conditions.	G.3 OSC On-site Assistance Teams will be given the opportunity to perform corrective actions associated with plant equipment. G.4 Demonstrations of in-plant corrective actions will be controlled in accordance with defined mini-scenarios and as specified in the ground rules (including extent of simulation, etc.) The mini-scenarios will allow players to implement the appropriate emergency work controls per established procedures.
4. Demonstrate the ability to provide adequate administrative controls and documentation for necessary repairs of plant equipment and systems during an emergency.	

H. Radiological Assessment	Extent of Play
1. Demonstrate that adequate dose assessment activities can be performed to determine off-site radiological consequences.	H.1 The scenario will provide information on plant conditions and in-plant radiological conditions to players that will allow them to evaluate off-site potential radiological consequences. H.2 radiological conditions to players that will allow them to evaluate off-site potential radiological consequences. H.3 The scenario will provide off-site radiological data that will allow H.4 players to evaluate off-site conditions. H.5 Players will implement appropriate sections of Procedures OP 3513, "Evaluation of Off-Site Radiological Conditions" and OP 3511, "Off-Site Protective Action Recommendations," as may be required by scenario events. "What-if" dose assessments will be calculated in accordance with OP-3513, Appendix K, "Guidelines for "What If" Projection of Potential Radioactive Material Releases".
2. Demonstrate that radiological assessment personnel in the EOF can obtain radiological and meteorological data in a timely manner.	
3. Demonstrate the ability to perform timely assessment of off-site radiological conditions to support the formulation of protective action recommendations (PAR) for the plume exposure pathway.	

*Indicates an identified observation from the 1999 Exercise.

H. Radiological Assessment	Extent of Play
4. Demonstrate the ability to assess potential off-site radiological consequences based on plant conditions.	
5. Demonstrate the ability to project plume trajectory and potentially affected downwind sectors using the METPAC computer dose assessment model, including development of "what-if" dose projections, based on conservative assumptions. *	
6. Demonstrate adequate staffing, equipment readiness check, and deployment of off-site monitoring teams.	
7. Demonstrate the use of appropriate equipment and procedures to perform off-site radiological monitoring	H.6 Off-site monitoring teams will be assigned at the OSC. Players will H.7 will implement appropriate sections of Procedure OP 3510, "Off-Site and Site Boundary Monitoring," as may be required by scenario events.

1999 Exercise Observation EOF-3 ("What-if" dose assessment activities)

Radiological Assessment staff had to derive "what-if" dose assessment formulas "on-the-spot" this lead to some erroneous calculations and delays in issuing valid "what-if" assessments.

I. Protective Action Decision Making	Extent of Play
1. Demonstrate the ability to implement appropriate on-site protective measures for emergency response personnel.	I.1 On-site protective action measures will include radiation exposure control, site accountability and use of protective equipment and supplies. Appropriate on-site protective measures will be implemented as required by scenario events.
2. Demonstrate the adequacy of the protective action decision making process to make appropriate recommendations concerning off-site radiological consequences. (CORNERSTONE PERFORMANCE INDICATOR)	I.2 Protective action decision making will be demonstrated in accordance with Procedure OP 3511, "Off-Site Protective Actions Recommendations." If a Protective Action Recommendation (PAR) is warranted, the PAR shall be communicated to the states within 15 minutes of its determination or declaration of a General Emergency.

*Indicates an identified observation from the 1999 Exercise.

J. Public Information	Extent of Play
1. Demonstrate the ability to develop and periodically disseminate timely and accurate press releases to the news media.	J.1 The News Media Center (NMC) will be activated and staffed. J.2 Information relative to drill events will be gathered, verified and incorporated into news releases. After approval, information will be
2. Demonstrate the ability to provide briefings and to interface with the news media.	J.3 disseminated and briefings on the information will be conducted at the NMC.
3. Demonstrate the ability to communicate and coordinate news releases between the EOF and the NMC.	
4. Demonstrate the ability to provide rumor control.	J.4 A communication line will be established to provide for rumor control concerning the simulated accident.
5. Demonstrate the ability to coordinate news release with the state's public information representatives.	J.5 State public information representatives should be present at the NMC. Information concerning news releases will be coordinated with the states' public information representatives.

*Indicates an identified observation from the 1999 Exercise.

K. Parallel and Other Actions	Extent of Play
<p>1. Demonstrate the adequacy of methods to establish and maintain access control and personnel accountability within the protected area.</p>	<p>K.1 Security activities will be implemented in accordance with established procedures to control access to the protected area. Assembly of emergency response personnel and evacuation of contractors/visitors will be implemented to test personnel accountability process within the protected area (Refer to Procedure OP 3524, "Emergency Actions to Ensure Initial Accountability and Security Response"). However, after the plant evacuation and initial accountability checks have been completed, contractors/visitors may be allowed to return to work and will be exempt from the remainder of drill related activities.</p>
<p>2. Demonstrate the ability to transition from the emergency phase to the recovery phase in accordance with established procedures.</p>	<p>K.2 The Site Recovery Manager will determine when it is appropriate to transition from the emergency phase to the recovery phase. This decision will require input from the various technical support groups and concurrence from the states of Vermont and New Hampshire and the Commonwealth of Massachusetts (Refer to OP 3503, "General Emergency", Appendix VIII "Site Recovery Manager").</p>
<p>3. Demonstrate the licensee's capability for self-critique and ability to identify areas needing improvement.</p>	<p>K.3 A drill critique will be conducted with controllers and players. Critique items will be compiled and documented in accordance with Procedure OP 3505, "Emergency Preparedness Exercises and Drills."</p>

Note: This drill satisfies the requirements for conducting an annual Radiological monitoring drill and the second of two semi-annual Health Physics drills. A separate Health Physics drill was held on February 21, 2001 which demonstrated collection and analysis of in-plant chemistry samples, which included the use of the Post Accident Sampling System.

*Indicates an identified observation from the 1999 Exercise.

**VERMONT YANKEE NUCLEAR POWER STATION
EMERGENCY PREPAREDNESS ANNUAL EXERCISE
2001**

2.2 STATE OF VERMONT - EXERCISE OBJECTIVES AND EXTENT OF PLAY

STATE OF VERMONT EXTENT OF PLAY

VERMONT YANKEE NUCLEAR POWER STATION 2001 PLUME PHASE EXERCISE

VERMONT EMERGENCY MANAGEMENT
Radiological Emergency Response Plan Program
103 South Main Street
Waterbury, Vermont 05671-2101
802 - 244 - 8721

Vermont Department of Health
Health Protection Division
108 Cherry Street, PO Box 70
Burlington, Vermont 05402
802- 863-7205

JUNE 5, 2001 Version

Executive Summary: There will be four phases of the exercise: Plume (one day), EPZ interviews and demonstrations (two days), the Reception Center and one day for the MS-1 Drill. There will be 22 objectives in the plume phase, 2 in the interviews, 6 to 7 in the demonstrations, 7 objectives in the Reception Center phase and two in the MS-1 drill. Some objectives will be observed both on the day of the exercise and also in one or more interviews and or demonstrations.

Monday (Sept. 3) Labor Day Holiday

Tuesday (Sept. 4)Orientation Meetings (Extent of Play Briefing 3:00 PM, the Media Center in the VY Training Center in Brattleboro, VT)

Wednesday (Sept. 5)Plume Phase

Thursday (Sept. 6) Interviews and demonstrations

Friday (Sept. 7) Interviews and demonstrations

Tuesday (Sept. 11) Critiques: 13:00 VT, 14:00 NH, 15:00 MA; location TBA.

Tuesday (Sept.11) Public Meeting- Vernon Town Hall 7:00 PM

Late Winter/ early Spring 2002: Reception Center drills and Exercise.

Point of contact: Lewis H. Stowell 802-241-5385 or E-mail lstowell@dps.state.us.vt

VERMONT 2001 FULL SCALE EXERCISE VERMONT YANKEE NUCLEAR POWER STATION

REP-14 OBJECTIVES -Final Version: 1.4

STATE OF
VERMONT

LOCAL
JURISDICTIONS

Yes

Yes

1. Mobilization of Emergency Personnel

Demonstrate the capability to alert and fully mobilize personnel for both emergency facilities and field operations. Demonstrate the capability to activate and staff emergency facilities for emergency operations.

Extent of Play.

State and local jurisdictions will be alerted and notified at each ECL. Mobilization of State and local personnel to staff emergency facilities and field operations will be in accordance with state and local plans. EOF staff for Vermont, IFO staff and monitoring teams will not be pre-staged but may be in the Brattleboro area. State and EPZ EOC staffs will be paged out of sequence between 06:45 and 07:45 and instructed to report to their assigned EOC at a time likely for their part of the exercise to begin. This will provide realism and also compress the time needed to travel to the EOC.

The following facilities will be activated and staffed:

Vermont State EOC

State Warning Point (Waterbury) & Alternate State Warning Point (Rockingham VSP)

Emergency Operations Facility (EOF) - Vermont staff

Incident Field Office

Radiological Monitoring & Decontamination Unit (will be demonstrated out of sequence September 6 or

7.)

Transportation Staging Area (will be demonstrated out of sequence September 6 or 7.)

NOTE: FEMA will be invited to observe practice drills for the Radiological Monitoring & Decontamination Unit and the Transportation Staging Area in August.

News Media Center (sometimes called the JIC)- Vermont staff

Local EOC's in the Towns of:

- Brattleboro
- Dummerston
- Guilford
- Halifax
- Vernon

Reception Center: The Director will be paged and will respond to occasional phone calls from his office in Westminster. The rest of the reception center will not be notified or mobilized. The Reception Center will conduct its exercise out of sequence in March 2002.

ARCA: None.

2. Facilities-Equipment, Displays and Work Environment.

Yes

Yes

Demonstrate the adequacy of facilities, equipment, displays, and other materials to support emergency operations.

Extent of Play.

Facilities, equipment, maps and displays will be used to support response operations. State EOC & IFO access control will be demonstrated.

The following facilities with back-up power will demonstrate adequacy by presenting up-to-date maintenance logs for inspection:

- Brattleboro EOC
- Dummerston EOC (2 units)
- Guilford EOC
- Halifax EOC
- Vernon EOC
- IFO

ARCA: None.

3. Direction and Control.

Yes

Yes

Demonstrate the capability to direct and control emergency operations.

Extent of Play.

Direction and control of all State and local emergency operations will be demonstrated by the appropriate EOC staff in accordance with State and local plans.

ARCA:

Issue No.: 67-97-03-A-02 Table IV-3 of the Dummerston plan (page 21) states that the minimum quantity of KI is 10 bottles and the minimum quantity of DRDs and TLDs is 24. Only 3 bottles of KI, 20 DRDs, and 23 TLDs (3 of which were control TLDs) were available at the EOC. The number of direct-reading dosimeters at the Halifax EOC (15) did not correspond with the number listed in the plan (24). (Objective 3) (NUREG-0654, A.2.a; H.10; K.3a; J.10e)

4. Communications.

Demonstrate the capability to communicate with all appropriate emergency personnel at facilities and in the field.

Yes

Yes

Extent of Play.

State and local emergency response personnel, including field teams will demonstrate the capability to communicate with appropriate locations. This includes communications between utility and State facilities personnel and between State and Local facilities personnel. Coordinated response efforts between all participating states will be demonstrated.

ARCAS: None.

5. Emergency Worker Exposure Control.

Demonstrate the capability to continuously monitor and control radiation exposure to emergency workers. Demonstrate the appropriate use of equipment and procedures for determining field radiation measurements.

Yes

Yes

Extent of Play.

Each off-site organization having a responsibility for emergency workers (IFO, Local EOCs, & Field Monitoring Teams) will utilize appropriate dosimetry to control radiation exposure. The IFO and local EOC's will demonstrate the capability to issue, zero, and read dosimeters and record readings. Each emergency worker participating in the exercise will be issued an emergency worker packet. Distribution and ingestion of KI will be simulated during the exercise. It will be available for inspection. Procedures will be demonstrated to manage exposure of emergency workers.

ARCAS:

Issue No.: 67-97-05-A-15 The school bus driver from Laidlaw Transportation did not know the reporting requirement of 1R. (Objective 5) (NUREG-0654 K.3, K.4)

Issue No.: 67-99-05-A-02 Emergency Workers in Guilford were not aware of their maximum exposure limit, or the location for the return of dosimetry at the end of their mission. (Objective 5) (NUREG-0654 K.3.b, K.4)

Issue No.: 67-99-05-A-03 Emergency workers in Guilford did not read their direct-reading dosimeters every 15 or 30 minutes after the release. (Objective 5) (NUREG-0654 K.3.b)

6. Field Radiological Monitoring-Ambient Radiation Monitoring.

Yes N/A

Demonstrate the appropriate use of equipment and procedures for determining field radiation measurements.

Extent of Play.

Two teams with a minimum of 2 persons each will be fielded for plume monitoring during the exercise. The contents of the team emergency response kits will not be inventoried during the exercise unless the kit seal is broken. An intact seal indicates that the inventory has previously been done and that the kit contents have not been disturbed. An accurate inventory form will be provided by the teams. Teams will take measurements in keeping with scenario events at pre-selected sampling sites. Additional State personnel may be observing the field teams but will be in separate vehicles and will not interfere in the conduct of the exercise.

ARCA None.

7. Plume Dose Projection.

Yes N/A

Demonstrate the capability to develop dose projections and protective action recommendations regarding evacuation and sheltering.

Extent of Play.

The State will demonstrate the capability to locate the plume and develop dose projections based on utility information and field team data. From this information the State will develop appropriate protective action recommendations. Initial PAR's may be derived solely from utility information. Additional field team data may be utilized to adjust initial PAR's.

ARCA: None

8. Field Radiological Monitoring-Airborne Radioiodine and Particulate Activity Monitoring.

Yes N/A

Demonstrate the appropriate use of equipment and procedures for the measurement of airborne radioiodine concentrations as low as (10⁻⁷) 0.000001 microcurie per cubic centimeter in the presence of noble gases and obtain samples of particulate activity in the airborne plume.

Yes

N/A

Extent of Play.

Airborne radioiodine and particulate samples are taken in accordance with procedures. Field teams will demonstrate measuring radioiodine and particulate matter outside of plume. Air sampling equipment will use Zeolite Filters. Field teams will transmit data to the Health Services Coordinator in accordance with procedures. Samples will be prepared for transportation with appropriate packaging and labeling. Transportation will be simulated. Each field team will demonstrate taking at least one sample. Instruments for this determination will be operationally field checked utilizing a "mock iodine" source. Additional State personnel may be observing the field teams but will be in separate vehicles and will not interfere in the conduct of the exercise.

ARCA: None.

9. *Plume Protective Action Decision making.*

Demonstrate the capability to make timely and appropriate protective action decisions (PAD).

Yes

N/A

Extent of Play.

State decision makers will demonstrate the ability to make initial and subsequent PADs. coordination with other jurisdictions, (i.e., NH and MA) will be demonstrated.

ARCA: None.

10. *Alert & Notification.*

Demonstrate the capability to promptly alert and notify the public within the 10-mile plume pathway emergency planning zone (EPZ) and disseminate instructional messages to the public on the basis of decisions by appropriate State or local officials.

Yes

Yes

Extent of Play.

Actions for public alerting and notification will be demonstrated up to the point of actual activation of NOAA transmitter, sounding of sirens and broadcast of EAS messages. NOAA activation of weather alert radios and EAS broadcasts will be simulated. Brattleboro and Vernon will simulate the sounding of their sirens. The public alerting and notification process will include demonstrating the necessary coordination of time sequence activities with New Hampshire, Massachusetts and respective Vermont towns. Towns will demonstrate actions up through the receipt of activation times to **simulate** siren sounding and will demonstrate capability to monitor EAS broadcast messages and National Weather Service Tone Alert Radio Messages.

NOTE: Only Vernon and Brattleboro have sirens.

NOTE: Albany National Weather Service will demonstrate that the transmission of an actual test message over the tone alert radios can be received at each of the EOCs (IFO & 5 towns in Vermont)(This will also activate tone alert radios in New Hampshire and Massachusetts.) on the day of the plume exercise but not as part of the alert & notification process. This test will occur soon after (but not more than 30 minutes after) the exercise termination message is generated by Vermont Yankee or other competent authority and will be observed by the FEMA Evaluators at the SEOC, Town EOCs, and the IFO.

ARCA: None.

11. *Public Instruction and Emergency Information.*

Demonstrate the capability to coordinate the formulation and dissemination of accurate information and instructions to the public.

Yes

N/A

Extent of Play.

The State will demonstrate the capability to formulate and disseminate information and instructions to the public. The State will demonstrate coordination of message content with other appropriate staff jurisdictions, organizations, facilities and States (NH, MA). The State will demonstrate the capability to provide instructions to the public including information on the initiation and implementation of protective actions. Information should delineate local government jurisdictions affected by the message. Vermont will use its EAS system.

ARCA: None.

12. *Emergency Information-Media.*

Demonstrate the capability to coordinate the development and dissemination of clear, accurate, and timely information to the news media.

Yes

Partial

Extent of Play.

The State designated spokesperson will coordinate activities and participate in joint briefings with the media at the News Media Center (JIC) at the Vermont Yankee Corporate Office in Brattleboro. The State EOC will provide updated information to the News Media Center. The local EOC's will refer media questions not related to town specific activities to the News Media Center. The local town option to generate news releases about their town specific activities will be simulated at the discretion of the towns.

ARCAS:

Issue No.: 67-97-12-A-04 Two news advisories issued during the exercise contained the misleading and incorrect information and did not reflect the Protective Action Decisions (PADs). News Advisory No. 4 states that area residents should shelter despite the fact there was no shelter order issued by the State. News Advisory No. 6 provided directions to the Reception Centers inconsistent with EBS message No. 3. (Objective 12)(NUREG-0654, E.7; G.4.a; G.4.b)

Issue No.: 67-99-12-A-01 During media briefing # 4 the PIO was unsure on wind direction and the location of reception center for people that could have been contaminated. (Objective 12) (NUREG-0654, G.3.a; G.4.a; G.4.b)

13. Emergency Information-Rumor Control (Information Center)

Yes

N/A

Demonstrate the capability to establish and operate rumor control in a coordinated and timely manner.

NOTE: Vermont has decided to change the name of their effort to keep the public informed and to identify and correct "rumors" to the "Information Center". Recent incidents (such as the February 2000 Indian Point 2 accident) indicate that the public does not relate well to the term "Rumor Control".

Extent of Play.

The State EOC has a rumor control number publicized in mailings to residents within the 10-mile EPZ. The State EOC will notify the State representative at the News Media Center (JIC) of the nature of the rumor. Controllers will issue appropriate number of calls to the Rumor Control number at the State EOC. The State EOC Information Center operator(s) will field a minimum of six calls per hour per operator starting after the first siren sounding has been ordered through the termination of the exercise.

NOTE: The procedures and titles of the Information Center have been changed but it will be the 2002 EPI calendar before the term "Rumor Control" is completely changed.

ARCA: None.

14. Implementation of Protective Actions - Use of KI for Emergency Workers, institutionalized individuals and the General Public.

Yes

Yes

Demonstrate the capability and resources to implement potassium iodide (KI) protective actions for emergency workers and institutionalized individuals.

Extent of Play.

The State will make the determination whether to authorize use of KI by emergency workers, and institutionalized individuals. Local plans call for KI to be issued to emergency workers with their dosimetry when dispatched to field assignment. KI issue will be simulated. Emergency workers will simulate the ingestion of KI when authorized by the Health Services Coordinator through the local EOC coordination.

Distribution and ingestion of KI will be simulated during the exercise. It will be available for inspection. The state of Vermont does not supply KI to the general public. The State of Vermont is currently reviewing its policy concerning the issuance of KI to the public in response to a NRC/FEMA directive.

ARCA: None

15. Implementation of Protective Actions-Special Populations

Yes Yes

Demonstrate the capability and resources necessary to implement appropriate protective actions for special populations.

Extent of Play.

FEMA will conduct out of sequence interviews with the Directors of the following Nursing Homes re: Emergency Plans.

- Eden Park Nursing Home
- Vernon Green Nursing Home
- Vernon Hall Retirement Residence (Co-located with Vernon Green.)

FEMA will conduct out of sequence interviews with the Directors of the following special facilities re: Emergency Plans:

- The Gathering Place (An elder care program.)

ARCA: None

16. Implementation of Protective Actions-Schools.

Yes Yes

Demonstrate the capability and resources necessary to implement protective actions for school children within the plume pathway emergency planning zone (EPZ).

Extent of Play.

FEMA will conduct approximately 30 out of sequence interviews with the of the Principals/Directors of the following on the Thursday or Friday following the exercise:

Public Schools: One Superintendent, three school Principals, and the Laidlaw Transportation Terminal Manager in Brattleboro.

Private Schools without Licensed Childcare: Three private schools

Licensed Childcare Facilities or Private Schools with Licensed Childcare: At least one in every town that has any licensed child care facilities and a total of at least eight (8).

Registered Childcare: At least one in every town that has any registered child care facilities and a total of at least twelve (12).

Colleges or institution of higher learning. One

A list of which child care facilities will be interviewed will be developed by early August. Because of the dynamic nature of the industry too many changes might be required if the list were made now. A list of public schools and a college will be submitted at the same time.

Additionally the Dosimeter Coordinator and two school bus drivers from Laidlaw Transportation will demonstrate out of sequence (Thursday or Friday after the plume exercise) the emergency worker briefing provided to bus drivers and answer questions in an interview about how the evacuation from the Vernon Elementary School and one of the Brattleboro Elementary Schools to the Reception Center at Bellows Falls Union High School would be conducted.

