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Homeland Security Exercise and Evaluation Program (HSEEP)
After Action Report/Improvement Plan New England Radiological Health Compact Tabletop
(AAR/IP)

**New England Radiological Health Compact Tabletop
Exercise**

October 23, 2012

**FINAL AFTER ACTION REPORT /
IMPROVEMENT PLAN**

February 21, 2013

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EXECUTIVE SUMMARY

The New England Radiological Health Compact Tabletop Exercise was developed to evaluate the New England Compact Emergency Response Implementing Procedures and the New England Compact. The exercise planning team was composed of representatives from New England state's Radiation Control Program Directors, Vermont Emergency Management, Vermont Department of Health, the EPA, state of Vermont HAZMAT team, the town of Hartford and Vermont Homeland Security. The exercise planning team discussed their previous real world emergencies and the desire to build upon the trainings and exercises conducted in the months leading up to the Tabletop Exercise. Utilizing the Homeland Security Exercise and Evaluation Program, this exercise worked to reinforce the relationships built during the annual New England Radiological Health Conference. An area of key concern for the planning committee is the understanding and implementation of the Incident Command System when New England Compact Resources are integrated with a host state during a critical incident.

Based on the exercise planning team's deliberations, the following objectives were developed for the New England Radiological Health Compact Tabletop:

Communications

Evaluate the plans in place regarding notification of the New England Compact in response to a non-nuclear power plant event.

Evaluate the plans in place regarding the activation and mobilization of the New England Compact resources in response to a non-nuclear power plant event.

Discuss the communications capabilities of all responding agencies and the ability to integrate communications systems.

Emergency Public Information and Warning

Discuss the ability of the Joint Information System to provide accurate and timely information to the public during a radiological event.

On-Site Incident Management

Discuss the integration of New England Compact resources responding to a regional radiological incident within the host state's Incident Command System structure and State Emergency Operations Center.

The purpose of this report is to analyze exercise results, identify strengths to be maintained and built upon, identify potential areas for further improvement and support development of corrective actions.

Major Strengths

The major strengths identified during this exercise are as follows:

- Radiological staff utilized for VY response can effectively be applied to non-VY radiological emergency.
- On Scene Incident Command showed exceptional coordination with all on scene agencies and liaison with SEOC.
- There is a radiological emergency plan for non-VY emergencies.

Primary Areas for Improvement

Throughout the exercise, several opportunities for improvement in the participating agencies' ability to respond to the incident were identified. The primary areas for improvement, including recommendations, are as follows:

- The relationships between the State Emergency Operations Center and other operations centers, including the Healthy Operations Center, and local operations centers needs clarification
 - Establishment of the Working Group
- Methods to ensure common operating pictures among all agencies need to be developed.
 - Establishment of the Working Group

This Tabletop should be considered a success as participants are more aware and prepared as a result of exercising.

SECTION 1: EXERCISE OVERVIEW

Exercise Details

Exercise Name

New England Radiological Health Compact Tabletop Exercise

Type of Exercise

Tabletop

Exercise Start Date

October 23, 2012

Exercise End Date

October 23, 2012

Duration

6 hours

Location

Hilton, Burlington, VT

Sponsor

Vermont Homeland Security

Program

FY2010 Homeland Security Grant Program

Mission

Response

Capabilities

Communications, Emergency Public Information and Warning, On Site Incident Management

Scenario Type

Radiological

Exercise Planning Team Leadership

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**Homeland Security Exercise and Evaluation Program (HSEEP)
After Action Report/Improvement Plan New England Radiological Health Compact Tabletop
(AAR/IP)**

Chief Steve Locke, Hartford Fire Department
Captain Chris Reinfurt, Vermont Homeland Security
Andrea Young, Vermont Homeland Security

Participating Organizations (those invited)

- New England Radiological Health Committee
 - i. State Radiation Control Programs
 - 1. Vermont
 - 2. Massachusetts
 - 3. Maine
 - 4. New Hampshire
 - 5. Rhode Island
 - 6. Connecticut
 - ii. EPA
 - iii. FDA
- Vermont HazMat Response Team Chief and Crew Chiefs
- Vermont Sampling Team Directors
- Vermont Department of Health, Health Operations Center
 - i. Command and General Staff
 - ii. Public Information Officer
 - iii. Radiological Health
 - iv. Laboratory
- State Emergency Operations Center
 - i. Vermont Emergency Management
 - ii. State Support Functions
 - 1. Vermont State Police
 - 2. HazMat
 - 3. Transportation
 - 4. Military Support
 - 5. Agency of Natural Resources/Agriculture
 - 6. Vermont 2-1-1
- Local Response Agencies
 - i. Hartford Fire