ARCA: None

17 Traffic and Access Control.

Demonstrate the organizational capability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas.

Yes

Yes

Extent of Play.

State and local EOC's consistent with the developing scenario events and PARS will determine the location of TCP/ACP's and coordinate and make decisions about the location, staffing and equipping of ACP/TCPs.

Traffic control will be performed by out of sequence FEMA interviews with :

- Vt State Police {Interview at the IFO on 09/05/01 with the VSP Liaison
- Dummerston { Interview at EOC on 09/05/01 of 1person assigned to a specific town TCP/ACP.}
- Guilford { Interview at EOC on 09/05/01 of 1person assigned to a specific town TCP/ACP.}
- Halifax { Interview at EOC on 09/05/01 of 1person assigned to a specific town TCP/ACP.}
- Vernon { Interview at EOC on 09/05/01 of 1person assigned to a specific town TCP/ACP.}

Traffic & Access Control will be evaluated at the State EOC by an Evaluator reviewing the actions of the Police Services Coordinator. The "out of sequence" interviews will the same day as the exercise but done when there is spare time by the FEMA evaluator.

ARCA: None.

18. Reception Center - Monitoring Decontamination, and Registration.

Demonstrate the adequacy of procedures, facilities, equipment and personnel for the radiological monitoring, decontamination and registration of evacuees. Monitor and decontaminate two vehicles.

2002 exact
date TBA

2002 exact date
TBA

Extent of Play. The state EOC will demonstrate the Reception Center notification procedure. This simulated notification will go through the IFO to the Westminster Emergency Director or designee. ("Simulated" means actual calls to the persons involved but no action is taken to activate the center.) A more detailed extent of play will be developed for the reception center exercise in the Fall of 2001.

ARCA:

Issue No.: 67-96-18-A-01 Each portal monitor was checked for operability. This check included a check of some of the individual portal monitor detectors with a one uCi Cs-137 check source. However, an operability source for compliance with the portal monitor standard was not done because it was not called for in the Reception Center Radiation Specialist's checklist. (Objective 18) - DRAFT REPORT

Issue No.: 67-96-18-A-02 Section 5.4A.,page 29, of the BFUHS Reception Center Plan, specifies that "Survey instruments used for confirming contamination will be calibrated every four (4) years". This calibration frequency seems to be at odds with other FEMA requirements, which specify that if an instrument is used to make a measurement, the instrument must be calibrated annually. In the case of the BFUHS Reception Center Plan, there is a clearly defined contamination action limit of 100 cpm above background. Assessing this 100 cpm value by use of a survey instrument is really a measurement, since you are making a determination (or certification) as to whether or not to notify further protective action precaution or constraints on use. It is almost more important to have an annually calibrated survey instrument at these locations than in the field monitoring kits where FEMA REP 14 requires that instruments be calibrated annually. (Objective 18) -DRAFT REPORT

19. Congregate Care.

Demonstrate the adequacy of facilities, equipment, supplies, personnel, and procedures for congregate care of evacuees.

Yes

Yes

Extent of Play. American Red Cross Chapter personnel will provide a current copy of the Shelter Surveys to the FEMA Evaluator by August 7, 2001. FEMA. will coordinate review of the shelter surveys.

ARCA: None

20. Medical Services - Transportation.

Demonstrate the adequacy of vehicles, equipment, procedures and personnel for transporting contaminated, injured, or exposed individuals.

VY

Yes

Extent of Play. Will be demonstrated during the MS-1 Drill in Fall 2001 (October or November) exact date being coordinated by Vermont Yankee (VY).

ARCA: None.

21. Medical Services - Facilities.

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

VY

Yes

Extent of Play. Will be demonstrated during the MS-1 Drill in Fall 2001 (October or November) exact date being coordinated by VY.

ARCA: None

22. Emergency Workers, Equipment, and Vehicles-Monitoring and Decontamination.

Demonstrate the adequacy of procedures for the monitoring and decontamination of emergency workers, equipment and vehicles.

Yes

N/A

Extent of Play. Will be demonstrated at the IFO on September 6 or 7, 2001.

ARCA: None

23. Supplementary Assistance (Federal/Other).

Demonstrate the capability to identify the need for external assistance and request such assistance from Federal or other support organizations.

Yes

N/A

Extent of Play. Applicable positions at the State EOC will make initial phone calls to Federal agencies alerting them to the simulated accident and simulate additional calls requesting assistance made applicable by the scenario. Little or no Federal Agency participation is expected.

ARCA: None

24. Post-Emergency Sampling (I)

Demonstrate the use of equipment and procedures for the collection and transportation of samples from areas that received deposition from the airborne plume.

No

N/A

Extent of Play. This was demonstrated in the Ingestion Pathway exercise in 1999.

ARCA: None

25. Laboratory Operations (I)

Demonstrate laboratory operations and procedures for measuring and analyzing samples.

No

N/A

Extent of Play. This was demonstrated in the Ingestion Pathway exercise in 1999.

ARCA: None

26. Ingestion Exposure Pathway- Dose Projection and Protective Action Decision Making

Demonstrate the capability to project dose to the public for the ingestion pathway and to recommend protective measures.

No

No

Extent of Play. This was demonstrated in the Ingestion Pathway exercise in 1999.

ARCA: None

27. Ingestion Exposure Pathway- Protective Action Implementation (I)

Demonstrate the capability to implement protective actions for the ingestion exposure pathway.

No

No

Extent of Play. This was demonstrated in the Ingestion Pathway exercise in 1999.

ARCA: None

28. Relocation, Re-Entry, and Return- Decision Making (I)

Demonstrate the capability to develop decisions on relocation, re-entry, and return.

No

No

Extent of Play. This was demonstrated in the Ingestion Pathway exercise in 1999.

ARCA: None

29. Relocation, Re-Entry, and Return- Implementation(I)

Demonstrate the capability to implement relocation, re-entry, and return.

No

No

Extent of Play. This was demonstrated in the Ingestion Pathway exercise in 1999.

ARCA: None

30. Continuous 24 Hour Staffing.

Demonstrate the capability to maintain staffing on a continuous 24 hour basis through an actual shift change.

Yes

No

Extent of Play.

Key personnel at the State EOC and the IFO will demonstrate a shift change. Each shift at each location shall demonstrate at least one decision making sequence (with accompanying EAS message).

ARCA:

Issue No.: 67-97-30-A-12 Page 13, Objective 30" Continuous 24 Hour Staffing" in the Vermont 1997 "Full Scale Exercise Vermont Yankee Nuclear Power Station" extent-of-play agreement dated March 7, 1997 requires that key personnel in the IFO in Dummerston demonstrate a shift change. Contrary to the extent-of-play agreement the Operations Officer and Radiological Officer did not demonstrate a shift change. (Objective 30) (NUREG-0654, A.4,N.1.a)

31. OffSite Support For The Evacuation of Onsite Personnel

Demonstrate the capability to provide off-site support for the evacuation of onsite personnel.

NO

NO

Extent of Play.

ARCA: None

32. Unannounced Exercise or Drill

Demonstrate the capability to carry out emergency response functions in an unannounced exercise or drill.

DONE

DONE

Extent of Play. Demonstrated in September 1998.

ARCA: None

33. Off-Hours Exercise or Drill

Demonstrate the capability to carry out emergency response functions during an off-hours exercise or drill.

DONE

DONE

Extent of Play. Demonstrated in September 1998.

ARCA: None

34. Licensee Off-site Response Organizations

Demonstrate the capability of licensee off-site response organization [licensee (ORO)] personnel to interface with non-participating organizations and accomplish coordination essential for emergency response.

N/A

N/A

Extent of Play. Not applicable.

ARCA: None

OBJECTIVES BY ORGANIZATION/LOCATION SUMMARY.

ORGANIZATION/ LOCATION

OBJECTIVES

Vermont State EOC	1,2,3,4,5 ¹ , 7,8 ¹ , 9,10,11, 12 ¹ ,13,14 ¹ , 15, 16 ¹ ,17, 23, 30.
State Warning Point (Waterbury)	1, 2, 4
Alternate State Warning Point (Rockingham)	1, 2, 4
Department of Health Laboratory	N/A
Emergency Operations Facility (EOF)	1, 2, 4, 5
News Media Center(JIC)-VT Staff	1, 2, 4,11,12,13 ¹ .
Field Monitoring Teams (2) (State)	4, 5, 6, 8,14.
Emergency Alert system Station (WTSA)	11, 12
Incident Field Office	1,2,3,4,5,10,11,12,14,15,16,17, 30
State Transportation Staging Area (STSA)	1,2,3,4,5,14.
Emergency Worker Radiological Monitoring and Decontamination Unit	1,2,3,4,5,14,22.
Reception Center (Scheduled Tentatively for March of 2002.)(Limited involvement in 2001.)	1,2,3,4,5,18,22.
Brattleboro EOC	1,2,3,4,5,10,11,12,14,15,16,17.
Dummerston EOC	1,2,3,4,5,10,11,12,14,15,16,17.
Guilford EOC	1,2,3,4,5,10,11,12,14,15,16,17.
Halifax EOC	1,2,3,4,5,10,11,12,14,15,16,17.
Vernon EOC	1,2,3,4,5,10,11,12,14,15,16,17.
EAS Radio Stations (WTSA & WKVT)	11,12
<u>Special Population Centers</u> The Gathering Place	15,16

ORGANIZATION/ LOCATION

OBJECTIVES

Vermont State EOC

1,2,3,4,5¹,7,8¹,9,10,11, 12¹,13,14¹, 15,
16¹,17, 23, 30.

State Warning Point (Waterbury)

1, 2, 4

Alternate State Warning Point (Rockingham)

1, 2, 4

Nursing Homes & Hospitals

Eden Park Nursing Homes

4,15

Vernon Green Nursing Home &Vernon Hall Retirement Residence

4,15

Host Health Care Facilities

4,15

Schools & Child Care Centers

Private Schools without child care

5,15,16

Private Schools with child care

5,15,16

Licensed Child Care Centers

5,15,16

Registered Child Care Centers

5,15,16

5,15,16

Legend:

¹ Provides directional control.

² Equipment checkout occurs here.

³ Simulated Transportation of Samples would go here.

⁴ Very limited participation.

SPECIAL POPULATIONS FACILITIES SCHEDULE

ORGANIZATIONS/FACILITIES	2001	2003	2005
Brattleboro Campgrounds & Summer Camps Fort Dummer (August)	X		
Camp Waubanoog (August)	X		
Dummerston Campgrounds & Summer Camps Hidden Acres (August)	X		
KOA (August)	X		
Green Mountain Camp for Girls (August)	X		
Public Schools:			
Superintendent of WSWSU		X	
Superintendent of WSESU	X		
Brattleboro Middle School	X		
Brattleboro Union H.S.	X		
Academy School (Brattleboro)	X		
Canal Street School (Brattleboro)	X		
Green Street School (Brattleboro)	X		
Dummerston Elementary School		X	
Guilford Central School		X	
Halifax West School		X	
Vernon Elementary	X		
CHILD CARE FACILITIES:			
Licensed Child Care Facilities (18)	7	7	4
Registered Child Care Facilities (38)	14	14	10
Private Schools : (8)			
The Austine School		X	
The Neighborhood School			X
Christian Heritage School Inc		X	
St Michael's Elementary School	X		

Second Draft

ORGANIZATIONS/FACILITIES	2001	2003	2005
Meadows School (at The Brattleboro Retreat)		X	
Kindle Farms Children's Services	X		
Community House			X
COLLEGES AND POST SECONDARY EDUCATION:			
World Learning and School for International Training (College)	X		
HEALTH CARE FACILITIES			
Nursing Homes:			
Eden Park			X
Linden Lodge {Being closed in mid 2001}		?	
Thompson House		X	
Vernon Green	X		
Assisted Living Facilities:			
Hill Top House	X		
Holton Memorial Home			X
Thompson House Residential Care		X	
Vernon Hall Retirement Residence	X		
Housing For the Elderly:			
Samuel Elliot Apts.			X
Melrose Terrace		X	
Garfield		X	
The Gathering Place	X		
Hospitals:			
Brattleboro Retreat		X	
Brattleboro Memorial Hospital (Excluding the MS-1 plan already demonstrated.)	X		
Congregate Care Facilities (ARC) Survey	X		

Second Draft

ORGANIZATIONS/FACILITIES	2001	2003	2005
Local Alternate Warning Point (Rockingham VSP)	X		
Special Facilities:			
Laidlaw Transportation (Brattleboro Terminal)	X		
Rescue INC		X	
Large Employers:			
Large Firms	0	3	3
Medium sized Firms	0	5	5
BFUHS Reception Center (Late Winter or Early Spring)	(2002)		

**VERMONT YANKEE NUCLEAR POWER STATION
EMERGENCY PREPAREDNESS ANNUAL EXERCISE
2001**

2.3 STATE OF NEW HAMPSHIRE - EXERCISE OBJECTIVES AND EXTENT OF PLAY

STATE OF NEW HAMPSHIRE
2001 PLUME EXPOSURE PATHWAY EXERCISE
VERMONT YANKEE

5/02/01

OBJECTIVES AND EXTENT OF PLAY

OBJECTIVE #1:

MOBILIZATION OF EMERGENCY PERSONNEL:

Demonstrate the capability to alert and fully mobilize personnel for both emergency facilities and field operations. Demonstrate the capability to activate and staff emergency facilities for emergency operations.

EXTENT OF PLAY:

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

FACILITIES DEMONSTRATING THIS OBJECTIVE:

STATE EOC, EOF, IFO, MEDIA CENTER, JOINT INFORMATION CENTER, LOCAL EOCs IN HINSDALE, RICHMOND, WINCHESTER, SWANZEY, CHESTERFIELD, AND KEENE (Host Community), STATE WARNING POINT, SOUTHWESTERN NEW HAMPSHIRE DISTRICT FIRE MUTUAL AID.

AREAS REQUIRING CORRECTIVE ACTION:

None Cited.

OBJECTIVE #2:

FACILITIES-EQUIPMENT, DISPLAYS AND WORK ENVIRONMENT:

Demonstrate the adequacy of facilities and equipment, displays, and other materials to support emergency operations.

EXTENT OF PLAY:

Each participating facility will demonstrate its capabilities in accordance with this objective.

FACILITIES DEMONSTRATING THIS OBJECTIVE:

STATE EOC, EOF, IFO, MEDIA CENTER, JOINT INFORMATION CENTER, LOCAL EOCs IN HINSDALE, RICHMOND, WINCHESTER, SWANZEY, CHESTERFIELD, AND KEENE (Host Community), STATE WARNING POINT, SOUTHWESTERN NEW HAMPSHIRE DISTRICT FIRE MUTUAL AID.

AREAS REQUIRING CORRECTIVE ACTION:

None Cited.

OBJECTIVE #3:

DIRECTION AND CONTROL:

Demonstrate the capability to direct and control emergency operations.

EXTENT OF PLAY:

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

FACILITIES DEMONSTRATING THIS OBJECTIVE:

STATE EOC, EOF, IFO, MEDIA CENTER, JOINT INFORMATION CENTER, LOCAL EOCs IN HINSDALE, RICHMOND, WINCHESTER, SWANZEY, CHESTERFIELD, AND KEENE (Host Community), STATE WARNING POINT, SOUTHWESTERN NEW HAMPSHIRE DISTRICT FIRE MUTUAL AID.

AREAS REQUIRING CORRECTIVE ACTION:

None Cited.

OBJECTIVE #4:

COMMUNICATIONS:

Demonstrate the capability to communicate with all appropriate emergency personnel at facilities and in the field.

EXTENT OF PLAY:

Facilities participating in the exercise will demonstrate the primary and a back up communications resource per facility.

FACILITIES DEMONSTRATING THIS OBJECTIVE:

STATE EOC, EOF, IFO, MEDIA CENTER, JOINT INFORMATION CENTER, LOCAL EOCs IN HINSDALE, RICHMOND, WINCHESTER, SWANZEY, CHESTERFIELD, AND KEENE (Host Community), STATE WARNING POINT, SOUTHWESTERN NEW HAMPSHIRE DISTRICT FIRE MUTUAL AID, MONITORING TEAMS.

AREAS REQUIRING CORRECTIVE ACTION:

None Cited.

OBJECTIVE #5:

EMERGENCY WORKER EXPOSURE CONTROL:

Demonstrate the capability to continuously monitor and control radiation exposure to emergency workers.

EXTENT OF PLAY:

This objective will be demonstrated in accordance with the NHRERP by facilities that participate in the exercise.

FACILITIES DEMONSTRATING THIS OBJECTIVE:

EOCs IN HINSDALE, RICHMOND, WINCHESTER, SWANZEY, CHESTERFIELD, MONITORING TEAMS.

AREAS REQUIRING CORRECTIVE ACTION:

None Cited.

OBJECTIVE #6:

FIELD RADIOLOGICAL MONITORING-AMBIENT RADIATION MONITORING:

Demonstrate the appropriate use of equipment and procedures for determining field radiation measurements.

EXTENT OF PLAY:

Two NHOHM radiological monitoring teams will be dispatched. Each team will monitor six points. The time at which any point is monitored is not expected to coincide with the request of accident assessment personnel for monitoring support.

FACILITIES DEMONSTRATING THIS OBJECTIVE:

FIELD MONITORING TEAMS

AREAS REQUIRING CORRECTIVE ACTION:

None Cited.

OBJECTIVE #7:

PLUME DOSE PROJECTION:

Demonstrate the capability to develop dose projections and protective action recommendations regarding evacuation and sheltering.

EXTENT OF PLAY PLUME EXPOSURE PATHWAY:

This objective will be demonstrated in accordance with the NHRERP in the context of the exercise scenario. PHAAP, METPAC and other accident assessment programs may be used.

FACILITIES DEMONSTRATING THIS OBJECTIVE:

STATE EOC.

AREAS REQUIRING CORRECTIVE ACTION:

None Cited.

OBJECTIVE #8:

FIELD RADIOLOGICAL MONITORING-AIRBORNE RADIOIODINE AND PARTICULATE ACTIVITY MONITORING:

Demonstrate the appropriate use of equipment and procedures for the measurement of airborne radio iodine concentrations as low as 10^{-7} (0.000001) Micro curie per cubic centimeter in the presence of noble gasses and obtain samples of particulate activity in the airborne plume.

EXTENT OF PLAY PLUME EXPOSURE PATHWAY:

This objective will be demonstrated in accordance with the NHRERP. Use of Silver Zeolite filter media will be simulated. Charcoal filter cartridges will be used. Cartridges will be prepared for transportation to the State Lab for analysis.

FACILITIES DEMONSTRATING THIS OBJECTIVE:

FIELD MONITORING TEAMS.

AREAS REQUIRING CORRECTIVE ACTION:

None Cited.

OBJECTIVE #9:

PLUME PROTECTIVE ACTION DECISION MAKING:

Demonstrate the capability to make timely and appropriate protective action decisions (PAD).

EXTENT OF PLAY:

This objective will be demonstrated by the state decision making team in accordance with the NHRERP. Local organizations will be notified and respond in accordance with their plans and procedures according to the recommended protective action.

The New Hampshire decision making team will discuss its decisions with the Vermont and Massachusetts decision making teams and coordinate public notification activity.

FACILITIES DEMONSTRATING THIS OBJECTIVE:

STATE EOC.

AREAS REQUIRING CORRECTIVE ACTION:

None Cited.

OBJECTIVE #10 :

ALERT AND NOTIFICATION:

Demonstrate the capability to promptly alert and notify the public within the 10-mile Plume Pathway Emergency Planning Zone (EPZ) and disseminate instructional messages to the public on the basis of decisions by appropriate state or local officials.

EXTENT OF PLAY:

Sounding of sirens and broadcast of EAS/ EPI messages will be simulated. EAS/EPI messages will be formulated and distributed by the New Hampshire EOC in accordance with the NHRERP. Simulation of the activation of the EAS system will be coordinated with Vermont and Massachusetts officials. WKNE will receive EAS/EPI messages in accordance with the NHRERP but will not broadcast any messages. Activation of NOAA weather tone alert radios will be simulated. Requests for their activation will be made by NHOEM to the Vermont State EOC. EPZ communities will demonstrate this objective through the receipt of activation times from their local liaisons and will demonstrate their capability to monitor EAS and NOAA stations.

FACILITIES DEMONSTRATING THIS OBJECTIVE:

STATE EOC, WKNE, Southwestern New Hampshire District Fire Mutual Aid.

AREAS REQUIRING CORRECTIVE ACTION :

None Cited.

OBJECTIVE #11:

PUBLIC INSTRUCTIONS AND EMERGENCY INFORMATION:

Demonstrate the capability to coordinate the formulation and dissemination of accurate information and instructions to the public.

EXTENT OF PLAY:

Public information messages will be developed periodically. Messages will be developed based upon scenario information. Broadcast of these messages will be simulated. The NH EOC will distribute the messages to the EOF, IFO, MEDIA Center, JIC and WKNE. Local EOCs will receive information concerning protective action recommendations from their respective local liaison. Local EOCs do not prepare public information messages and do not have a representative at the Media Center. Local EOCs will monitor EAS and NOAA radios per their procedures.

FACILITIES DEMONSTRATING THIS OBJECTIVE:

STATE EOC, MEDIA CENTER.

AREAS REQUIRING CORRECTIVE ACTION :

None Cited.

OBJECTIVE #12:

EMERGENCY INFORMATION -MEDIA

Demonstrate the capability to coordinate the development and dissemination of clear, accurate, and timely information to the news media.

EXTENT OF PLAY:

The demonstration of this objective occurs at the state EOC, the Media Center and JIC. Controllers will simulate media response. The primary responsibility for briefing the media with respect to off site activities in New Hampshire lies with the State. New Hampshire will coordinate its' media information with Vermont, Massachusetts and the Utility in accordance with the NHRERP. EPZ community officials may respond to questions about local emergency response but are encouraged to refer press inquires to the Media Center. A controller message will be generated for each community to initiate a response and referral to media inquiries made to local officials.

FACILITIES DEMONSTRATING THIS OBJECTIVE:

STATE EOC, MEDIA CENTER, LOCAL EOC'S.

AREAS REQUIRING CORRECTIVE ACTION :

None Cited.

OBJECTIVE #13:

EMERGENCY INFORMATION-RUMOR CONTROL:

Demonstrate the capability to establish and operate rumor control in a coordinated and timely manner.

EXTENT OF PLAY:

In accordance with Rev.12 the NHRERP, demonstration of this objective will occur at the State EOC. Controllers will provide incoming calls. The controllers will provide at least one false or misleading rumor relating to PARs. Calls to the rumor control center will occur at a rate of at least six per hour per operator during the Site Area Emergency and General Emergency levels. Rumor control personnel will screen messages for trends. Communities will refer calls that address issues beyond local jurisdiction to the rumor control number. A controller message will be generated for each community to initiate a response and referral of information.

FACILITIES DEMONSTRATING THIS OBJECTIVE:

STATE EOC.

AREAS REQUIRING CORRECTIVE ACTION :

None Cited.

OBJECTIVE #14:

IMPLEMENTATION OF PROTECTIVE ACTION-USE OF KI FOR EMERGENCY WORKERS, INSTITUTIONALIZED INDIVIDUALS, AND THE GENERAL PUBLIC :

Demonstrate the capability and resources to implement Potassium Iodide (KI) protective actions for emergency workers, institutionalized individuals, and if the state plan specifies, the general public.

EXTENT OF PLAY:

The decision to use or not use KI for emergency workers and institutionalized individuals will be demonstrated at the State EOC. The capability to distribute and administer KI will be demonstrated at appropriate state and local facilities. Actual distribution of KI to emergency workers and institutionalized individuals will occur in accordance with procedures the ingestion of KI will be simulated. No KI will be ingested by emergency workers during this exercise. Quantities of KI are stored at local EOCs, EPZ Nursing Homes and Hospitals and the IFO. The NHRERP does not provide for the issuance of KI to the general public. Calls to institutions will be simulated.

FACILITIES DEMONSTRATING THIS OBJECTIVE:

STATE EOC, LOCAL EOCs IN HINSDALE RICHMOND WINCHESTER SWANZEY AND CHESTERFIELD, MONITORING TEAMS, ACCESS AND TRAFFIC CONTROL PERSONNEL.

AREAS REQUIRING CORRECTIVE ACTION:

None Cited.

OBJECTIVE #15:

IMPLEMENTATION OF PROTECTIVE ACTIONS-SPECIAL POPULATIONS:

Demonstrate the capability and resources necessary to implement appropriate protective actions for special populations.

EXTENT OF PLAY:

The ability and resources to implement protective actions for special populations will be demonstrated in accordance with the NHRERP. Each local EOC will simulate calls to special needs populations per their special needs call lists and arrange for appropriate resources to meet the special needs. Controller messages will simulate requests for assistance. Dispatch of resources and response to requests for assistance will be simulated.

FACILITIES DEMONSTRATING THIS OBJECTIVE:

STATE EOC, IFO, STSA, LOCAL EOCs IN HINSDALE WINCHESTER RICHMOND SWANZEY AND CHESTERFIELD.

AREAS REQUIRING CORRECTIVE ACTION:

None Cited.

OBJECTIVE #16:

IMPLEMENTATION OF PROTECTIVE ACTION-SCHOOLS:

Demonstrate the capability and resources necessary to implement protective actions for school children within the Plume Pathway Emergency Planning Zone (EPZ).

EXTENT OF PLAY:

Calls will be made to each school to verify transportation resource requirements. Calls will be made to transportation providers to verify resource capabilities.

In an out of sequence demonstration one bus will be dispatched to the schools in Hinsdale, Winchester and Chesterfield (Three Busses Total). School Administrative personnel will be interviewed regarding their procedures

FACILITIES DEMONSTRATING THIS OBJECTIVE:

STATE EOC, LOCAL EOCs, and EPZ SCHOOLS out of sequence.

AREAS REQUIRING CORRECTIVE ACTION ;

None Cited.

OBJECTIVE #17:

TRAFFIC AND ACCESS CONTROL:

Demonstrate the organizational capability and resources to control evacuation traffic flow and to control access to evacuated and sheltered areas.

EXTENT OF PLAY:

Local police will be asked to talk through procedures for the staffing of traffic control points in their jurisdiction. Traffic control Equipment to implement the traffic control plan will be inspected. Troop C New Hampshire State Police will demonstrate one access control point and the ability to handle a traffic impediment. Demonstrations will occur during plume exposure pathway phase of the exercise at times to be coordinated between facility controllers and FEMA evaluators. The demonstrations will consist of a talk through of actions needed to implement the Access control plan.

FACILITIES DEMONSTRATING THIS OBJECTIVE:

LOCAL EOCs, TROOP C, NH DOT.

AREAS REQUIRING CORRECTIVE ACTION:

None Cited.

OBJECTIVE #18:

RECEPTION CENTER-MONITORING, DECONTAMINATION, AND REGISTRATION:

Demonstrate the adequacy of procedures facilities, equipment, and personnel for the radiological monitoring, decontamination, and registration of evacuees.

EXTENT OF PLAY:

Keene State College will demonstrate the ability to operate the reception / monitoring / decon and Emergency Worker Decon facilities there. This demonstration will take place independently and out of sequence. Seven Vehicles and Seven simulated evacuees (One female and one male "Contaminated" and one emergency worker) will be processed during the demonstration in accordance with FEMA rep 14 guidance.

FACILITIES DEMONSTRATING THIS OBJECTIVE:

KEENE STATE COLLEGE, RECEPTION/DECON CENTER.

AREAS REQUIRING CORRECTIVE ACTION:

None Cited.

OBJECTIVE #19:

CONGREGATE CARE:

Demonstrate the adequacy of facilities, equipment, supplies, personnel, and procedures for congregate care of evacuees.

EXTENT OF PLAY:

The Congregate care centers will not be activated. A tour of new congregate care facilities that support the Keene State College reception center will be conducted with a controller and an ARC representative independently and out of sequence.

FACILITIES DEMONSTRATING THIS OBJECTIVE:

CONGREGATE CARE FACILITIES SUPPORTING KEENE STATE COLLEGE.

AREAS REQUIRING CORRECTIVE ACTION :

None cited.

OBJECTIVE #20:

MEDICAL SERVICES-TRANSPORTATION:

Demonstrate the adequacy of vehicles, equipment, procedures, and personnel for transporting contaminated, injured or exposed individuals.

EXTENT OF PLAY:

This objective has been demonstrated during the February 10, 2001 MS-1 drill at the Cheshire Medical Center.

FACILITIES DEMONSTRATING THIS OBJECTIVE :

WINCHESTER FIRE DEPARTMENT AMBULANCE.

AREAS REQUIRING CORRECTIVE ACTION :

None Cited.

OBJECTIVE #21 :

MEDICAL SERVICES-FACILITIES:

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

EXTENT OF PLAY:

This objective has been demonstrated during the February 10, 2001 MS-1 drill at the Cheshire Medical Center.

FACILITIES DEMONSTRATING THIS OBJECTIVE:

CHESHIRE MEDICAL CENTER.

AREAS REQUIRING CORRECTIVE ACTION:

None Cited.

OBJECTIVE #22:

EMERGENCY WORKERS, EQUIPMENT, AND VEHICLES- MONITORING AND DECONTAMINATION:

Demonstrate the adequacy of procedures for the monitoring and decontamination of emergency workers, equipment and vehicles.

EXTENT OF PLAY:

This Objective will be demonstrated out of Sequence at Keene State College See Objective #19.

FACILITIES DEMONSTRATING THIS OBJECTIVE:

EMERGENCY WORKER MONITORING/DECON FACILITY.

AREAS REQUIRING CORRECTIVE ACTION :

None Cited.

OBJECTIVE #23 :

SUPPLEMENTARY ASSISTANCE (FEDERAL/OTHER) :

Demonstrate the capability to identify the need for external assistance and to request such assistance from Federal or other support organizations.

EXTENT OF PLAY:

American Red Cross and Civil Air Patrol will send representatives to facilities in accordance with the NHRERP. New Hampshire will coordinate its requests for supplementary assistance with Vermont and Massachusetts pursuant to the NHRERP. The Compact Administrator of the New England Radiological Health Compact is responsible for coordination of technical assistance for Vermont, New Hampshire and Massachusetts. The Administrators activity will be simulated.

FACILITIES DEMONSTRATING THIS OBJECTIVE:

STATE EOC.

AREAS REQUIRING CORRECTIVE ACTION :

None Cited.

OBJECTIVE #24:

POST EMERGENCY SAMPLING:

Demonstrate the use of equipment and procedures for the collection and transportation of samples from areas that received deposition from the airborne plume.

EXTENT OF PLAY:

This objective will be demonstrated in conjunction with the ingestion phase of the exercise.

FACILITIES DEMONSTRATING THIS OBJECTIVE:

N/A

AREAS REQUIRING CORRECTIVE ACTION:

None Cited.

OBJECTIVE #25 :

LABORATORY OPERATIONS:

Demonstrate laboratory operations and procedures for measuring and analyzing samples.

EXTENT OF PLAY:

N/A.

AREAS REQUIRING CORRECTIVE ACTION :

None Cited.

OBJECTIVE #26:

INGESTION EXPOSURE PATHWAY-DOSE PROJECTION AND PROTECTIVE ACTION DECISION MAKING:

Demonstrate the capability to project dose to the public for the Ingestion Pathway and to recommend protective measures.

EXTENT OF PLAY:

N/A

AREAS REQUIRING CORRECTIVE ACTION:

None Cited.

OBJECTIVE #27:

INGESTION EXPOSURE PATHWAY-PROTECTIVE ACTION IMPLEMENTATION:

Demonstrate the capability to implement protective actions for Ingestion Exposure Pathway.

EXTENT OF PLAY

N/A.

AREAS REQUIRING CORRECTIVE ACTION:

None Cited.

OBJECTIVE # 28:

RELOCATION, RE-ENTRY, AND RETURN-DECISION MAKING:

Demonstrate the capability to develop decisions on relocation, and return.

EXTENT OF PLAY:

N/A.

AREAS REQUIRING CORRECTIVE ACTION:

None Cited.

OBJECTIVE #29:

RELOCATION, RE-ENTRY, AND RETURN-IMPLEMENTATION:

Demonstrate the capability to implement relocation, re-entry, and return.

EXTENT OF PLAY

N/A.

AREAS REQUIRING CORRECTIVE ACTION :

None Cited.

OBJECTIVE #30:

CONTINUOUS, 24-HOUR STAFFING:

Demonstrate the capability to maintain staffing on a continuous 24-hour basis through an actual shift change.

EXTENT OF PLAY:

Second shift staffing rosters will be provided at each facility.

AREAS REQUIRING CORRECTIVE ACTION:

None Cited.

OBJECTIVE #31:

OFF SITE SUPPORT FOR THE EVACUATION OF ON SITE PERSONNEL:

Demonstrate the capability to provide off site support for the evacuation of on site personnel.

EXTENT OF PLAY:

N/A.

FACILITIES DEMONSTRATING THIS OBJECTIVE:

N/A.

AREAS REQUIRING CORRECTIVE ACTION:

None Cited.

OBJECTIVE #32:

UNANNOUNCED EXERCISE OR DRILL:

Demonstrate the capability to carry out emergency response functions in an unannounced exercise or drill.

EXTENT OF PLAY:

This exercise will be a scheduled exercise.

FACILITIES DEMONSTRATING THIS OBJECTIVE:

N/A

AREAS REQUIRING CORRECTIVE ACTION:

None Cited.

OBJECTIVE #33:

OFF-HOURS EXERCISE OR DRILL:

Demonstrate the capability to carry out emergency response functions during an off-hours exercise or drill.

EXTENT OF PLAY:

The exercise will be conducted during regular working hours.

FACILITIES DEMONSTRATING THIS OBJECTIVE:

N/A.

AREAS REQUIRING CORRECTIVE ACTION :

None cited

OBJECTIVE #34:

LICENSEE OFF SITE RESPONSE ORGANIZATIONS:

Demonstrate the capability of licensee off site response organization (licensee (ORO)) personnel to interface with non-participating organizations and accomplish coordination essential for emergency response.

EXTENT OF PLAY:

N/A.

FACILITIES DEMONSTRATING THIS OBJECTIVE:

N/A.

AREAS REQUIRING CORRECTIVE ACTION:

None Cited.

**VERMONT YANKEE NUCLEAR POWER STATION
EMERGENCY PREPAREDNESS ANNUAL EXERCISE
2001**

2.4 COMMONWEALTH OF MASSACHUSETTS - EXERCISE OBJECTIVES AND EXTENT OF PLAY

**MASSACHUSETTS
OBJECTIVES AND EXTENT OF PLAY
VERMONT YANKEE NUCLEAR POWER STATION EXERCISE
SEPTEMBER 5, 2001**

OVERVIEW

The following organizations/locations will demonstrate in 2001:

Massachusetts State Emergency Operations Center
Area III Emergency Operations Center
MEMA & MDPH staff at the EOF
Nuclear Incident Advisory Team (field monitoring teams)
MEMA staff at the Media Center
Massachusetts State Police, Troop B Headquarters in Northampton
Massachusetts State Police Shelburne Barracks Dispatch Center
Massachusetts Highway Department, District 2
Department of Environmental Management, District 9 Fire Warden
Department of Fisheries, Wildlife and Environmental Law Enforcement
Bernardston EOC
Colrain EOC
Gill EOC
Greenfield EOC
Leyden EOC
Northfield EOC
Warwick EOC

School Superintendent's Offices

Gill-Montague Regional School District
Mohawk Trail Regional School District
Pioneer Valley Regional School District

Schools

Colrain Central School
Gill Elementary School
The Giving Tree School, Gill
Northfield Elementary School
Otter Pond Preschool, Gill
Pearl Rhodes Elementary School, Leyden
Pioneer Valley Regional School, Northfield
Warwick Community School

Children's Camps

Camp Keewanee (interview by FEMA on June 27; closed during the exercise)

Camp Lion Knoll (interview by FEMA on June 6; closed during the exercise)

Camp Northfield (interview by FEMA on June 6; closed during the exercise)

Transportation Providers

Chapin & Sadler

F. M. Kuzmeskus Bus Company

Laidlaw Transit, Inc.

Liebenow, Inc.

Radiological Monitoring and Decontamination Station

Gill

The following locations/organizations are **not** participating in the 2001 Vermont Yankee Exercise:

Schools

Bernardston Elementary School

Full Circle School, Bernardston

Northfield Mount Hermon School, Gill and Northfield Campuses

Linden Hill School, Northfield

Host Facilities for School & Day Care Children

Girls' Club of Greenfield

Greenfield Community College

Orange Armory

Turners Falls High School

U-Mass

Mass Care Shelters

Greenfield Armory

Greenfield High School

Federal Street School

Transportation Providers

Greenfield-Montague Transportation Authority

Wilson Bus Lines

Radiological Monitoring and Decontamination Stations

Colrain

Greenfield

Warwick

Other

Greenfield Community College
Massachusetts State Laboratory

OBJECTIVE 1: MOBILIZATION OF EMERGENCY PERSONNEL

Demonstrate the capability to alert and fully mobilize personnel for both emergency facilities and field operations. Demonstrate the capability to activate and staff emergency facilities for emergency operations.

EXTENT OF PLAY:

State EOC—State EOC emergency staff who normally work at other locations will arrive at the EOC at the times they normally report for work unless they are paged/called and directed to report for duty at an earlier time. Operations/Communications staff will show rosters and call-down or computerized lists to the FEMA evaluator.

Area III EOC—Area III EOC emergency staff who normally work at other locations will arrive at the EOC at the times they normally report for work unless they are paged/called and directed to report for duty at an earlier time. Operations staff will show rosters and call-down or computerized lists to the FEMA evaluator.

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

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

NIAT Field Monitoring Teams—Personnel will be in the area awaiting notification.

Greenfield EOC—Calls to demonstrate the activation of Greenfield Community College (GCC) host school facility, reception center and the emergency worker radiological monitoring and decontamination station (as well as the mass care shelters, which are activated by Greenfield Community College), will be made in sequence; however, no personnel will actually be mobilized.

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

Massachusetts Highway Department, District 2—No mobilization to the field will occur. FEMA will inspect the equipment for access control during a site visit on June 27, 2001.

School Superintendents' Offices—Please see Objective 16.

ARCAs:

67-97-01-A-30: The Northfield Health Officer did not participate in the exercise. This resulted in the four dairies in town not being advised to shelter milk producing livestock as ordered by the State. (Objective 1) (NUREG 0654, E.1,2; H.4; N.1.)

67-99-01-A-16: (Warwick) Positions of Selectman, Fire Chief and Highway Department Foreman did not participate in the exercise. (Objective 1) (NUREG-0654, A.4, E.1, E.2)

OBJECTIVE 2: FACILITIES—EQUIPMENT, DISPLAYS, AND WORK ENVIRONMENT

Demonstrate the adequacy of facilities, equipment, displays and other materials to support emergency operations.

EXTENT OF PLAY:

No exceptions.

ARCAs: None

OBJECTIVE 3: DIRECTION AND CONTROL

Demonstrate the capability to direct and control emergency operations.

EXTENT OF PLAY:

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

ARCAs: None

OBJECTIVE 4: COMMUNICATIONS

Demonstrate the capability to communicate with all appropriate emergency personnel at facilities and in the field.

EXTENT OF PLAY:

State EOC, Area III EOC, EOF—Contact with locations/organizations that are not demonstrating in 2001 or are demonstrating out of sequence will be simulated by logging a contact at the appropriate time(s) in the exercise unless otherwise noted in the extent of play for other objectives.

EPZ Town EOCs—Contact with locations/organizations that are not demonstrating in 2001 or are demonstrating out of sequence will be simulated by logging a contact at the appropriate time(s) in the exercise unless otherwise noted under Objectives 15 or 16.

School Superintendents' Offices—Please see Objective 16.

ARCAs:

67-99-04-A-15: The TDD at the Greenfield EOC lacked the power to function during the exercise. Although the TDD showed power, it was not receiving enough power to transmit a message. (Objective 4) (NUREG-0654, F.1, F.2) This ARCA was resolved during a FEMA site visit on March 23, 2001.

OBJECTIVE 5: EMERGENCY WORKER EXPOSURE CONTROL

Demonstrate the ability to continuously monitor and control radiation exposure of emergency workers.

EXTENT OF PLAY

No exceptions.

ARCAs:

93-41: The Northfield EOC did not demonstrate the capability to continuously monitor and control emergency worker exposure. (Objective 5) (NUREG-0654, K.3.a, K.3.b)

OBJECTIVE 6: FIELD RADIOLOGICAL MONITORING—AMBIENT RADIATION MONITORING

Demonstrate the appropriate use of equipment and procedures for determining field radiation measurements.

EXTENT OF PLAY:

NIAT Field Teams—Two field teams will each demonstrate obtaining a minimum of two complete samples. Controller messages will provide simulated radiation measurements.

ARCAs: None

OBJECTIVE 7: PLUME DOSE PROJECTION

Demonstrate the capability to develop dose projections and protective action recommendations regarding evacuation and sheltering.

EXTENT OF PLAY:

EOF—MDPH will demonstrate determining if and where a plume exists in Massachusetts, as well as projected dose, if any, based on utility information and simulated field team data provided in a Controller message. From the information, MDPH will formulate appropriate protective action recommendations.

ARCAs: None

OBJECTIVE 8: FIELD RADIOLOGICAL MONITORING—AIRBORNE RADIOIODINE AND PARTICULATE ACTIVITY MONITORING

Demonstrate the appropriate use of equipment and procedures for the measurement of airborne radioiodine concentrations as low as 10^{-7} (0.0000001) microcuries per cubic centimeter in the presence of noble gases and obtain samples of particulate activity in the airborne plume.

EXTENT OF PLAY:

NIAT Field Teams—Two field teams will each demonstrate measurement of airborne radioiodine concentration and particulate matter. Each monitoring team will demonstrate obtaining a minimum of two air samples. Controller messages will provide simulated monitoring data.

Teams will use charcoal cartridges to simulate silver zeolite cartridges, but the silver zeolite cartridges will be available for inspection by FEMA.

NIAT personnel will prepare sample media for transport and arrange for transport of the sample. Actual transport to the designated laboratory for analysis will not be performed. No actual radiological material will be used.

ARCAs: None

OBJECTIVE 9: PLUME PROTECTIVE ACTION DECISION-MAKING

Demonstrate the capability to make timely protective action decisions (PAD).

EXTENT OF PLAY:

No exceptions.