- ii. Mt. Ascutney Hospital
- iii. White River Junction District Office/Health Department
- Federal Agencies
 - i. Federal Bureau of Investigation
 - ii. Department of Energy
 - iii. Department of Homeland Security
 - iv. Federal Emergency Management Agency
 - v. Centers for Disease Control and Prevention
 - vi. Department of Health and Human Services
 - vii. Environmental Protection Agency
 - viii. Food and Drug Administration
 - ix. Department of Defense
 - x. Army Corps of Engineers
 - xi. Department of Transportation

Number of Participants

The total number of participants was 103. By role, they were:

- Players – 65
- Evaluators – 9
- Facilitators – 6
- Observers – 23

SECTION 2: EXERCISE DESIGN SUMMARY

Exercise Purpose and Design

This tabletop is designed to bring together key personnel with the goal of understanding, coordinating, and improving the operational response to a critical incident that necessitates the activation of the New England Compact. The New England Compact tabletop exercise planning committee identified the purpose of this exercise as a method of discussing Emergency Response Implementing Procedures and the New England Compact, in addition to examining strengths and identifying areas for improvements in the target capabilities identified during the planning process. An area of key concern for the planning committee is the understanding and implementation of the Incident Command System when New England Compact Resources are integrated with a host state during a critical incident.

Exercise Objectives, Capabilities, and Activities

Capabilities-based planning allows for exercise planning teams to develop exercise objectives and observe exercise outcomes through a framework of specific action items that were derived from the Target Capabilities List (TCL). The capabilities listed below form the foundation for the organization of all objectives and observations in this exercise. Additionally, each capability is linked to several corresponding activities and tasks to provide additional detail.

Based upon the identified exercise objectives below, the exercise planning team has decided to demonstrate the following capabilities during this exercise:

Communications

Evaluate the plans in place regarding notification of the New England Compact in response to a non-nuclear power plant event.

Evaluate the plans in place regarding the activation and mobilization of the New England Compact resources in response to a non-nuclear power plant event.

Discuss the communications capabilities of all responding agencies and the ability to integrate communications systems.

Emergency Public Information and Warning

Discuss the ability of the Joint Information System to provide accurate and timely information to the public during a radiological event.

On-Site Incident Management

Discuss the integration of New England Compact resources responding to a regional radiological incident within the host state's Incident Command System structure and State Emergency Operations Center.

Scenario Summary

Participants were presented with an automobile accident creating an explosion and release of Cobalt-60. For full details, please see the Situation Manual.

SECTION 3: ANALYSIS OF CAPABILITIES

This section of the report reviews the performance of the exercised capabilities, activities, and tasks. In this section, observations are organized by Table Groups. Each observation is linked to a Capability and is followed by related references, analysis, and recommendations.

Table 1: Health Operations Center

Capability 1: Communications

Observation 1.1: Strength: Vermont Department of Health Emergency Operation Plan (VDH EOP) provides for a solid notification process should an incident/emergency such as the one of this scenario.

References:

CPG-101
VDH EOP
SEOP (Radiological Annex)

Capability Element: Planning

Analysis: The group discussed how the VDH would be notified of this incident (traffic collision involving radioactive release) in this scenario. The senior representative of the HOC table was very familiar with the VDH EOP and advised the table that the plan has specific procedures on how notifications are made. Specifically he cited that VDH duty officer would be alerted to this incident by Vermont State Police Dispatch via Emergency Management staff or by local VDH personnel in the area of Hartford. It was also discussed that informal processes exist where notification could also be made especially something of this magnitude. Once notified a decision would be made as to the opening of the HOC by the Health Department Commissioner and further notification of internal staff would be made through the Health Alert Network.

Upon reviewing the VDH EOP it was noted that it contains very detailed information on how VDH would be notified to include VSP Dispatch. The plan is comprehensive and contains specific instructions on VDH notifications at every level of activation for the emergency. This level of detail in alert/notification and the communications of an emergency to personnel are vital to early initiation of resources to prevent further deaths, destruction and containment of the incident. This level of planning is imperative to a successful outcome.

Recommendations:

1. Continue sustaining this capability through training and exercises that assess VDH's ability to communicate between the SEOC SSF#8 function and the HOC.

Observation 1.2: Strength: The HOC IC advised that it (VDH) has a robust communications redundancy plan.