ARCAs: None

OBJECTIVE 10: ALERT AND NOTIFICATION

Demonstrate the capability to promptly alert and notify the public within the 10-mile plume pathway emergency planning zone (EPZ) and disseminate instructional messages to the public on the basis of decisions by appropriate State or local officials.

EXTENT OF PLAY:

State EOC—Actions to demonstrate performance of initial notification of the public will be performed up to the point of actual transmission of the Emergency Alert System (EAS) message. The message will be prepared and the radio stations will be contacted. A standard test message will be sent to WHYN and WHAI and broadcast once at approximately the time of initial notification to the public. WPVQ will pick up the message by monitoring WHYN.

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

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

ARCAs:

67-99-10-A-13: (Colrain) The town sirens did not operate when tested during the exercise. According to the town EM Director, they are tested monthly, but they have been inoperable before when tested during exercises. (Objective 10) (NUREG-0654, E.6) This ARCA was resolved during a FEMA site visit on March 23, 2001.

OBJECTIVE 11: PUBLIC INSTRUCTIONS AND EMERGENCY INFORMATION

Demonstrate the capability to coordinate the formulation and dissemination of accurate information and instructions to the public.

EXTENT OF PLAY:

State EOC—Following the initial alert and notification, subsequent contacts to the EAS stations will be simulated.

ARCAs: None

OBJECTIVE 12: EMERGENCY INFORMATION—MEDIA

Demonstrate the capability to coordinate the development and dissemination of clear, accurate and timely information to the news media.

EXTENT OF PLAY:

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

ARCAs: None

OBJECTIVE 13: EMERGENCY INFORMATION—RUMOR CONTROL

Demonstrate the capability to establish and operate rumor control in a coordinated and timely manner.

EXTENT OF PLAY:

State EOC—Control cell personnel will make calls simulating members of the public and media personnel. The rumor control personnel will demonstrate the ability to handle calls on the rumor control line. Handling at least one rumor trend (three or more calls of the same nature) will be demonstrated. Two rumor control operators each will respond to an average of six calls per hour once the Public Alert and Notification System has been activated at Site Area Emergency.

Media Center—Information generated as a result of incoming calls to the EOC Rumor Control phones will be included in news briefings. At least one rumor trend will be handled.

EPZ EOCs—Control cell personnel will make calls to each local EOC simulating members of the public. Each EOC will demonstrate determining which call(s) may be handled by the EOC (queries about town response) and which call(s) must be referred to the State Rumor Control/Public Information line (all other types of calls).

ARCAs: None

OBJECTIVE 14: IMPLEMENTATION OF PROTECTIVE ACTIONS—USE OF KI FOR EMERGENCY WORKERS, INSTITUTIONALIZED INDIVIDUALS, AND THE GENERAL PUBLIC

Demonstrate the capability and resources to implement potassium iodide (KI) protective actions for emergency workers, institutionalized individuals, and, if the State Plan specifies, the general public.

EXTENT OF PLAY:

Actual ingestion of KI will not occur. Empty KI tablet containers (small zip-lock bags) will be included in the dosimetry packets. KI inventories will be available for inspection at each distribution location.

Massachusetts does not provide KI to members of the general public.

ARCAs: None

OBJECTIVE 15: IMPLEMENTATION OF PROTECTIVE ACTIONS—SPECIAL POPULATIONS

Demonstrate the capability and resources necessary to implement appropriate protective actions for special populations.

EXTENT OF PLAY:

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

- Warwick State Forest in Warwick
- Erving State Forest in Warwick

The other four DEM alerting locations will not be demonstrated in 2001:

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

The actual alert and notification will be simulated by displaying appropriate equipment and pre-scripted messages to the evaluator. Members of the public in the vicinity will not be affected.

A FEMA evaluator will be present at District 9 Fire Warden's Office to observe communications, dosimetry distribution, equipment, maps, and prescribed messages and to interview the DEM field personnel. The FEMA evaluator will accompany one of the two field personnel/teams dispatched.

As per procedures, the team alerting Erving State Forest are not required to wear dosimetry, as the forest is outside of the EPZ.

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

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

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

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

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

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

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

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

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

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

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

The Fire Liaison will notify the Franklin County Boat Club and the Oak Ridge Golf Club. No personnel will be dispatched to clear the Oak Ridge Golf Club. The Barton Cove Camp Ground will not be notified because it closes for the season on September 3, 2001.

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

The Police Liaison will simulate notification of the Boy Scout Camp, Camp Keewanee, and Camp Lion Knoll by logging the appropriate actions at the appropriate times. No actual notification will occur, as all three are closed for the season during the exercise.

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

The capability to correctly operate a TTY will be demonstrated in Greenfield by sending and receiving a test message to/from a TTY at the Massachusetts Commission for the Deaf and Hard of Hearing.

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

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

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

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

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

The EOC will simulate contacting Camp Northfield by logging the appropriate actions at the appropriate times. No actual notification will occur, as Camp Northfield is closed the week of the exercise.

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

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

ARCAs:

67-99-15-A-14: Colrain EOC staff did not have a list of special needs individuals within the Colrain portion of the EPZ. (Objective 15) (NUREG-0654, J.10c, J.10d) This ARCA was resolved during a FEMA site visit on March 23, 2001.

OBJECTIVE 16: IMPLEMENTATION OF PROTECTIVE ACTIONS—SCHOOLS

Demonstrate the capability and resources necessary to implement protective actions for school children within the plume pathway emergency planning zone (EPZ).

EXTENT OF PLAY:

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

EPZ EOCs—Initial notification will be made to all public school superintendents' offices, private schools, and day care centers. Subsequent calls will be made to the Gill-Montague Regional School District Superintendent's Office (who in turn will notify Gill Elementary School), Mohawk Trail Regional School District Superintendent's Office (who in turn will notify the Colrain Central School), Pioneer Valley Regional School District Superintendent's Office (who in turn will notify Northfield Elementary School, the Pearl Rhodes Elementary School in Leyden, the Pioneer Valley Regional School in Northfield, and the Warwick Community School), The Giving Tree Preschool in Gill, and the Otter Pond Preschool, also in Gill. No further calls will be made to other schools; instead, calls will be simulated and logged at the appropriate times during the exercise.

Assignments of school bus escorts will be demonstrated, but escorts will not be dispatched during the course of the main exercise.

After the main exercise has concluded, an exercise of school transfer routes will be demonstrated in the towns of Bernardston, Colrain, and Gill, as follows:

Bernardston

The exercise will begin at the direction of the local EOC's Controller, who will indicate termination of the main exercise and the beginning of the out-of-sequence school transfer route exercise.

The Controller will direct Laidlaw Transit, Inc. to dispatch one vehicle (probably a van) to the Bernardston Elementary School.

The Bernardston EOC will dispatch the escort vehicle with dosimetry to the Bernardston Elementary School.

The Controller and FEMA Evaluator will travel with the escort vehicle to the school.

At the Bernardston Elementary School, the escort vehicle driver will issue dosimetry to the Laidlaw Transit, Inc. driver and lead the Laidlaw Transit, Inc. vehicle to the Greenfield Community College host facility.

The demonstration will conclude at Greenfield Community College; the Controller and FEMA Evaluator will return to the Bernardston EOC in the escort vehicle.

Colrain

The exercise will begin at the direction of the local EOC's Controller, who will indicate termination of the main exercise and the beginning of the out-of-sequence school transfer route exercise.

The Controller will direct Liebenow, Inc. to dispatch one vehicle (probably a van) to Colrain Central School.

The Colrain EOC will dispatch the escort vehicle with dosimetry to the Colrain Central School.

The Controller and FEMA Evaluator will travel with the escort vehicle to the school.

At the Colrain Central School, the escort vehicle driver will issue dosimetry to the Liebenow driver and lead the Liebenow vehicle to the Greenfield Community College host facility.

The demonstration will conclude at Greenfield Community College; the Controller and FEMA Evaluator will return to the Colrain EOC in the escort vehicle.

Gill

The exercise will begin at the direction of the local EOC's Controller, who will indicate termination of the main exercise and the beginning of the out-of-sequence school transfer route exercise, which consists of two parts.

Northfield-Mount Hermon School, Gill Campus

The Controller will direct Chapin & Sadler to dispatch one vehicle (probably a van) to the Northfield-Mount Hermon School, Gill Campus.

The Gill EOC will dispatch the escort vehicle with dosimetry to the Northfield-Mount Hermon School.

The Controller and FEMA Evaluator will travel with the escort vehicle to the school.

At the Northfield-Mount Hermon School, the escort vehicle driver will issue dosimetry to the Chapin & Sadler driver and lead the Chapin & Sadler vehicle to UMass host facility.

The demonstration will conclude at UMass; the Controller and FEMA Evaluator will return to the Gill EOC in the escort vehicle.

The Giving Tree School

The Controller will direct F. M. Kuzmeskus Bus Company to dispatch one vehicle (probably a van) to The Giving Tree School.

The Gill EOC will dispatch the escort vehicle with dosimetry to The Giving Tree School.

The Controller and FEMA Evaluator will travel with the escort vehicle to the school.

At The Giving Tree School, the escort vehicle driver will issue dosimetry to the F. M. Kuzmeskus Bus Company driver and lead the F. M. Kuzmeskus Bus Company vehicle to UMass host facility.

The demonstration will conclude at UMass; the Controller and FEMA Evaluator will return to the Gill EOC in the escort vehicle.

Gill-Montague Regional School District School Superintendent's Office—All calls will be made to the Gill Elementary School and to the F. M. Kuzmeskus Bus Company. During the call to the bus company, vehicles and drivers will be tallied for their availability and their ETA noted. No dispatch of vehicles will occur.

Mohawk Trail Regional School District Superintendent's Office—All calls will be made to the Colrain Central Elementary School and to Liebenow, Inc. (bus company). During the appropriate call to the bus company, vehicles and drivers will be tallied for their availability and their ETA noted. No dispatch of vehicles will occur.

Pioneer Valley Regional School District Superintendent's Office—All calls will be made to Pioneer Valley Regional School, Northfield Elementary School, Pearl Rhodes Elementary School, and Warwick Community School, and to Laidlaw Transit, Inc. (bus company). During the appropriate call to the bus company, vehicles and drivers will be tallied for their availability and their ETA noted. No dispatch of vehicles will occur. The Pioneer Valley School Superintendent will arrange for a sufficient number of buses to transfer all the schoolchildren in the district in one trip.

Call(s) to the Orange Police Station to activate the Orange Armory will be simulated and logged at the appropriate times during the exercise.

Schools and Day Care Centers—Colrain Central School, Gill Elementary School, The Giving Tree School in Gill, Northfield Elementary School, Otter Pond Preschool in Gill, Pearl Rhodes Elementary School in Leyden, Pioneer Valley Regional School in Northfield, and Warwick Community School will receive initial and subsequent contacts. Students will not be involved. No vehicles will be dispatched for precautionary transfer or evacuation. An out-of-sequence transportation demonstration will occur, as noted above.

The following schools and day care centers will not participate:

- Bernardston Elementary School
- Full Circle School, Bernardston
- Northfield-Mount Hermon School, Gill Campus
- Northfield-Mount Hermon School, Northfield Campus
- Linden Hill School, Northfield

Host Facilities

No host facilities are participating in this exercise.

ARCAs: None

OBJECTIVE 17: TRAFFIC AND ACCESS CONTROL

Demonstrate the organizational capability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas.

EXTENT OF PLAY:

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

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

Massachusetts State Police, Troop B, Northampton—Personnel who might be assigned traffic and access control duties will be interviewed by the FEMA evaluator on the procedures for operating an access control point. These questions may include the following topics: purpose, kind, and use of dosimetry, procedures for reading dosimetry, reporting levels, obtaining equipment for setting up an access control point, procedures for operating an access control point.

Massachusetts Highway Department Facility, Deerfield—FEMA will inspect the equipment for access control during a site visit on June 27, 2001.

EPZ EOCs—EPZ EOCs will demonstrate through discussions and communications the ability to direct and monitor traffic control operations within their jurisdictions. No personnel or equipment will be deployed to field locations. Instead, local highway representatives at the local EOCs will participate in a discussion of procedures and resources available for traffic control. At a time to be determined, the FEMA evaluator will visit the local highway garage to inspect equipment that would be used for traffic control points.

ARCAs: None

OBJECTIVE 18: RECEPTION CENTER—MONITORING, DECONTAMINATION, AND REGISTRATION

Demonstrate the adequacy of procedures, facilities, equipment and personnel for the radiological monitoring, decontamination and registration of evacuees.

EXTENT OF PLAY:

Greenfield Community College Reception Center will not be demonstrated in this exercise.

ARCAs:

67-97-18-A-33: The monitoring of vehicles and personnel (male) could have been faster had the monitors used a one to two inch a second method of monitoring. It was also determined that some members of the monitoring teams were not familiar with the proper procedures for determining the background levels. (Objective 18) (NUREG-0654, I.8, J.9, J.10.h, J.12)

OBJECTIVE 19: CONGREGATE CARE

Demonstrate the adequacy of facilities, equipment, supplies, personnel, and procedures for congregate care of evacuees.

EXTENT OF PLAY:

The Greenfield Armory, Greenfield High School, and Federal Street School will not be demonstrated in 2001, but shelter surveys will be provided to FEMA.

ARCAs: None

OBJECTIVE 20: MEDICAL SERVICES—TRANSPORTATION

Demonstrate the adequacy of vehicles, equipment, procedures and personnel for transporting contaminated, injured, or exposed individuals.

EXTENT OF PLAY:

This objective was last demonstrated by Bay State Health System Ambulance on November 15, 2000.

ARCAs: None

OBJECTIVE 21: MEDICAL SERVICES—FACILITIES

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

EXTENT OF PLAY:

This objective was last demonstrated by Franklin Medical Center on November 15, 2000.

ARCAs: None

OBJECTIVE 22: EMERGENCY WORKERS, EQUIPMENT, AND VEHICLES— MONITORING AND DECONTAMINATION

Demonstrate the adequacy of procedures for the monitoring and decontamination of emergency workers, equipment, and vehicles.

EXTENT OF PLAY:

This objective will not be demonstrated by Colrain, Greenfield, or Warwick in 2001.

This objective will be demonstrated by Gill out of sequence after exercise play in the Gill EOC has terminated. An independent scenario will be used to drive the exercise play at the RM&D Station.

Individuals simulating emergency workers in Gill will be processed through the facility, with one male and one female declared contaminated. Personnel decontamination demonstration will be simulated using a discussion of methods and techniques. Vehicle monitoring will be performed on one vehicle, and handling of contaminated vehicles will be discussed.

ARCAs: None

OBJECTIVE 23: SUPPLEMENTARY ASSISTANCE (FEDERAL/OTHER)

Demonstrate the ability to identify the need for external assistance and to request such assistance from federal or other support organizations.

EXTENT OF PLAY:

State EOC—Simulated restriction of rail traffic will be demonstrated through coordination with the Vermont Division of Emergency Management, as per procedure. Simulated restriction of air traffic will be demonstrated by contacting the Aeronautics Commission, as per procedure. Coordination with the New England Radiological Health Compact will be demonstrated by contacting the Secretary of the Compact, as per procedure. Only the initial call to the Compact will be made, all others will be simulated.

ARCAs: None

OBJECTIVE 24: POST-EMERGENCY SAMPLING

Demonstrate the use of equipment and procedures for the collection and transportation of samples from areas that received deposition from the airborne plume.

EXTENT OF PLAY:

This objective will be not be demonstrated in 2001.

ARCAs: None

OBJECTIVE 25: LABORATORY OPERATIONS

Demonstrate laboratory operations and procedures for measuring and analyzing samples.

EXTENT OF PLAY:

This objective will not be demonstrated in 2001.

ARCAs: None

OBJECTIVE 26: INGESTION EXPOSURE PATHWAY—DOSE PROJECTION AND PROTECTIVE ACTION DECISION-MAKING

Demonstrate the capability to project dose to the public for the ingestion exposure pathway and to recommend protective actions.

EXTENT OF PLAY:

This objective will not be demonstrated in 2001.

ARCAs: None

OBJECTIVE 27: INGESTION EXPOSURE PATHWAY—PROTECTIVE ACTION IMPLEMENTATION

Demonstrate the capability to implement protective actions for the ingestion exposure pathway.

EXTENT OF PLAY:

This objective will not be demonstrated in 2001.

ARCAs: None

OBJECTIVE 28: RELOCATION, RE-ENTRY, AND RETURN—DECISION MAKING

Demonstrate the capability to develop decisions on relocation, re-entry, and return.

EXTENT OF PLAY:

This objective will not be demonstrated in 2001.

ARCAs: None

OBJECTIVE 29: RELOCATION, RE-ENTRY, AND RETURN—IMPLEMENTATION

Demonstrate the capability to implement appropriate measures for relocation, re-entry, and return.

EXTENT OF PLAY:

This objective will not be demonstrated in 2001.

ARCAs: None

OBJECTIVE 30: CONTINUOUS, 24-HR STAFFING

Demonstrate the capability to maintain staffing on a continuous 24-hour basis through an actual shift change.

EXTENT OF PLAY:

Rosters will be developed showing two shifts for the key personnel of Emergency Management Director, Communications Officer, and Dosimetry Coordinator in the following locations in 2001:

- Bernardston EOC
- Colrain EOC
- Gill EOC
- Greenfield EOC

- Leyden EOC
- Northfield EOC
- Warwick EOC

This objective will not be demonstrated at the following locations:

- State EOC
- Area III EOC

ARCAs: None

OBJECTIVE 31: OFFSITE SUPPORT FOR THE EVACUATION OF ONSITE PERSONNEL

Demonstrate the capability to provide offsite support for the evacuation of onsite personnel.

EXTENT OF PLAY:

This objective does not apply to Massachusetts.

Draft 5 Changes: Clarification of the composition of DFWELE teams.

Revision 0 Changes: One language change per Bob Poole's request. Changed status of Camp Northfield.

VERMONT YANKEE NUCLEAR POWER STATION
EMERGENCY PREPAREDNESS EXERCISE

2001

3.0 EXERCISE GUIDELINES AND SCOPE

- 3.1 Exercise Guidelines and Ground Rules
- 3.2 Procedure Execution List

VERMONT YANKEE NUCLEAR POWER STATION
EMERGENCY PREPAREDNESS EXERCISE
2001

3.1 EXERCISE GUIDELINES AND GROUND RULES

The Vermont Yankee Emergency Preparedness Exercise which will be conducted on Wednesday, September 5, 2001 is a "full-participation biennial" exercise. The exercise will involve full participation from Vermont Yankee, Nuclear Regulator Commission, State of Vermont, State of New Hampshire, Commonwealth of Massachusetts, and local towns within the plume exposure EPZ. All Vermont Yankee emergency response facilities will be fully activated, and the scenario will be driven by the simulator, as in past drills and exercises. State and local off-site objectives will be demonstrated for FEMA observation and evaluation.

This section provides the guidance and ground rules for conducting the 2001 Vermont Yankee Emergency Preparedness Exercise. It provides the framework for conducting the exercise, demonstrating emergency response capabilities, and evaluating response activities.

I. **Concepts of Operations and Control**

A. **Exercise Controller Operations**

Vermont Yankee management has appointed an Exercise Coordinator to oversee all exercise activities. The Exercise Coordinator is responsible for approving the objectives and developing the scenario time sequence. The Exercise Coordinator is also responsible for the selection and training of exercise controllers who are required to conduct and evaluate the exercise.

Vermont Yankee will supply Controllers for major locations where an emergency response action will be demonstrated. Before the exercise, the Controllers will be provided with the appropriate materials necessary for their assigned function. The material will include any maps and messages to be used and forms for documenting and evaluating observed activities.

In each facility where an activity takes place, the designated Lead Controller will make judgment decisions to keep the action going in accordance with the scenario time line. The Lead Controllers will provide advice to other Controllers assigned to their facility to resolve minor exercise control issues or concerns that may occur. If a major exercise control problem arises, the Controller should first contact the Lead Controller who will then contact the Exercise Coordinator for guidance or resolution of the problem. All major requests for scenario modifications or holding periods must be cleared through the Exercise Coordinator. Controllers also have the authority to resolve scenario-related problems that may occur during the exercise.

Controllers will observe the players as they perform their assigned emergency response functions. Controllers are responsible for being knowledgeable in the area of their assigned function and possible activities that may be observed. In the event of corrective or repair activities, the Controller shall be cognizant of procedures associated with the action. If an activity is to be simulated (as identified within the specific mini-scenarios or exercise ground rules), the Controller shall request the players to describe the actions that would be initiated to effect the desired outcome of the assigned task within the scenario time sequence of events and constraints allowed. The Controllers will critique the effectiveness of the emergency response actions taken and will also provide a written evaluation of their observations.

The initial conditions will be provided to a Control Room operations crew, located in the Simulator. The accident scenario will be run on the plant simulator to generate the plant and reactor system parameters for the exercise. Additional message cards and scenario parameters will be provided by Controllers at the times indicated in the exercise sequence of events or when required by player actions.

As information is provided to the players, they should determine the nature of the emergency and implement appropriate plant procedures including emergency plan implementing procedures and emergency operating procedures. These procedures should include a determination of the emergency classification in accordance with the Vermont Yankee Emergency Plan. Notifications will be made to the appropriate federal and state authorities.

The hypothesized emergency will continue to develop based on data and information provided to the operators located in the simulator. Wherever possible, operators should complete actions as if they were actually responding to plant events. Inconsistencies in the scenario may be intentional and may be required to test the capabilities of the emergency response facilities to the maximum extent possible in a limited period of time.

B. Avoiding Violations of Laws

Violation of laws is not justifiable during the exercise. To implement this guideline the following actions must be taken:

1. Participants must be specifically informed of the need to avoid violating any federal, state and local laws, regulations, ordinances, statutes and other legal restrictions. The orders of all police, sheriffs or other authorities shall be followed as appropriate.
2. Participants will not direct illegal actions to be taken by other participants or members of the general public.

3. Participants will not intentionally take illegal actions when responding to scenario events. Specifically, local traffic laws (i.e. speed limits) will be observed.

C. Avoiding Personnel and Property Endangerment

All participants will be instructed to avoid endangering property (public or private), other personnel responding to the events, members of the general public, animals and the environment.

D. Actions to Minimize Public Inconvenience

It is not the intent, nor is it desirable, to effectively train or test the public response during the conduct of the exercise. Public inconvenience is to be avoided.

The conduct of the exercise could arouse public concern that an actual emergency is occurring. It is important that conversations that can be monitored by the public (radio, loudspeakers, etc.) be prefaced and concluded with the words, "THIS IS A DRILL; THIS IS A DRILL."

II. General Guidance for the Conduct of the Exercise

A. Exercise Simulation

Since the exercise is intended to demonstrate actual capabilities as realistically as possible, participants will be instructed to act as they would in an actual emergency. Wherever possible, emergency response actions will be carried out. Some of the exercise objectives will be demonstrated by simulating the associated emergency response actions. Simulation of response activities will occur when specific actions do not have to be performed, and when actions are outside of the defined mini-scenarios (refer to Section 7.2). When an emergency response is to be simulated, the Controller will provide verbal or written directions on actions that are to be simulated.

The following describes those specific actions that do not have to be performed and can be simulated by participants. No action will be allowed which alters or affects the ongoing operation of the plant.

1. Before the start of the exercise, specific workstation terminals in the TSC, EOF/RC will be connected to the Simulated Plant Process Computer (SPPCS) via the simulator to receive and display scenario-related data. The Main Plant Control Room's workstation terminals will remain tied to the plant process computer (ERFIS).

2. A number of individuals from the Vermont Yankee Emergency Response Organization will be pre-staged to facilitate exercise and simulator related logistics. Individuals that will be pre-staged include the following:
 - a. The Operating crew in the Simulator Control Room and the crew's AOs and other personnel at the plant to compliment the operating crew at the Simulator.
 - b. The Chemistry technician assigned as the Chemistry Communicator in the Simulator Control Room if requested by SS/PED.
 - c. An individual assigned as an Alternate Communicator in the Simulator Control if requested by SS/PED.
 - d. An R&CE person assigned to the Simulator Control Room for data acquisition if requested by TSC personnel.
 - e. An RP person assigned to the Simulator Control Room for data acquisition if requested by TSC Coordinator.
 - f. R&CE personnel to set up the ERFIS terminals in the SPPCS mode.
3. Meteorological data will be simulated through the simulator SPPCS computer.
4. After plant evacuation and accountability have been completed, plant personnel and contractors/visitors, not directly involved in the exercise, will be allowed to return to work at the discretion of the TSC Coordinator.
5. Discussion of potassium iodide (KI) usage will be done if scenario conditions warrant its use. However, distribution and ingestion of KI will be simulated.
6. If off-site monitoring sampling is required, charcoal cartridges will be used in place of silver zeolite cartridges.
7. Off-Site monitoring teams and security boundary monitoring personnel will not wear either protective clothing or respirators.
8. On-Site repair teams are expected to follow normal radiation protective practices including the wearing of protective clothing if the situation calls for it. Respirators or other protective breathing devices will be donned and demonstrated on the proper use to the Controller. At

which time the protective device may be removed and simulated use for the rest of that event.

9. The inner gate and electrically controlled doors will not be left in the open position during the exercise.
10. The plant Gai-Tronics is available between the Simulator Control Room and the plant through the use of an interface device. Although not a complete duplication it will allow a person in the plant to talk directly to the simulator over the plant Gai-Tronics. However, actual plant announcements will be coordinated by the controllers and made from the Vermont Yankee plant Main Control Room.
11. Exercise Controllers will not be issued dosimetry unless plant access is required before the exercise. Security will be notified of the Exercise Controllers assigned locations.
12. The Exercise Controller may simulate all decontamination actions associated with the scenario events after discussion and approval.
13. Plant personnel may simulate the use of respiratory protection equipment after discussion and approval by the Exercise Controller.

B. Player's Guidelines and Gamesmanship

The following is a list of general guidelines and instructions for the players regarding the exercise.

1. Participants will include Exercise Controllers, Players, and NRC and FEMA Evaluators. Exercise Controllers will provide players with command and message cards to initiate emergency response actions and evaluate player actions. NRC/FEMA Evaluators will also evaluate and note player actions. Exercise Controllers and NRC/FEMA Evaluators will wear badges for identification purposes.
2. Always identify yourself by name and function to the Exercise Controllers. Wear a name tag if one is provided.
3. You may ask the Exercise Controller for information such as:
 - a. Initial conditions of the plant and systems including:
 - o operating history of the core
 - o initial coolant activity
 - o general weather conditions

- o availability of systems according to the scenario
 - b. Area radiation data at the location of emergency teams.
 - c. Airborne data at the location of emergency teams after a sample has been properly obtained.
 - d. Activity from nose swabs or skin contamination surveys.
- 4. You may not ask the following from the Exercise Controllers:
 - a. Information contained in procedures, drawings, or instructions.
 - b. Judgments as to which procedures should be used.
 - c. Data which will be made available later in the scenario.
 - d. Assistance in performing actions.
 - e. Assistance in performing calculations.
- 5. Play out all actions, as much as possible, in accordance with your plan and procedures as if it were an actual emergency. If an action or data is to be simulated, the Exercise Controller will provide appropriate direction.
- 6. Periodically speak aloud, identifying your key actions and decisions to the Exercise Controllers and NRC Evaluators, especially if present in your facility and observing your functions. This may seem artificial, but it will assist the controllers in determining the various response actions being initiated and is to your benefit.
- 7. When you are assigned to complete a response action, notify an Exercise Controller before performing the action. Let the Exercise Controllers decide which actions will be observed and which ones will not. If the Exercise Controller elects to observe your activity, ensure the Exercise Controller remains with you to observe the task (i.e. do not lose the controller en-route to the area where the action will take place).
- 8. If you are in doubt about completing a response action, ask your Exercise Controller for clarification. The Exercise Controller will not prompt or coach you. Emergency response actions must not place participants in any potentially hazardous situations.

9. The scenario has been scrutinized to anticipate as many success paths that may be initiated by the response teams. In the event you or your staff determine there may be alternative responses to scenario conditions, you may not be allowed to initiate your proposed "fix". However, the initiative will be noted but you will be requested to continue your response in accordance with the proposed scenario events from the Exercise Controller. In addition, the Exercise Controller may periodically issue messages or instructions designed to initiate response actions. You must accept these messages immediately. They are essential to the proper completion of the exercise scenario.
10. If the Exercise Controller intervenes in your response actions and recommends you redirect or reconsider your play actions, it is for a good reason. The Exercise Controller's direction may be essential to ensure demonstration of objectives for all participating groups.
11. If you disagree with your Exercise Controller, discuss your concerns in a professional manner. However, the Exercise Controller's final decisions should be followed.
12. Respond to questions in a timely manner.
13. Do not accept exercise-related scenario messages/instructions from the NRC Evaluators. They should work through Vermont Yankee Exercise Controllers if they want to initiate additional emergency conditions. However, you may answer questions directed to you by the NRC Evaluators. If you do not know the answer, offer to get them the answer as soon as possible (without interfering with exercise activities) or refer them to your lead facility player or Exercise Controller.
14. You must respond as if elevated radiation levels are actually present based on the scenario information you receive. This may require you to wear protective clothing, respirators, or additional dosimetry.
15. Exercise Controllers are exempt from simulated radiation levels and other emergency conditions. Do not let this confuse you or cause you to act unwisely. However, no one is exempt from normal plant radiological practices and procedures.
16. Use status boards and logbooks as much as possible to document and record your actions.
17. Always begin and end all communications with the words "THIS IS A DRILL," so that exercise-related communications are not confused with an actual emergency.

18. Keep a list of items that you believe will improve your plans and procedures. A player debriefing will follow the exercise. Provide any comments or observations to your lead player or Exercise Controller after the exercise. Areas for improvement or weaknesses when corrected will improve the overall emergency response capability.

The following is a list of items to improve gamesmanship during the exercise:

1. Make it known when significant events occur or when you are about to perform a significant activity.
2. Keep all messages, status boards, and problem boards accurate, current, timed, and dated.
3. Hold briefings regularly, approximately every 30-45 minutes, or as conditions warrant.
4. Key players should wear badges that identify their role. Bound logbooks should be used in all emergency response facilities.
5. All announcements, including those on the Gai-Tronics, should state "THIS IS A DRILL."
6. Avoid simulation unless it has been specified. Use protective clothing where called for (e.g., step-off pads, etc.).

C. Simulator Control Room (SCR) Information

The following describes how the SCR emergency response activities will be integrated with the plant Control Room functions during the exercise:

1. Players reporting to the plant Control Room will be directed to an area (SS office) that will have a Control Room Controller and communications link with the simulator. All Control Room exercise communications should be directed to the SCR.
2. An interface device has been installed to connect the Simulator Control Room in Brattleboro with the plant Gai-Tronics system. Although not a complete duplication it will allow a person in the plant to talk directly to the simulator over the plant Gai-Tronics. The Controller in the plant Main Control Room will monitor and manually actuate the interface, causing a slight delay between initial communications. CHANNEL 3 will be the designated line to be used for communications between the Simulator Control Room and the Plant. CHANNEL 1 and CHANNEL 2 will be the designated lines for all other plant exercise related communications and messages.

3. Gai-Tronics announcements done in the Simulator Control Room will be coordinated by the Simulator Control Room Controller and made from the Vermont Yankee plant Main Control Room. The announcements will be made and repeated by the Controller or Operating crew in the plant Main Control Room.
4. TSC Communicators normally assigned to the Control Room and a Radiation Protection Technician for transmitting radiological and meteorological data will be pre-staged in the simulator.
5. Personnel movement in and out of the SCR will be limited to the Exercise Controllers and designated exercise participants.
6. Communications equipment in the SCR is the same as the plant Control Room. The commercial telephone extensions are different, but the auto-ring down circuits and speaker telephones will be operable. The orange Nuclear Alert System (NAS) State telephone and Federal Telecommunications System (FTS 2001) Emergency Notification System (ENS)-NRC telephone will be operable. The orange Nuclear Alert System telephone extension in the Simulator is 613.

D. Personnel Accountability and Participation (Exempted Participants)

Procedures require that all participants be identified. Proper identification will not only help eliminate confusion, but is necessary for security and accountability. This requirement applies to all areas within the plant fence, Governor Hunt House, EOF/RC, simulator area, News Media Center, and the Vermont Yankee Corporate Office in Brattleboro.

Although it is expected that all personnel will respond to the declared emergency as delineated in the applicable procedures, it is recognized that a number of persons (e.g., normal plant operations shift, normal security complement, fire watches, etc.) will not participate due to the nature of their assigned duties and activities. Department Heads will be requested to review their area of responsibility and provide the Exercise Coordinator with a list of names for anyone that should be exempted from participation. The number of exempt personnel should be minimized.

Plant Security will be provided with the list of exempt personnel for the exercise. All other personnel, not listed, are expected to participate as required by the Emergency Plan. The list of exempt personnel will include the On-Shift Security Crew, Operating Crew, and Duty Chemistry and Radiation Protection Technician and other individuals identified by the Department Heads.

E. Off-Site Participation (Federal, State and Local)

This year, Vermont Yankee is conducting a "full participation biennial" exercise that will involve substantial participation from the Nuclear Regulatory Commission, States of Vermont, New Hampshire, Commonwealth of Massachusetts and the local towns within the plume exposure EPZ. This is NRC's and FEMA's biennial look at the state of emergency preparedness of all three states, local towns and Vermont Yankee. NRC Emergency Incident Response Team participation is expected for this exercise.

The capability to notify federal, state, and local authorities of emergency classifications in accordance with established procedures will be demonstrated as follows:

1. NRC will be notified by using the FTS 2001 ENS telephone.
2. Vermont, New Hampshire, and Massachusetts State Police dispatchers and State Emergency Operations Centers (EOCs) will be notified through the orange Nuclear Alert System telephone.
3. Vermont, New Hampshire, and Massachusetts State officials at the EOF/RC and the News Media Center (NMC) will be notified by the appropriate Vermont Yankee personnel (if available and participating in the exercise).

If any state official tries to contact the actual plant Control Room REGARDING THE EXERCISE, the Vernon switchboard should transfer the call to the Simulator Control Room in Brattleboro.

F. Exercise Critiques

The following is a brief description of the critique sessions that will be held after the exercise. The critique sessions are held to determine whether the stated exercise objectives were met, verify the effectiveness of the emergency plan and procedures, and identify areas for future improvements. The specific schedule for the critique sessions will be announced at the conclusion of the exercise.

Emergency Response Facility Critiques

The Controllers will facilitate the critique sessions. Center leads will conduct critique sessions. Exercise participants will be debriefed on the findings for their particular emergency response facility(s). Four critique sessions will be held:

1. SRM and EOF
2. TSC and Simulator Control Room
3. OSC and Security
4. News Media Center

Lead Controller Debriefing

This session will be conducted to compile all exercise comments and findings. Participation is limited to Lead Controllers or other Exercise Controllers as needed.

Exercise Critique

This session will be conducted to present a summary of major findings identified during the exercise. Participants include Vermont Yankee management, Exercise Controllers, key players, and the NRC.

H. Exercise Termination

The Exercise Coordinator will terminate the exercise when all emergency response actions have been completed in accordance with the exercise scenario time sequence and exercise objectives.

The following steps will be implemented to terminate the exercise:

1. The Exercise Coordinator will obtain information from the Lead Controllers regarding the status of player actions and the demonstration of the exercise objectives.
2. The Lead Controllers are responsible for informing the Exercise Coordinator of their facility status and whether the emergency response actions and objectives have been satisfactorily observed.
3. Upon receipt of information from the Lead Controllers, the Exercise Coordinator will inform the Site Recovery Manager and TSC Coordinator that all exercise objectives have been completed and the exercise can be terminated.
4. A coordinated decision to terminate the exercise will be made between the Site Recovery Manager and the TSC Coordinator. The Site Recovery Manager will also receive concurrence from the states to terminate exercise activities.
5. The Site Recovery Manager will terminate the exercise.

The exercise may also be terminated under the following circumstances:

A. In the event of an actual plant emergency condition should occur, the following actions will be taken:

1. The Shift Supervisor will contact the TSC Coordinator and inform him of the plant status.
2. The TSC Coordinator will, in turn, contact the Site Recovery Manager and inform him of the plant status.
3. The Site Recovery Manager will immediately inform any State representatives at the EOF of the nature of the emergency.
4. Concurrent with the notification in Step 2, the Control Room will announce the following statement over the plant paging system:

"The emergency plan exercise has been terminated. I repeat. The emergency plan exercise has been terminated."

This message may be immediately followed by the appropriate emergency announcements.

5. The Exercise Coordinator will be responsible for directing the actions of all other exercise participants.

B. In the event that actual off-site emergency impacts the response actions of Vermont Yankee participants, the following actions should be taken:

1. The Shift Supervisor will notify the Control Room Controller who, in turn, will notify the Exercise Coordinator.
2. A coordinated decision will be made in conjunction with the Site Recovery Manager and/or the TSC and EOF Coordinators concerning the completion of the exercise.
3. The Exercise Coordinator will be responsible for temporarily halting the exercise until such time a decision is made to terminate or to continue the exercise.
4. If the final decision is to terminate the exercise, the Exercise Coordinator will be responsible for directing the activities of all exercise participants, as well as for informing the NRC of the exercise termination.
5. If the final decision is to continue the exercise, the Exercise Coordinator is responsible for informing all Controllers of any projected changes to the expected response action(s).
6. The Exercise Coordinator will direct the organization as to the appropriate actions required for restoring the exercise scenario sequence.

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3.2 EMERGENCY PLAN IMPLEMENTING PROCEDURE EXECUTION LIST

<u>Procedure Number</u>	<u>Rev. No.</u>	<u>Title</u>
AP 3125	18	Emergency Plan Classification and Action Level Scheme
OP 3504	32	Emergency Communications
OP 3507	29	Emergency Radiation Exposure Control
OP 3510	24	Off-Site and Site Boundary Monitoring
OP 3511	11	Off-site Protective Action Recommendations
OP 3513	20	Evaluation of Off-Site Radiological Conditions
OP 3524	17	Emergency Actions to Ensure Initial Accountability and Security Response
OP 3525	9	Radiological Coordination
OP 3531	14	Emergency Call-In Method
OP 3533	4	Post Accident Sampling of Reactor Coolant
OP 3534	3	Post Accident Sampling of Plant Stack Gaseous Releases
OP 3535	3	Post Accident Sampling and Analysis of Primary Containment
OP 3536	1	In Plant Air Sample Analysis with Abnormal Condition
OP 3540	0	Control Room Actions During an Emergency
OP 3541	0	Activation of the Technical Support Center (TSC)
OP 3542	0	Operation of the Technical Support Center (TSC)

OP 3544	0	Operation of the Operations Support Center (OSC)
OP 3545	0	Activation of the Emergency Operations Facility / Recovery Center (EOF/RC)
OP 3546	0	Operation of the Emergency Operations Facility / Recovery Center (EOF/RC)
OP 3547	0	Security Actions During an Emergency

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4.0 CONTROLLER INFORMATION

- 4.1 Controller Assignments
- 4.2 Controller Exercise Guidelines
- 4.3 Controller Evaluation Criteria

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4.1 **CONTROLLER ASSIGNMENTS**

NOTE: ASSIGNMENTS TO BE ISSUED UNDER SEPARATE MEMO AND REVIEWED AT THE
EXERCISE CONTROLLER BRIEFING SESSION

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4.2 CONTROLLER EXERCISE GUIDANCE

Before the exercise, each Controller will be provided a scenario package that corresponds to their respective assignments. It is the responsibility of the Controller to read the contents of the scenario package and understand their controller assignments.

Each Controller will be requested to attend appropriate training or briefing sessions before the exercise. Any questions regarding the scenario or assignments should be discussed at this time. Each Controller should ensure that they are familiar with location(s) required by their assignment.

Controllers should familiarize themselves with their assigned Lead Controller before the exercise. The Lead Controller is responsible to direct Controller activities throughout the course of the exercise. At the exercise termination, each Controller is responsible to provide their comments, observations and documentation to the Lead Controller. Each Lead Controller is responsible to provide this documentation to the Exercise Coordinator. Each Lead Controller is also responsible to provide a brief summary of their Controller comments to the Exercise Coordinator for presentation during the critique.

Controllers should identify themselves to players and explain their role in the exercise. Players should be told that if any actions are going to deviate from standard plant or emergency procedures must be identified to the Controllers. Controllers should keep a detailed log of their observations throughout the exercise. This log should note the time, location, activity and player responses. Section 4.3 contains log sheets, checklists, and evaluation forms for documentation purposes.

The primary role of the Controller is to document the emergency response activities of the players. In order to document emergency response activities, each Controller is required to complete the Emergency Exercise/Drill Controller's Evaluation Form (VYOPF 3505.02). When completing this form, each Controller should provide information on overall performance and observations (strength noted of positive actions taken or expected actions done well), comments/recommendations (specific areas that may warrant further evaluation for improvement), and potential weaknesses (inadequate performance). **(Inadequate indicates that the demonstrated performance could have precluded effective implementation of plans or procedures.)** For comments/recommendations and potential weaknesses (inadequate performance), the Controller should provide a clear written description of the finding or observation.

Controllers should not allow their biases to be documented as recognized weaknesses or deficiencies. Observations and comments may be further subdivided according to the following major headings: Facility Activation and Organizational Control, Communications, Adherence to Plans and Procedures, Equipment Capabilities, Scenario, Training, Facility Layout, Off-Site Monitoring, Personnel Dosimetry/Exposure Control, and General Comments.

Facility Activation comments should identify: (1) the time that emergency response personnel were notified; (2) when the facility was activated; (3) when initial activities are organized; (4) whether personnel performance follows the organized arrangements specified by plant procedures; and (5) the efficiency of methods of authority transfer. If a transfer of responsibility occurs, then the Controller should determine if affected personnel are aware that the transfer has occurred.

Communication comments should identify: (1) personnel familiarity with emergency communications use; (2) whether sufficient communications were available to ensure a timely, efficient, and effective flow of information; (3) whether there were enough communications personnel to make use of all available equipment; (4) the adequacy of communications logs and describe the effectiveness of data transfer; (5) whether there were any problems in the design of the existing communications system (i.e., location relative to traffic flow); (6) whether there were any recognized difficulties in use of computer systems; and (7) whether status boards are effectively used. Controllers should document their comments in this area very carefully, providing sufficient details to track any recognized deficiencies.

Plans and Procedures comments should identify: (1) whether personnel were familiar with the details or overall concepts of applicable procedures; (2) whether situations developed which required deviation from the procedure or plan; (3) whether personnel were overwhelmed with procedural requirements distracting them from performing their required emergency response function; and (4) whether the procedures adequately described the actions required to complete an assigned function.

Equipment Capability comments should identify: (1) whether all necessary materials and equipment were available and functional; (2) whether emergency response personnel checked operability of equipment prior to conducting their assignment; (3) whether backup equipment was readily available when malfunctions were reported; (4) whether the available systems provide an adequate service; and (5) whether equipment malfunctions impacted the expected emergency response.

Scenario related comments should identify: (1) whether sufficient information was available to ensure appropriate player response; (2) whether the scenario details deviated from actual procedural requirements; and (3) whether the scenario detail provided any prompts to the player.

Training comments should identify: (1) whether plant personnel have been provided sufficient training for their assigned ERO position; and (2) whether training identifies improper procedural requirements.

Facility Layout comments should identify: (1) whether the available work space was adequate; (2) whether traffic flow hindered the response efforts; (3) whether the communications available in the work area were adequate; (4) whether the noise level hindered emergency response efforts; and (5) whether sufficient references were available to complete the job assignment.

Off-Site Monitoring comments should identify: (1) the adequacy of sampling methods; (2) the adequacy of reporting and documentation; and (3) the effectiveness of the team in defining radiological status. Dose projection methods should also be evaluated with this general category. Consideration of dose projection methods should identify (1) the effectiveness of methods to interpret off-site conditions; and (2) the effectiveness of using the dose projections in positioning off-site teams.

Personnel Dosimetry/Exposure Control comments should identify: (1) the timeliness and effectiveness of dosimetry distribution; (2) the effectiveness of protective measures; (3) the adequacy of established contamination control access points; (4) the adequacy of exposure planning measures afforded in plant activities; and (5) the adequacy of decontamination and posting techniques.

Controller's evaluation and documentation forms are found in Section 4.3. All documentation recorded must be provided to the Lead Controller after the exercise.

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4.3 CONTROLLER EVALUATION CRITERIA

As discussed in Sections 4.1 and 4.2, each Controller has been assigned specific areas of response to observe and evaluate. This section has been developed to assist the Controllers in recording and documenting their findings and observations. The following attachments are included:

Attachment A provides a form to be used to maintain an event chronology log.

Attachment B contains evaluation checklists for each emergency response facility. Each Controller should complete the appropriate checklist.

Procedural Form VYOPF 3505.02, "Emergency Exercise/Drill Controller's Evaluation Form," is provided to summarize major findings and observations. **EACH CONTROLLER MUST COMPLETE THIS FORM (VYOPF 3505.02).**

All three attachments should be completed and submitted to the Lead Facility Controller. Each Lead Facility Controller will submit the completed attachments to the Exercise Coordinator for documentation of exercise observations and findings.

ATTACHMENT B

Vermont Yankee
Emergency Exercise/Drill Evaluation Checklist

INSTRUCTIONS

The following checklists are provided to assist the Controller with their evaluation of the drill/exercise. The Controller should complete the checklist(s) for their assigned locations(s). To complete the evaluation checklist(s), use the rating scale listed below. The completed checklist should be used as a "road map" to document your observations and comments on procedural form VYOPF 3505.02. Controllers should provide a clear written description of their findings and observations.

<u>Rating</u>	<u>Symbol</u>	<u>Rating Explanation for Comments</u>
Adequate	A	Adequate indicates that the demonstrated performance was consistent with plans and procedures. Comments may include strong positive strengths or expected actions done well.
Inadequate	I	Inadequate indicates that the demonstrated performance could have precluded effective implementation of plans and procedures. This also may include an aspect of player's response that warrants further evaluation for improvement or corrective action. Comments should provide a clear description of finding and observation noted. This may include recommendations for improvement, if possible.
Adequate with Weakness	W	Adequate with weakness noted. Comments should provide sufficient information to identify the weakness.
Not Observed or Not Applicable	N	No comments are required.

CHECKLISTS

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I. Control Room (Simulator and Actual)	4.3-4
II. Technical Support Center	4.3-5
III. Operations Support Center	4.3-7
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VII. News Media Center	4.3-13

I. CONTROL ROOM

A. <u>Accident Assessment/Emergency Classification</u>	Rating	Comments
1. Did the Control Room staff demonstrate the ability to recognize emergency initiating conditions and classify the events in accordance with AP 3125?	_____	Yes/No
2. Did the Control Room staff demonstrate the ability to coordinate the assessment of plant conditions and corrective actions with the Technical Support Center?	_____	Yes/No
B. <u>Notification and Communication</u>		
1. Did the Control Room staff demonstrate the ability to notify the plant staff of an emergency through the use of alarms and the public address system?	_____	Yes/No
2. Did the Control Room staff demonstrate the ability to notify federal and state authorities of emergency classifications in accordance with established procedures?	_____	Yes/No
3. Was information flow within the Control Room and to other appropriate emergency response facilities timely, complete, and accurate?	_____	Yes/No
4. Was adequate record keeping of events, actions, and communications documented and logged by the Control Room staff?	_____	Yes/No
5. Were adequate emergency communication systems available in the Control Room to transmit data and information to other emergency response facilities?	_____	Yes/No
6. Did the Control Room staff maintain an effective open line of communication with the NRC over the ENS as requested?	_____	Yes/No
C. <u>Activation and Response</u>		
1. Did the Control Room staff demonstrate the ability to appropriately implement Emergency Plan Implementing Procedures and did they follow them?	_____	Yes/No
2. Was the person in charge in the Control Room clearly identifiable and was good command and control taken at the Control Room?	_____	Yes/No
3. Did the Control Room staff interface with the NRC site response team in an effective manner?	_____	Yes/No

Controller Name: _____

II. TECHNICAL SUPPORT CENTER

<u>A. Accident Assessment/Emergency Classification</u>	<u>Rating</u>	<u>Comments</u>
1. Did the TSC staff demonstrate the ability to support the Control Room in identifying the cause of the incident, mitigating the consequences of that incident, and placing the plant in a stable condition?	_____	Yes/No
2. Did the TSC staff demonstrate the ability to coordinate the assessment of plant conditions and corrective actions with the the Control Room?	_____	Yes/No
3. Did the TSC staff demonstrate the ability to initiate and coordinate corrective actions in an efficient and timely manner?	_____	Yes/No
4. Did the TSC staff demonstrate the ability to direct and coordinate the taking of appropriate chemistry samples to analyze plant conditions?	_____	Yes/No
5. Did the TSC staff demonstrate the ability to participate with the Control Room and EOF/RC in emergency classification and EAL discussion?	_____	Yes/No
 <u>B. Notification and Communication</u>		
1. Was information flow within the TSC and to other appropriate emergency response facilities timely, complete, and accurate?	_____	Yes/No
2. Was adequate record keeping of events, actions, and communications documented and logged by the TSC staff?	_____	Yes/No
3. Were adequate emergency communication systems available in the TSC to transmit data and information to other emergency response facilities?	_____	Yes/No
4. Was information concerning plant conditions disseminated between the Control Room and TSC performed in a timely manner?	_____	Yes/No
5. Were status boards utilized and maintained to display pertinent accident information at the TSC?	_____	Yes/No
6. Did the TSC staff provide technically qualified individuals to man the open line of communications over the ENS and HPN phone links with the NRC as requested?	_____	Yes/No

Controller Name: _____

II. TECHNICAL SUPPORT CENTER (cont'd)

<u>C. Activation and Response</u>	<u>Rating</u>	<u>Comments</u>
1. Did the TSC staff demonstrate the ability to activate and staff the TSC?	_____	Yes/No
2. Did the TSC staff demonstrate the ability to appropriately implement Emergency Plan Implementing Procedures and did they follow them?	_____	Yes/No
3. Were initial and continuous accountability checks of TSC and CR personnel performed?	_____	Yes/No
4. Did the TSC Coordinator establish and coordinate access control into the Protected Area and Control Room?	_____	Yes/No
5. Did the TSC Coordinator demonstrate the ability to maintain command and control of TSC emergency response activities?	_____	Yes/No
6. Did the TSC keep other emergency response facilities advised of the status of their activities and information which they had developed?	_____	Yes/No
7. Was the TSC organization and initiation of activity efficient and well organized?	_____	Yes/No
8. Did the TSC staff interface with the NRC site response team in an effective manner?	_____	Yes/No

Controller Name: _____

III. OPERATIONS SUPPORT CENTER

A. Notification and Communication

Rating

Comments

1. Was information flow within the OSC and to other appropriate emergency response facilities timely, complete, and accurate?
2. Was adequate record keeping of events, actions, and communications documented and logged by the OSC staff?
3. Were adequate emergency communication systems available in the OSC to transmit data and information to other emergency response facilities?
4. Were job aids, such as forms or status boards used to display team assignments and tasks at the OSC?

Yes/No

Yes/No

Yes/No

Yes/No

B. Activation and Response

1. Did the OSC staff demonstrate the ability to activate and staff the OSC?
2. Did the OSC staff demonstrate the ability to appropriately implement Emergency Plan Implementing Procedures and did they follow them?
3. Were initial and continuous accountability checks of OSC personnel performed?
4. Did the OSC Coordinator and OSC Coordinator's Assistant demonstrate the ability to maintain command and control of OSC emergency response activities?
5. Did the OSC keep other emergency response facilities advised of the status of their activities and information which they had developed?
6. Was the OSC organization and initiation of activity efficient and well organized?
7. Did the OSC staff demonstrate the ability to provide adequate radiation protection controls for on-site emergency response personnel?
8. Did the OSC staff demonstrate the ability to perform radiological habitability assessments of emergency response facilities and implement appropriate habitability controls?

Yes/No

Controller Name: _____

III. OPERATIONS SUPPORT CENTER (cont'd)

	<u>Rating</u>	<u>Comments</u>
9. Did the OSC staff demonstrate the ability to monitor and track radiation exposure of on-site emergency response personnel?	_____	Yes/No
10. Did the OSC staff demonstrate the ability to obtain and analyze appropriate chemistry samples as directed by the TSC?	_____	Yes/No
11. Did the OSC staff demonstrate the ability to initiate, brief, and dispatch on-site assistance teams?	_____	Yes/No
12. Were on-site assistance teams able to trouble-shoot and evaluate problems with plant equipment and systems?	_____	Yes/No
13. Were there adequate administrative controls and documentation taken to perform the necessary repairs of plant equipment and systems during an emergency situation?	_____	Yes/No
14. Did the OSC staff interface with the NRC site response team in an effective manner?	_____	Yes/No

Controller Name: _____

IV. EMERGENCY OPERATIONS FACILITY/RECOVERY CENTER

A. Notification and Communication

Rating

Comments

1. Was information flow within the EOF/RC and to other appropriate emergency response facilities timely, complete, and accurate? _____ Yes/No
2. Was adequate record keeping of events, actions, and communications documented and logged by the EOF/RC staff? _____ Yes/No
3. Were adequate emergency communication systems available in the EOF/RC to transmit data and information to other emergency response facilities? _____ Yes/No
4. Was information concerning plant conditions disseminated between the TSC and EOF/RC performed in a timely manner? _____ Yes/No
5. Were status boards utilized and maintained to display pertinent accident information at the EOF/RC? _____ Yes/No
6. Did the EOF staff provide technically qualified individuals to man the open line of communications over the ENS and HPN phone links with the NRC as requested? _____ Yes/No

B. Activation and Response

1. Did the EOF/RC staff demonstrate the ability to activate and staff the EOF/RC? _____ Yes/No
2. Did the EOF/RC staff demonstrate the ability to appropriately implement Emergency Plan Implementing Procedures and did they follow them? _____ Yes/No
3. Did the Corporate Security Force establish access control into the EOF/RC? _____ Yes/No
4. Did the EOF Coordinator demonstrate the ability to maintain command and control of EOF emergency response activities? _____ Yes/No
5. Did the EOF/RC keep other emergency response facilities advised of the status of their activities and information which they had developed? _____ Yes/No
6. Were the EOF/RC organization and the initiation of activity efficient and well organized? _____ Yes/No
7. Did the EOF staff demonstrate the ability to monitor habitability conditions and establish the necessary monitoring controls at the EOF and News Media Center? _____ Yes/No

Controller Name: _____

IV. EMERGENCY OPERATIONS FACILITY/RECOVERY CENTER (cont'd)

	<u>Rating</u>	<u>Comments</u>
7. Did the Site Recovery Manager demonstrate the ability to maintain the command and control of the overall emergency response effort and organization?	_____	Yes/No
8. Did the Site Recovery Manager demonstrate the ability to de-escalate from the emergency phase into the recovery phase?	_____	Yes/No
9. Were preliminary recovery plans established and discussed between the Site Recovery Manager and appropriate personnel?	_____	Yes/No
10. Did the EOF staff interface with the NRC site response team in an effective manner?	_____	Yes/No
 C. <u>Radiological Assessment</u>		
1. Was information concerning radiological and meteorological data obtained by appropriate EOF personnel in a timely manner?	_____	Yes/No
2. Did the EOF staff demonstrate the ability to perform off-Site dose assessment in accordance with OP 3513?	_____	Yes/No
3. Did the EOF staff demonstrate the ability to effectively track and define the plume utilizing the computerized dose assessment model (METPAC)?	_____	Yes/No
4. Did the EOF staff demonstrate the ability to coordinate off-site monitoring data with State authorities?	_____	Yes/No
 D. <u>Protective Action Decision Making</u>		
1. Did the Radiological Assistant's staff demonstrate the ability to perform timely assessment of off-site radiological conditions to support the formulation of protective action recommendations?	_____	Yes/No
2. Did the EOF Coordinator obtain and provide the necessary information to the Site Recovery Manager concerning protective action recommendations in accordance with OP 3511?	_____	Yes/No
3. Did the Site Recovery Manager demonstrate the ability to make protective action recommendations to off-site authorities in accordance with Procedure OP 3511?	_____	Yes/No

Controller Name: _____

V. SITE AND OFF-SITE MONITORING

A. Activation and Response

	<u>Rating</u>	<u>Comments</u>
1. Did site and off-site monitoring teams demonstrate the ability to transmit information over the radio using proper units and terminology in accordance with Procedure OP 3510?	_____	Yes/No
2. Were site and off-site monitoring teams dispatched and deployed in a timely manner?	_____	Yes/No
3. Were team members familiar with the use of equipment, field monitoring procedures, and what was required of them?	_____	Yes/No
4. Were off-site monitoring teams able to determine and communicate their location in the field using appropriate maps and sample points (landmarks)?	_____	Yes/No
5. Were off-site monitoring teams briefed on plant conditions and changes?	_____	Yes/No

Controller Name: _____

VI. SECURITY

A. Activation and Response

	<u>Rating</u>	<u>Comments</u>
1. Did the Security staff demonstrate the ability to perform accountability of personnel within the Protected Area in accordance with Procedure OP 3524?	_____	Yes/No
2. Were access control points established and maintained to control access at the site and the Protected Area?	_____	Yes/No
3. Did the Security staff demonstrate the ability to appropriately implement Emergency Plan Implementing Procedures and did they follow them?	_____	Yes/No

Controller Name: _____

VII. NEWS MEDIA CENTER

A. Activation and Response

	<u>Rating</u>	<u>Comments</u>
1. Did the News Media staff demonstrate the ability to activate and staff the News Media Center?	_____	Yes/No
2. Was information flow between the News Media Center and the EOF/RC timely, complete, and accurate?	_____	Yes/No
3. Were the News Media staff familiar with their plans and procedures and do they follow them?	_____	Yes/No
4. Did the News Media staff demonstrate the ability to provide accurate and timely information concerning the emergency to the public and the news media?	_____	Yes/No
5. Did the News Media staff demonstrate the ability to coordinate news releases with the state's public information representatives?	_____	Yes/No
6. Did the News Media staff demonstrate the ability to provide briefings for and to interface with public and news media?	_____	Yes/No
7. Did the News Media Center Coordinator discuss the habitability conditions of the News Media Center with appropriate State and Federal officials and assembled media staff?	_____	Yes/No
8. Did the News Media staff interface with the NRC site response team in an effective manner?	_____	Yes/No

Controller Name: _____

VERMONT YANKEE NUCLEAR POWER STATION
EMERGENCY PREPAREDNESS EXERCISE

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5.0 EXERCISE SCENARIO

- 5.1 Initial Conditions
- 5.2 Exercise Sequence of Events
- 5.3 Scenario Timeline

VERMONT YANKEE NUCLEAR POWER STATION
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2001

5.1 INITIAL CONDITIONS

(Information provided to the players at the start of the exercise).

1. The reactor is now at approximately 100% power. The reactor has been operating steady state for the last seven months with no recent shutdowns. The Rod Sequence is A-2 and the Rod Group is 209. The plant is on closed cycle and chemistry is chlorinating the circulating water system. Breaker 9T8 is tagged out and is not available until extensive work has been performed that would require Bus 9 to be de-energized.
2. The initial plant and reactor system parameters associated with the start of the exercise are shown on Table 5.1-1, "Initial Plant and Reactor System Values" and "Vermont Yankee Daily Plant Status Report."
3. The following on-site meteorological conditions exist at 0815:

Wind Speed, mph (upper/lower)	4.8/4.2
Wind Direction, degrees (upper/lower)	7/6.7
Delta Temperature, °F (upper/lower)	-1.2/-1.4
Ambient Temperature, °F	56.0
Precipitation, inches per ¼ hour	0.00

4. Regional Meteorological Forecast Information:

A high pressure system is currently centered over Montreal, Canada. The combination of a warm and relatively humid air mass and solar heating may result in severe thunderstorms this morning. At 04:30 am EDT, the National Weather Service in Albany NY issued a severe thunderstorm warning for Windham County Vermont, Cheshire County New Hampshire, and Franklin County Massachusetts effective until 12:00pm. EDT.

Table 5.1-1
Initial Plant and Reactor System Values

Reactor Vessel Coolant Level	159 Inches
Reactor Pressure	1008 psig
Reactor Coolant Temperature	527 °F
Reactor Power - APRM (average)	99.8 %
Core Plate D/P	18 psid
Total Core Flow	46.6 x 10 ⁶ lbm/hr
Main Steam Line Flow - Total	6.2 x 10 ⁶ lbm/hr
Main Steam Line Radiation (average)	180 mR/hr
Condenser Hotwell Level	56 %
Condenser Vacuum	2.5 in. Hg(Abs)
Condensate Storage Tank Level	50 %
Recirc Drive Flow	29.6 Kgpm/loop
Feedwater Flow	6.3 x 10 ⁶ lbm/hr
Reactor Building D/P	-1.44 in H ₂ O
Drywell Pressure	1.9 psig
Drywell Temperature	140 °F
Torus Water Level	11.05 ft
Torus Temperature	78 °F
Drywell/Torus O ₂ Concentration	1.44 %
High Range Containment Monitors	3.0 R/hr
Containment Gas/Particulate	475/1150 cpm
Reactor Building Vent Monitors Gas/Part	150/1500 cpm
Reactor Building Vent Exhaust N/S	2.0/2.0 mR/hr
Steam Jet Air Ejector (ARM)	85 mR/hr
SJAE Discharge Rate	280 uCi/sec
Stack Gas 1/2	180/280 cpm
High Range Noble Gas Monitor	<0.1 mR/hr

"THIS IS A DRILL - FOR DRILL PURPOSES ONLY"

VERMONT YANKEE

DAILY OPERATIONS REPORT, SEPTEMBER 5, 2001

PLANT STATUS: 98% POWER
GEN. GROSS OUTPUT 12942 MWH
OFFGAS 890 μ Ci/sec (MEASURED)
RX VESSEL COND. 0.092 umho/cm
DRYWELL LEAKAGE: 2.48 GPM

PLANT OPERATIONAL SUMMARY & SIGNIFICANT EVENTS:

***CONTINUE FULL POWER OPERATIONS**

SIGNIFICANT NEW WORs

DESCRIPTION	DEPT/PRIORITY
*36246 Repair 9T8 Breaker	MAINT ELECTRICAL / 1

TECH SPEC/LCO EQUIPMENT OUT OF SERVICE:

SYSTEM/COMPONENT	TECH SPEC.	DATE	TIME	ALLOWABLE TIME
<i>TO BE DETERMINED</i>				

STATUS/COMMENTS ON MAJOR WORK IN PROGRESS/MAJOR WORKAROUNDS

- * DAILY DRYWELL TEMPERATURE PROFILES BEING TAKEN BY OPS.
- * STOP LIST ITEMS FOR MINI SHUTDOWN BEING COMPILED BY OPG AND MAINTENANCE TODAY:

- PMT OF "B" IA DRYER
 - SLC PUMP QUARTERLY SURVEILLANCE

- * NEXT WEEK:

- HOUSE HEATING BOILER ANNUAL INSPECTIONS (TEC REP)
 - CASK ROOM WORK: SETUP NEW LINERS FOR RAD WASTE PROCESSING
 - QUARTERLY PRIMARY CONTAINMENT VALVE SURVEILLANCES

LONG TERM PROBLEMS SOLVED:

NONE

PREPARED BY:

MGL

"THIS IS A DRILL - FOR DRILL PURPOSES ONLY"

VERMONT YANKEE NUCLEAR POWER STATION
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5.2 EXERCISE SEQUENCE OF EVENTS

VERMONT YANKEE NUCLEAR POWER STATION
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5.2 EXERCISE SEQUENCE OF EVENTS

The drill begins at 0800 with the simulator reactor running at 100% power. The reactor has been running normally for the last 7 months. The Circulating Water System is in the process of being lined up in the closed cycle mode for chlorinating of the system. Breaker 9T8 is tagged out for repairs and is not expected to be available for several more days. In order to reinstall the breaker and affect final repairs bus 9 would have to be de-energized.

Command Cards SCR-C-1 (Prior to 0800): Guidelines provided to Simulator Control Room players on the use of GaiTronics and the plant evacuation alarm during the drill. SCR-C-2 (0800 or when needed): Instructions provided to Simulator Control Room players that early in-plant actions may be controlled and performed by the Simulator Controllers.

Message Cards INITIAL-M-1 (start of drill or facility activation): Exercise scenario initial conditions provided to the Simulator Control Room players and to appropriate Emergency Facility Coordinators upon activation. Security (Prior to 0815): A list of Exercise Controllers and non-participants, who are exempt from accountability checks, provided to Security Shift Supervisor.

At 0815 an earthquake is felt on site, along with the simulator control room receiving a seismic monitor alert alarm on the 9-7 panel. SS/PED should declare an **Unusual Event** (approximately 0830)

The shift supervisor should initiate the appropriate notifications concerning the declaration of the Unusual Event and changing plant conditions.

Command Cards SCR-C-3 (Prior to 0830): Instructions to control the declaration of the Unusual Event

SCR-C-4 (As needed): Restrict operators from scrambling the plant during the exercise prior to the second earthquake, as a precautionary measure.

At 0845, I&C when requested by Operations, will report (controlled by simulator controller with a time crunch) that OBE was exceeded. The SS/PED will declare an **Alert** based on AP 3125 Natural Phenomenon, A-5-c, Earthquake exceeding the OBE.

Message Cards SCR-M-2 (0815): Vibrations are being felt throughout the control room.
 SEC-M-2 (0815): Guidelines provided to Security Shift Supervisor on VY / DE&S pager activation and Wilder Station (Vernon Hydro) notification
 TSC-M-1 (0900 or when needed): Guidelines provided to TSC Coordinator on assignment of TSC Communicators to Control Room.

Command Cards SCR-C-5 (0850 or when needed): Instructions to control the declaration of the Alert

OP 3127 Appendix A "Seismic Damage Indicator Walkdown Check Sheet" will be requested by the Simulator Control Room (SCR) and implemented by the AOs. Notifications should be made to appropriate plant personnel and off site agencies. The SS may confer with the Operations Manager to discuss if power operations should be continued.

Following the Alert declaration, the Technical Support Center (TSC), the Operations Support Center (OSC) and the Emergency Operations Facility/Recovery Center (EOF/RC) will be activated and staffed.

Message Cards EOF-M-1 (1000 or as requested): Information to be provided to EOF Rad Assessment staff on the National Weather Service forecast or plant site meteorological conditions.
 ESC-M-1 (1000 or as requested): Information provided to ESC Meteorologist on weather forecast for the Vermont Yankee site. NWS-M-1 (1000): Updated National Weather Service information is provided to players.

At 0955 a second earthquake is felt throughout the plant and the seismic monitor alert alarm on the 9-7 panel comes in for the second time. A number of condenser tubes fail, causing condensate conductivity to increase. Several alarms on Panel 9-6 will come in including Hotwell Conductivity Hi, Hotwell Emergency Dump VLV Open, Hotwell Level Hi and Cond Demin Trouble. Shortly after receiving the seismic alarm, MCC Bus 8 fails (Mini Scenario 7.2.2) and the condensate demineralizer bypass valve fails open (Mini Scenario 7.2.3). On Panel 9-8, BKR 88 opens, and alarm 8-J-8 (BUS 8 MCC TROUBLE) will come in indicating loss of Bus. Due to the large number of condenser tubes breaking and the bypass valve failing open, this condition will allow chlorinated river water to enter the condensate system and the reactor vessel. The

introduction of chlorinated water into the reactor vessel will precipitate the onset of fuel clad failure. Radiation levels in the vessel start to increase until the plant is manually scrammed or scrams on MSIV isolation. A **Site Area Emergency** will be declared due to AP 3125 Natural Phenomenon S-5-c, Earthquake damage to some safety class equipment. (Mini Scenario 7.2.2)

Message Cards SCR-M-3, TSC-M-2, SEC-M-1, EOF-M-2, OSC-M-1 (0955): A second earthquake is being felt throughout your area

Command Cards EOF-C-1 (0955 or when needed): Instructions to control the declaration of the Site Area Emergency

When the reactor scrams, 7 rods associated with the north bank fail to insert. Also the drain valve on the north Scram Discharge Volume fails in the closed position and cannot be reopened in order to drain the system. (Mini Scenario 7.2.6) When manual insertion of the rods using OE 3107 Appendix G, operators that are sent to close CRD-56 will note that the valve hand wheel has broken off at the stem and cannot be closed. Insertion of the rods can be accomplished by venting the over piston area of each rod. If the operators decide to inject with SLC the "A" Squib Valve will fail to fire. (Mini Scenario 7.2.7) With MCC Bus 8 out, SLC ON the "B" side will not be available to inject if it is initiated. (Since the decision for SLC injection is based on torus temperature, injection may not be called upon) Also due to the loss of Bus 8 the cleanup system will not be available and has masked the indication that CU-15 is still open. For the next 90 minutes Operators will continue to follow the EOPs attempting to insert rods, control reactor pressure and level, and maintaining torus temperature. TSC / OSC will be concentrating their efforts to trouble shoot and restore Bus 8. Other areas that the TSC may be working on at this time are:

- Assisting Control Room in inserting Control Rods which may include attempting to reopen the SDV drain valve.
- Evaluating loads that are lost due to Bus 8 being out
 - Eg: providing temporary power to Stack Gas Sample Pump SRS-P-2 (VYOPF 5245.06)
- Condensate Bypass valve being stuck open
- Area walk downs to assess EQ damage
- I/C evaluating Seismic monitor
- Manual firing of SLC Squib Valve

At about 1115 Bus 8 repairs have been affected. About ten minutes later a leak has developed in the cleanup system downstream of CU-15 valve. When Bus 8 has been restored it is noticed on the 9-4 panel that CU-15 valve is still open. When Operators attempt to close the valve it will not close. (Mini Scenario 7.2.4) Due to the leak in the CU system and failure of CU-15 to isolate, Area Radiation Monitors in the reactor building and the Stack Radiation Monitors start to increase. Transparent to the Operators, one of the SBTG trains charcoal filters was dislodged

during the second earthquake which allows iodine to be vented out the stack. Because of these indications it should be determined that a **General Emergency** entry condition has been met, AP 3125 Fuel Damage G-2-a, Loss of 2 of 3 fission product barriers with the potential loss of the third.

Command Cards: EOF-C-2 (1125 or when needed): Instructions to control the declaration of the General
Emergency

It is expected that a team will be assembled, provided appropriate direction and protection to enter a high radiation environment to affect necessary repairs in order to close CU-15 valve. (Mini Scenario 7.2.4) Around 1215, repairs to CU 15 should be sufficient to close the valve. At approximately 1230 ARMs located in the Reactor Building indicate a decreasing trend.

Plant staff should complete activities to stabilize plant conditions. The Site Recovery Manager should review OP-3546 to assess transition to the recovery phase.

When the decision is made to transition to recovery (with state concurrence), the discussions should focus on establishing a recovery organization, refining core damage assessments, obtaining post-accident samples, ensuring long-term cooling, evaluation of possible leakage paths to confirm that no continued release of radioactive materials will occur, etc

When all of the objectives have been met, the Exercise may be terminated, initiate critique and comment period in facilities.

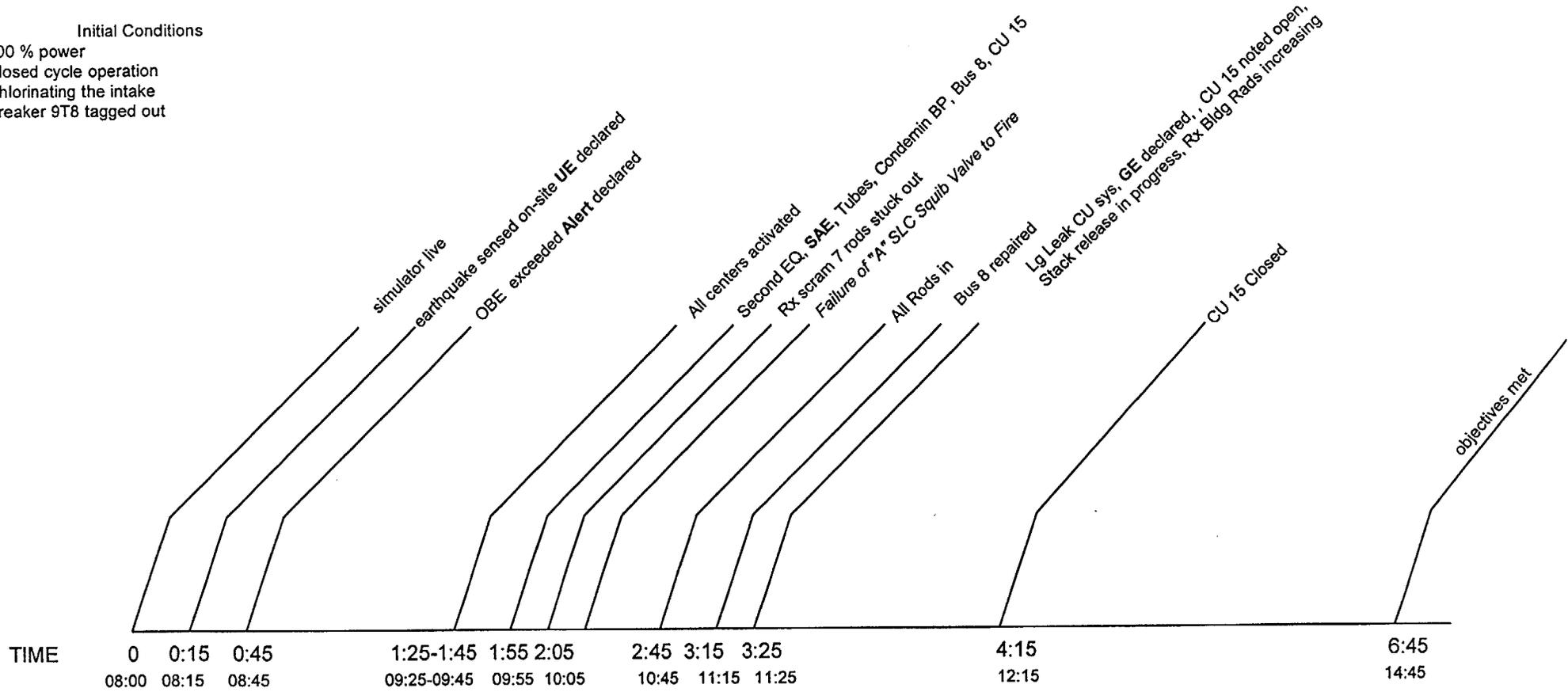
**VERMONT YANKEE NUCLEAR POWER STATION
EMERGENCY PREPAREDNESS EXERCISE
2001**

5.3 TIMELINE OF SIGNIFICANT EVENTS (assumed start time of 0815)

Clock Time	Elapsed Time	Event
0800	00:00	Initial Conditions provided to Control Room Staff, simulator program established per scenario design. Initial conditions also provided to plant management at the morning meeting. Simulator placed in "run", exercise commences;
0815	0:15	Earthquake sensed on-site, UNUSUAL EVENT U-5-c
0830	00:30	Mini Scenario: <ul style="list-style-type: none"> • 7.2.1 OP3127 Appendix A "Seismic Damage Walkdown Check Sheet (Pre-staged AOs)
0845	00:45	OBE exceeded, ALERT, EAL A-5-c <ul style="list-style-type: none"> • Simulator Controlled
0955	01:55	Second Earthquake sensed, Condenser Tube failure, Site Area Emergency, EAL, S-5-c (Q-cards provided to key players by controllers that second earthquake is being sensed) Mini Scenarios: <ul style="list-style-type: none"> • 7.2.2 Bus 8 failure • 7.2.3 Condemin. Bypass valve fails partially open • 7.2.4 CU 15 fail to close fault inserted.(unnoticeable to operators at this time due to Bus 8 out) • Repeat of 7.2.1
1005	2:05	Reactor Scram Due to failed fuel from injection of Chlorinated water into the vessel Mini Scenarios: <ul style="list-style-type: none"> • 7.2.5 7 Rods fail to insert • 7.2.6 SDV Drain valve fails to open. • 7.2.7 SLC fails to inject ("A" Squib Valve fails to Fire)
≅1045	≅ 2:45	SLC injecting, All rods inserted
≅1125	≅ 3:25	Bus 8 repaired

1125	3:25	Leak in the cleanup system begins: Cleanup 15 noted open. See Mini Scenario 7.2.4 Reactor Building ARMs increasing Stack release begins General Emergency, UAL G-2-a
1215	4:15	Cleanup 15 Closed
1230	4:30	ARMs and Stack Release start to decrease
1445	6:45	Objectives Met, Exercise May be Terminated

Initial Conditions
 100 % power
 Closed cycle operation
 Chlorinating the intake
 Breaker 9T8 tagged out



Exercise

VERMONT YANKEE NUCLEAR POWER STATION
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6.0 EXERCISE MESSAGES

6.1 Command Cards

6.2 Message Cards

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6.1 COMMAND CARDS

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SCENARIO COMMAND CARD

FROM: Simulator CR Lead Controller COMMAND NO.: SCR-C-1
TO: Shift Supervisor CLOCK TIME: Prior to 0800
LOCATION: Simulator Control Room SCENARIO TIME: Prior to 00:00

THIS IS A DRILL
DO NOT initiate any actions affecting normal plant operations.

Communications systems that are available in the Control Room have been duplicated in the Simulator Control Room (SCR) EXCEPT for GAITRONICS/PLANT EVACUATION ALARM.

Please use the GAITRONICS/PLANT EVACUATION ALARM in the SCR to complete the required PA announcements. An exercise controller will then direct a member of the shift operations crew at the plant to repeat the announcements from the Main Control Room.

An interface device has been installed to connect the Simulator Control Room in Brattleboro with the plant GAITRONICS system. It will allow a person at the plant to talk directly to the simulator over the plant GAITRONICS. The Controller in the plant Main Control Room will monitor and manually actuate the interface, causing a slight delay between initial communications. CHANNEL 3 is the designated the line to be used for communications between the Simulator Control Room and the Plant. CHANNEL 1 and CHANNEL 2 are the designated lines for all other plant exercise related communications and messages.

THIS IS A DRILL

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SCENARIO COMMAND CARD

FROM: Simulator CR Lead Controller

COMMAND NO.: SCR-C-2

TO: Shift Supervisor

CLOCK TIME: 0800 or when needed

LOCATION: Simulator Control Room

SCENARIO TIME: Prior to 00:00

THIS IS A DRILL
DO NOT initiate any actions affecting normal plant operations.

Early in-station actions normally performed by Control Room support personnel may be controlled and performed by the simulator controllers until after the operating shift personnel are augmented by the Emergency Response Organization.

THIS IS A DRILL

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SCENARIO COMMAND CARD

FROM: Simulator CR Lead Controller

COMMAND NO.: SCR-C-3

TO: Simulator Communicator

CLOCK TIME: 0815 or when needed

LOCATION: Simulator Control Room

SCENARIO TIME: 0:15

THIS IS A DRILL
DO NOT initiate any actions affecting normal plant operations.

DECLARE AN UNUSUAL EVENT "NATURAL PHENOMENON – Earthquake Sensed On-Site.
BASED ON AP 3125, EAL U-5-c

THIS IS A DRILL

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SCENARIO COMMAND CARD

FROM: Simulator CR Lead Controller

COMMAND NO.: SCR-C-4

TO: Shift Supervisor

CLOCK TIME: 0830

LOCATION: Simulator Control Room

SCENARIO TIME: 00:30 Or as needed

—

THIS IS A DRILL
DO NOT initiate any actions affecting normal plant operations.

.....

Restrict operators from scrambling the plant during the exercise prior to the second earthquake,
as a precautionary measure

THIS IS A DRILL

VERMONT YANKEE NUCLEAR POWER STATION
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SCENARIO COMMAND CARD

FROM: Simulator CR Lead Controller COMMAND NO.: SCR-C-5
TO: Shift Supervisor CLOCK TIME: 0845
LOCATION: Simulator Control Room SCENARIO TIME: 00:45 As needed

THIS IS A DRILL
DO NOT initiate any actions affecting normal plant operations.

DECLARE AN **ALERT** "NATURAL PHENOMENON – Earthquake exceeds the OBE. BASED ON AP 3125, EAL A-5-c

THIS IS A DRILL

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SCENARIO COMMAND CARD

FROM: EOF Lead Controller

COMMAND NO.: EOF-C-1

TO: Site Recovery Manager

CLOCK TIME: 0955

LOCATION: EOF

SCENARIO TIME: 01:40

THIS IS A DRILL
DO NOT initiate any actions affecting normal plant operations.

DECLARE A SITE AREA EMERGENCY BASED UPON AP 3125, EAL A-5-c DECLARE "NATURAL PHENOMENON – Earthquake damage to some safety class equipment.

THIS IS A DRILL

VERMONT YANKEE NUCLEAR POWER STATION
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SCENARIO COMMAND CARD

FROM: EOF Lead Controller

COMMAND NO.: EOF-C-2

TO: Site Recovery Manager

CLOCK TIME: 1125

LOCATION: EOF

SCENARIO TIME: 03:25

THIS IS A DRILL
DO NOT initiate any actions affecting normal plant operations.

DECLARE A **GENERAL EMERGENCY** BASED ON AP 3125, "FUEL DAMAGE EAL G-2-a- Loss of 2 of 3 fission product barriers with the potential loss of the third."

PAR to states Based on Plant conditions Should be "Recommend Shelter" For the Towns of":

- Vernon VT
- Guilford VT
- Hinsdale NH
- Bernardsten Mass
- Northfield Mass

THIS IS A DRILL

VERMONT YANKEE NUCLEAR POWER STATION
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SCENARIO COMMAND CARD

FROM: EOF Lead Controller

COMMAND NO.: EOF-C-3

TO: Site Recovery Manager

CLOCK TIME: about 1155

LOCATION: EOF

SCENARIO TIME: 03:55

THIS IS A DRILL
DO NOT initiate any actions affecting normal plant operations.

PAR to states Based on Dose Assessment Should be "Evacuation For the Towns of":

- Vernon VT
- Hinsdale NH
- Bernardsten Mass
- Northfield Mass
- Gill Mass
- Greenfield Mass

THIS IS A DRILL

VERMONT YANKEE NUCLEAR POWER STATION
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SCENARIO COMMAND CARD

FROM: TSC Lead Controller

COMMAND NO.: TSC-C-1

TO: TSC Coordinator

CLOCK TIME: 1200

LOCATION: TSC

SCENARIO TIME: 03:45

THIS IS A DRILL

DO NOT initiate any actions affecting normal plant operations.

Dispatch an OSC Assistance Team to investigate the malfunction of the primary containment CU-15 inboard isolation valve at the Motor Control Center (MCC) 8-B in the Reactor Building Elevation 280' level.

THIS IS A DRILL

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6.2 MESSAGE CARDS

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EMERGENCY PREPAREDNESS EXERCISE
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SCENARIO MESSAGE CARD

FROM: Simulator Lead Controller

MESSAGE NO.: SCR-M-2

TO: Simulator Control Room

CLOCK TIME: 0815

LOCATION: Simulator

SCENARIO TIME: 00:15

THIS IS A DRILL
DO NOT initiate any actions affecting normal plant operations.

An earthquake is now being felt in the simulator control room.

CONTROLLER NOTE:

Extent of play is to be controlled within the simulator until the Exercise has reached the Alert level.

THIS IS A DRILL

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SCENARIO MESSAGE CARD

FROM: TSC Lead Controller

MESSAGE NO.: TSC-M-2

TO: TSC Coordinator

CLOCK TIME: 09:30 or upon assignment of
Communicators

LOCATION: TSC

SCENARIO TIME: 01:15

THIS IS A DRILL
DO NOT initiate any actions affecting normal plant operations.

After simulating assignment of your TSC Communicators to the Control Room, the pre-staged TSC Communicators at the Simulator Control Room can now be used.

THIS IS A DRILL

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SCENARIO MESSAGE CARD

FROM: All Lead Controllers

MESSAGE NO.: SCR-M-3,SEC-M-3
TSC-M-3,EOF-M-2,OSC-M-1

TO: Security, SCR,TSC,OSC,EOF

CLOCK TIME: 0955

LOCATION: All Locations

SCENARIO TIME: 01:40

THIS IS A DRILL
DO NOT initiate any actions affecting normal plant operations.

Inform all areas that a second earthquake is being felt throughout the facility. It appears to be more severe than the one that was experience earlier.

CONTROLLER NOTES:

This information should be made to players within your area. This may be transmitted by making an announcement.

THIS IS A DRILL

VERMONT YANKEE NUCLEAR POWER STATION
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SCENARIO MESSAGE CARD

FROM: EOF Controller

MESSAGE NO.: ESC-M-1

TO: EOF Meteorologist

CLOCK TIME: 1000 or as requested

LOCATION: EOF

SCENARIO TIME: 01:45

THIS IS A DRILL
DO NOT initiate any actions affecting normal plant operations.

CONTROLLER NOTE:

When the EOF Meteorologist request information about weather forecast or site specific meteorological information, provide the meteorological information contained in Section 10.2 of the exercise manual as follows:

1. Provide the general area NWS Forecast information contained in Section 10.2 (page 10.2-1) on ESC activation or when requested.
2. Provide Vermont Yankee Site Forecast information contained in Section 10.2 (page 10.2-2 through 10.2-4) at the appropriate time stated.

THIS IS A DRILL

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SCENARIO MESSAGE CARD

FROM: Facility Lead Controller

MESSAGE NO.: NWS-M-1

TO: Facility Coordinator

CLOCK TIME: 1000

LOCATION: Various ERFs
(VY, State and Local)

SCENARIO TIME: 01:45

THIS IS A DRILL
DO NOT initiate any actions affecting normal plant operations.

Mostly sunny. Temperatures rising to the mid to upper 60's. Easterly winds from 4 to 8 mph.

CONTROLLER NOTE:

THIS IS A DRILL

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SCENARIO MESSAGE CARD

FROM: Facility Lead Controller

MESSAGE NO.: EOF-M-2 OSC-M-2
TSC-M-3

TO: TSC, EOF, OSC

CLOCK TIME: Post 11:25

LOCATION: Various

SCENARIO TIME: Post 3:10

THIS IS A DRILL
DO NOT initiate any actions affecting normal plant operations.

In order to meet objectives for the repair teams to effectively exercise the successful termination of the leak radiation levels in the reactor building may be arbitrarily low.

CONTROLLER NOTE:

If the centers question the validity of the Area Radiation Monitors concentrations not be connected to the type of accident that is being experienced, this message may be supplied to questioning center.

THIS IS A DRILL

VERMONT YANKEE NUCLEAR POWER STATION
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7.0 STATION EVENT DATA

7.1 Event Summary

7.2 Event Mini-scenarios

Vermont Yankee Nuclear Power Station
Emergency Preparedness Exercise
2001

7.1 EVENTS SUMMARY

The following supplementary material provides information for Controllers having in-plant control assignments to ensure that scenario events are properly controlled and defined. The information provided in this section assumes that the "players", who are dispatched to perform repair, rescue, or other activities, will take certain actions in response to the scenario. The Controller must be cognizant of the actions of player assignments and provide information regarding the results of the players' actions, as appropriate. The information provided in this section does not preclude the possibility that the Controller will be required to provide additional information to the players.

<u>Mini-Scenario</u>	<u>Approximate Time</u>	<u>Event</u>	<u>Location</u>
7.2.1	0815 +@ 0955	Earthquake Felt on Site	Throughout Site
7.2.2	0955	Bus 8 Failure	Switchgear Room
7.2.3	0955	Condemin. By Pass Valve	Turbine Building By Condemins.
7.2.4	1125	CU-15 Fails to Close BKR Fault	280' Reactor Build. Southwest
7.2.5	1005	Manual Insertion of Control Rods and CRD-56 Operation	Control Room & Reactor Building Elevation 252'
7.2.6	1005	SDV Drain Valve (CRD 33A) Fails to Reopen	Reactor Bldg. Elevation 252
7.2.7	1005	SLC Fails to Inject	Reactor Bldg. Elevation 318
7.2.8	N/A	Chemistry Samples of Plant Systems and In-Plant Radiological Surveys	Various Locations

VERMONT YANKEE NUCLEAR POWER STATION
EMERGENCY PREPAREDNESS EXERCISE
2001

7.2.1 Mini-scenario – Earthquake Sensed On Site

I. General Description

At 0815 the plant will experience an earthquake on site. Plant personnel will be able to feel the earthquake and will also receive the control room seismic alarm.

II. Description of Player Responses/Observations/Corrective Actions

FIRST EARTHQUAKE

Upon receipt of the Control Room Seismic Alarm and sensing building motion (controller message) the Control Room personnel will enter OP 3127, Natural Phenomena procedure. They should enter AP 3125, Emergency Plan Classification and Action Level Scheme. With Controller input that I /C reports that OBE has been exceeded, the operators will declared an **Alert** IAW section A-5-c.

Pre-staged shift Auxiliary Operators will be sent to various locations on the plant site to inspect for damage. There may be multiple inspections taking place at the same time. At this time no damage will be observed by the inspection teams.

SECOND EARTHQUAKE

Upon receipt of the Control Room Seismic Alarm and sensing building motion (controller message) the Control Room personnel will again enter OP 3127, Natural Phenomena procedure. Because of loss of Bus 8 (safety class equipment) during the second EQ, a **Sight Area Emergency** IAW section S-5-c will be declared. It is expected more teams from the OSC will be dispatched in order to investigate damage. Controllers will be assigned to two of the teams that are dispatched. Damage will be noted through out the site to non-seismic equipment as provided by the controllers. The equipment that is damage will not affect plant operation other than that which is being controlled by other mini-scenarios.

CONTROLLER NOTES:

FIRST EARTHQUAKE

- 1. Simulator Controller informs SS/PED that I /C department reports seismic monitor has exceeded the OBE. This information may be given shortly after receiving the seismic alarm. Normally this information would take about an half hour to obtain if I/C actually performed this task.**
- 2. NO safety related equipment will be damaged at this time.**
- 3. Additional teams that may be sent out to inspect will not need a controller to accompany them. They will be told by the controller that they are to report what they actually see.**

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SECOND EARTHQUAKE

- 1. All controllers will provide information to their respective areas that a second earthquake is being sensed**
- 2. Teams that may be sent out to inspect should have a controller to accompany them. Controllers will provide information on damage that is expected to occur. This information is on an adlib bases and is not to include any safety related equipment other than that is being governed by specific mini-scenarios.**

III. Event Closeout

The event terminates at the end of the exercise.

IV. Messages

All information will be reported verbally by the controller. Responses will be appropriate to the activities of the players.

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7.2.2 Mini-scenario – Bus 8 Failure Due to Second Earthquake

I. General Description

After all centers are activated (around 0955) following the declaration of the Alert, a second earthquake will be sensed on site. The seismic monitor alarm will come in again. After the ACRO acknowledges the alarm and reports back to the SS, the simulator controller will insert the Bus 8 trip malfunction. This short delay will allow time for the operators in the control room to acknowledge the alarm, possibly identify some conductivity alarms which come in due to condenser tube breaks and still connect the loss of Bus 8 to the second earthquake. This earthquake will be stronger than the first and causes additional equipment damage. At the direction of the lead controller, **ALL** center controllers will give a message card to the appropriate center personnel stating that another stronger earthquake has just occurred. When the message card is given to the SS/PED, Safety Bus 8 will be tripped off the line at the same time. That will be the most obvious indication of the second earthquake and should trigger the control room personnel to recommend to the SRM to escalate to an SAE IAW S-5-c.

II. The failure of Bus 8 will be attributed to a torque wrench left in the back of the cubicle during the Bus 8 inspection during RFO-22. This FME will fall over onto un-insulated B&C phase in Bus 8 switchgear. This will cause a ground on both B&C phase. Due to BKR 88 trip, all voltmeters on Buss 8 will read zero

Description of Player Responses/Observations/Corrective Actions

The TSC should send out a team (AO/Electrician) to investigate the loss of Bus 8. The AO will only be able to identify the readings in the Switchgear Room. The electrician should be able to interpret the indications as a phase to ground fault on C phase. The electrical group should request that the feeder breaker BKR 88 be white tagged. They should then megger the bus and perform a visual inspection to find the ground. The electricians may ask Operations to open each of the outgoing feeders to determine if the ground is on an individual component feeder or in the SWGR itself. The controller will provide information as required. This mini-scenario should last approximately 1 to 1.5 hours to determine the cause, correct and return the bus to service.

CONTROLLER NOTES:

Efforts to repair the bus should take 1½ hours or be completed at about 11:15 AM.

III. Event Closeout

When the repairs have been completed, the Event Controller will report to the lead OSC Controller that the bus can be restored. The OSC Lead Controller will inform the Simulator Controller they can clear the fault. At this time the OSC Lead Controller will inform the Event Controller that the players can report that the Bus has been repaired.

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IV. Messages

All information provided to the players will be provided by the Controller. Responses will be appropriate to the activities of the players.

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7.2.3 Mini-scenario – Cond Demin Bypass Valve Fails Open

I. General Description

At the time of the second earthquake, the Control Room will receive a Condensate Demineralizer Trouble alarm. They may notify the TSC/OSC to send an Auxiliary Operator to determine which local alarm is alarming. When the AO arrives, he will see that alarm CD-C-5, **BYP VLV NOT FULLY CLSD** and is in the alarm state. Upon further investigation, he will discover that the valve has broken away from the air operator and cannot be closed. He will notify the control room and return to the checkpoint.

After discussions with the TSC, a team of mechanics/I&C/AO may be sent to attempt to close the valve, since condensate system conductivity is increasing and being sent to the reactor vessel.

II. Description of Player Responses/Observations/Corrective Actions

(To be filled out by Event Controller, mechanical failure which valve can easily be closed by mechanics)

CONTROLLER NOTES:

- 1. When mechanics closes the valve the Event Controller will tell the players the valve is close.**
- 2. This event does not need to go through the OSC Lead Controller before it is reported.**

III. Event Closeout

When the valve is closed and has been reported.

IV. Messages

All information will be provided verbally by the Controller. Responses will be appropriate to the activities of the players.

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7.2.4 Mini-scenario – CU –15 Failure to Close

I. General Description

When the automatic isolation signal is sent to CU system, the primary containment isolation CU-15 remains open due to the 42 device not getting a close signal from the control circuitry. The valve indication on the 9-4 panel will indicate open.

At approximately 1125, a major line break occurs on the CU system. The break is located in the CU pump room about 285' elevation of the Reactor Building. Initially, Operators' efforts to close inboard CU-15 from the Simulator Control Board will not be successful.

II. Description of Player Responses/Observations/Corrective Actions

Since Simulator Control Board indicates the CU valve (CU-15) failed to close, an OSC team should be assembled, briefed, and dispatched to investigate the CU-15 breaker located at the MCC-8B on the 280' level south west side of the Reactor Building. Precautions should be addressed due to the fact that a CU system leak on the northeast side of the Reactor Building is in progress at the present time and closing this valve will probably stop this leak. It is expected that the OSC Team investigating the CU-15 breaker will enter the 252' elevation of the Reactor Building from the south Reactor Building entrance.

At MCC-8B, the OSC Team will locally push the "close" 42 contacts inside the valve breaker and will successfully close the valve.

CONTROLLER NOTES:

- 1. Radiation levels will be provided to the team as the team proceeds through the Reactor Building (Refer to Section 9.3). Controllers should provide the dose rate and airborne levels after surveys or air samples are properly obtained. Players should be told that they should respond as if the scenario-related radiation and airborne levels are present based on the information that they received.**
- 2. Respirators or other protective breathing devices should be donned. After the players demonstrate their proper use they may be removed and simulate their further use. They should be carried with them during the event.**
- 3. Closure of the CU-15 valve will have an effect on the exercise time line and termination of the exercise. Therefore, this event needs to be coordinated between the Exercise Coordinator and Lead OSC Controller and controlled by the Controller. The Controller will need to contact the Lead OSC Controller whether the task needs to be delayed or can be completed.**
- 4. Once the repair team locally push the "close" 42 contacts to close the CU-15 valve, this**

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information should be passed on to the OSC Lead Controller who will inform the Simulator Lead Controller that the CU-15 valve can be closed. At this time, the Controller can inform the team that they can report the completion of the task. This is to facilitate the timing to show that CU-15 valve indication is closed on the Simulator Control Room Board and to isolate the leak into the Reactor Building.

III. Event Closeout

The event terminates when the team demonstrates that pushing the "close" 42 contacts inside the valve breaker closes the CU-15 valve.

IV. Messages

All information will be provided verbally by the Controller. Responses will be appropriate to the activities of the players. This may include the following expected activities:

OSC Team reports to MCC-8B on 280' level southwest side of Reactor Building.

Results of opening the breaker door and pushing the "close" 42 contacts on CU-15 valve.

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7.2.5 Mini-scenario - MANUAL INSERTION OF CONTROL RODS AND CRD-56 OPERATION

I. General Description

When the plant experiences a stator cooling runback and reactor scram, seven rods will not insert during the subsequent scram. EOP-2 directs the operator to drive rods in by Appendix G. In order to do this with a scram signal present; drive water must be diverted to the directional control valves to insert control rods. This is accomplished by shutting charging water header isolation valve CRD-56.

II. Description of Player Responses/Observations/Corrective Actions

When the decision to manually drive control rods into the core is made, Operations will request the Reactor Building Auxiliary Operator (AO) to shut CRD-56 per OE 3107, Appendix G. Upon request of the Simulator Control Room, the Reactor Building Auxiliary Operator (AO) will proceed to the Reactor Building Elevation 252' to shut CRD-56. When the AO reaches valve location, he will note that CRD-56 valve hand wheel has broken off at the stem and cannot be shut. The AO should then inform the Control Room that CRD-56 can not be shut. At this time the AO may be directed to attempt to insert the control rod using Appendix H (venting the over piston area) of OE 3107. When the AO using the procedure vents the over piston area of each rod that is stuck out, the rod will insert.

CONTROLLER NOTES:

- 1. All actions associated with manually closing of CRD-56 will be simulated. No manipulation of equipment or valves should be done.**
- 2. When the AO manually simulates attaching the proper hoses to the appropriate CRDs the appropriate rod will insert. This process will be repeated until all stuck rods have been inserted.**
- 3. This event will be coordinated directly to the simulator control room via channel 3. It is expected that this evolution will take about 1 hour to complete.**

III. Event Closeout

This event is terminated when the Simulator Control Room reports that all rods are inserted.

IV. Messages

All information will be provided verbally by the Controller. Responses will be appropriate to the activities of the players.

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7.2.6 Mini-scenario SDV Drain Valve Fails to Reopen

I. **General Description**

After the Reactor Scram, 15 rods (associated with the North SDV) will be stuck out. The Control Room crew will discover that one Scram Discharge Volume (SDV) drain valve on the North SDV ("A"), CRD 33A will not reopen when attempting to reset the scram. This will cause the North SDV to be hydraulically locked. The Control Room may ask the TSC/OSC to send Auxiliary Operators and Maintenance into the field to attempt to open the valve to allow enough SDV drainage to allow normal insertion of the stuck rods.

II. **Description of Player Responses/Observations/Corrective Actions**

If a repair crew is sent to the reactor building, they would be briefed at the Control Point prior to entry. When the crew gets to the valve, they will find the air line to CRD-33A has been damaged. They will need to repair the air line to allow the Control Room personnel to attempt valve operation. The attempt to reopen the valve will fail. The maintenance team will continue the valve repair with cues provided by the controller. The Lead Controller will determine when or if the valve will be allowed to open.

CONTROLLER NOTES:

1. **This scenario should force the Control Room to have to use over piston venting (Appendix H) to drive the stuck rods.**
2. **Radiation levels will be provided to the team as the team proceeds through the Reactor Building (Refer to Section 9.3). Controllers should provide the dose rate and airborne levels after surveys or air samples are properly obtained. Players should be told that they should respond as if the scenario-related radiation and airborne levels are present based on the information that they received.**
3. **All actions associated with attempting to close or manually closing of CRD-33A will be simulated. No manipulation of equipment or valves should be done.**
4. **The appropriate equipment and tools should be available, but not used. No actions should be taken that will affect the safety of personnel or ongoing operation of the plant.**
5. **The repair of the valve will take at least 45 minutes and will be directed**

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by the Lead Controller.

III. Event Closeout

The event terminates at the end of the exercise.

IV. Messages

All information will be provided verbally by the Controller. Responses will be appropriate to the activities of the players.

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7.2.7 Local Actuation of SLC Squib Valves-OE 3107 Appendix i

I. General Description

After the Control Room crew has entered OE 3101. "Reactivity Control Emergency Procedure" and has been directed to inject Standby Liquid Control (SLC). The "A" squib valve fails to fire. The "B" side cannot fire due to loss of power from Bus 8. Local actuation of the squib valve, in accordance with Appendix I, may be implemented in order to actuate SLC as a means to insert negative reactivity.

II. Description of Player Responses/Observations/Corrective Actions

The decision to locally fire the Squib Valves is made when and if the control room decides to initiate SLC. If the SLC is initiated the Reactor Operator will notice that the Squib Valve failed to fire when activated from the control room. Local actuation involves per EOP 3107 Appendix I, attaching a battery to the squib valve that is contained in the EOP toolbox on the 318' level of the Reactor Building. An AO would be dispatched to manually initiate the SLC. It is expected that the AO will go to SLC skid to obtain the necessary equipment (battery and appropriate electrical leads) to manually fire the squib valve. Once there the AO should be instructed to describe the actions necessary to manually fire the squib valve. When this task has been completed, the AO should report back to the SS/PED to verify actuation. These actions will be simulated.

CONTROLLER NOTES:

- 1. ALL ACTIONS ASSOCIATED WITH MANUALLY FIRING OF SQUIB VALVE WILL BE SIMULATED. NO MANIPULATION OF EQUIPMENT OR VALVES SHOULD BE DONE.**
- 2. AFTER THE AO DESCRIBES THE NECESSARY ACTIONS TO MANUALLY FIRE THE SQUIB VALVE IN ACCORDANCE WITH APPENDIX I OF OE 3107, THE COMPLETION OF THE TASK SHOULD FIRST BE REPORTED BY THE OSC LEAD CONTROLLER TO THE SIMULATOR CONTROLLER IN ORDER TO CLEAR THE FAULT. AT THIS TIME THE AO CAN REPORT THAT THE TASK IS COMPLETE.**

III. Event Closeout

This event will be terminated when the AO reports that the SLC explosive primer has been detonated in accordance with OE 3107, Appendix I and the Shift Supervisor has positive indication of SLC injection.

IV. Messages

All information will be provided verbally by the Controller. Responses will be appropriate to the activities of the players.

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7.2.8 Mini-scenario - Chemistry Samples of Plant Systems and In-plant Radiological Surveys

I. General Description

Scenario events postulated for the exercise may require that samples of plant systems will need to be taken and analyzed to assess plant conditions and support accident assessment activities. Additional in-plant radiological surveys may be done to monitor and assess plant radiological conditions. This mini-scenario outlines the extent of play and players' expected actions to be demonstrated.

II. Description of Player Responses/Observations/Corrective Actions

A. Chemistry Samples of Plant Systems

Samples of plant systems may be requested throughout the exercise scenario. It is expected that system samples of reactor coolant, primary containment and plant stack effluent may be requested. Plant systems sampling may be initially directed from the Simulator Control Room and then transferred to the TSC after activation. Depending on the plant radiological conditions at the time of the sample request, samples may be taken using established routine sampling procedures or post accident sampling techniques as specified in post accident sampling procedures (OP 3533, OP 3534, OP 3535 and OP 3536). When samples of plant systems are requested, qualified personnel from Radiation Protection and Chemistry will be dispatched to obtain and analyze the requested sample. The assigned sample team or technician should be familiar with the procedural requirements and administrative controls to obtain and analyze the requested sample.

Once the TSC and OSC are activated and staffed, all sample requests should be coordinated through the OSC. The assigned sample team should consult with the OSC Coordinator or alternate for specific instructions and obtain a dose commitment limit for the sampling evolution to be conducted. After the team is briefed, the sampling team should be able to locate the required equipment and then go or simulate going to the sample location. (For purpose of timeliness, these actions may be simulated after discussions and approval of the Controller.) Once there or simulated there, the sample team or technician should be instructed to briefly discuss the actions necessary to obtain and analyze the sample.

CONTROLLER NOTES:

- 1. All actions to obtain and analyze the sample should be simulated. No manipulation of equipment or sampling system components should be done. The appropriate equipment and tools should be available, but not used. No actions should be taken that will affect the safety of personnel or ongoing operation of the plant.**
- 2. Because of the time compression of the exercise and the need for plant system sample results to be used to demonstrate the ability to assess the data in support of accident assessment activities, the time frame to obtain and analyze the actual sample will be**

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simulated and compressed. The assumed sampling process time will be approximately 15 minutes per sample taken unless the actual sample time is shorter.

Therefore, after the assumed sampling process time of 15 minutes and the sample team briefly discusses the sampling activities to obtain and analyze the sample, the controller should provide the appropriate information on sample results to the sample team. The sampling team should then report and log sample results in accordance with the sampling procedure requirements. All actions to obtain and analyze the sample should be simulated. No manipulation

B. In-Plant Radiological Surveys

Plant radiological surveys (general area dose rates and air samples) will be conducted to establish the necessary radiation protection controls for on-site personnel. Radiation Protection and Chemistry technicians and other qualified personnel will conduct radiological surveys to verify plant habitability and to define the necessary radiation protection controls to support in-plant corrective actions and repair activities. While conducting these radiological surveys, plant personnel should be instructed that they should actually demonstrate these activities to earn information about scenario-related area radiation and airborne activity levels. Controllers should provide the dose rate and airborne levels after surveys or air samples have been properly obtained. (Information on in-plant radiation levels is contained in Section 9.3 of the manual.) Players should be told that they should respond as if the scenario-related radiation and airborne levels are actually present based on the information that they received.

CONTROLLER NOTES:

Actions to conduct radiological surveys should not be simulated unless directed by the Exercise Controller. The appropriate equipment should be used to obtain the information. However, no actions should be taken that will affect the safety of personnel or ongoing operation of the plant.

III. Event Closeout

This event terminates when the sampling teams report sample results of plant system samples requested or when radiological surveys are conducted and completed throughout the exercise scenario.

IV. Messages

All information will be provided verbally by the Controller. Responses will be appropriate to the activities of the players.