References:

VDH EOP
NIMS

Capability Element: Resource (Equipment)

Analysis: During Module 3 discussions the HOC IC advised that it has multiple ways to communicate during an incident. He advised that they have cell phones and landlines as the primary communications mode. During emergencies their landline phones have GETS capability and their cell phones have Wireless Priority Service (WPS) which gives their phones priority in case cell carriers are overwhelmed by calls from customers. Further he advised their cells have text capability. Further they have Satellite phones at each of the district offices and at VDH HOC. He advised that through their computers they would also have access to e-mails and Disaster-LAN for communications purposes. Finally, RACES is assigned to VDH during an emergency.

Effective emergency management and incident response activities rely on redundant flexible communications and information systems that provide a common operating picture to emergency management and response personnel. Establishing and maintaining a common operating picture is a principal goal of NIMS. Properly planned and implemented communication plans enable the dissemination of information among command and support elements and, as appropriate, cooperating agencies and organizations. In summary good communications equates to good support and coordination with the incident commander in the field.

Recommendations:

1. Sustain communications redundancy by continuing to fund these methods of communications and using them in actual or simulated incidents.

Observation 1.3: Area for Improvement: VDH HOC does not have a written communications plan within the VDH EOP.

References:

VDH EOP
SEOP
NIMS
CPG 101

Capability Element: Planning

Analysis: VDH HOC does not have a written communications plan that outlines how it will communicate during an emergency. This plan must be concise, simple to read and provide enough information for an outside resource to understand. Good communications plans identify the type of equipment that is primary, secondary etc.

Effective communication planning provides emergency management and incident response personnel with vital information to create a common operating picture. A common operating picture is established and maintained by gathering, assessing, and disseminating incident information to all appropriate parties. Achieving a common operating picture allows on-scene and off-scene personnel—such as those at the Incident Command Post, Emergency Operations Center to have the same information.

Recommendations:

1. Establish a Communication Annex within the VDH EOP that identifies all of the communications methods utilized as identifying primary and alternate communications modes.

Capability 2: On Site Incident Management

Observation 1.4: Strength: The Dose Assessment Team advised they could provide initial assessments of the scene for first responders once they received the data needed from the HOC.

References:

VDH EOP
State Emergency Operations Plan, Radiological Annex

Capability Element: Planning, Training

Analysis: During module 1 discussion the Dose Assessment Team advised they could provide initial assessments of radiation for First Responders in minutes upon receiving the data while at the HOC. The team plans to reside at the HOC during this type of incident as it provides them with a location close to their offices. This type of fast assessment is paramount to the safety of citizens and first responders in a radiological emergency. Having this information quickly allows the incident commander to make vital decisions that can save lives and minimize exposure.

Recommendations:

1. Sustain this activity by consistently training and exercising this function at the HOC.

Observation 1.5: Area for Improvement: The HOC discussed establishing an Incident Safety Plan but there was no discussion with the Incident Command Table.

References:

NIMS

Capability Element: Planning

Analysis: The participants at the HOC table had a discussion about establishing a safety plan for the incident. While it must be assumed that VDH will have input on the overall content of the safety plan this responsibility resides with the Incident Commander in the field. We observed no interaction between the HOC and the IC table. There cannot be two safety plans within one incident. Input to a safety plan that impacts first responders in the field must be developed at the incident command post not at the HOC. Radiation contamination is not a common threat encountered by first responders therefore the IC will be looking for technical advice during a complex and dynamic incident like this scenario. This will ensure that the ICs and the appointed safety officers have the necessary information to safeguard the first responders from the effects of radiation as well as plans to safeguard the affected public. Without this information risk will be taken and the potential of injury and death could occur. The roles of the incident commander and the supporting coordinating elements can be better understood through ICS

training and exercises. Further detailing major responsibilities for each entity in a plan will elevate any questions as to who is responsible.

Recommendations:

1. Establish roles and responsibilities for the HOC and document them within the VDH EOP relative to coordinating with the build out of the safety plan.
2. Roles can be better understood by completing ICS training up to the 300 levels and the G-191 ICP and EOC Interface.
3. Further, VDH should consider deploying technical specialist for the planning sections in the ICP and in some cases an incident commander to the field for unity of effort.

Observation 1.6: Area for Improvement: The Dose Assessment Team was unclear about where they should operate and what organization they should directly support.

References:

Vermont Department of Health Emergency Operations Plan, June 1, 2006, 64 pages.
Vermont Department of Health Radiological Emergency Plan, Rev. 0, April 30, 2008, 30 pages.
Health Services Coordinator Radiological Emergency Response Implementing Procedure, Rev. 4, February, 2011, 16 pages.
Radiological Health Advisor Radiological Emergency Response Implementing Procedure, Rev. 4, February, 2011, 30 pages.
VDH Dose Assessment Team Radiological Emergency Response Implementing Procedure, Rev. 8, February, 2011, 38 pages.
Vermont Department of Health Laboratory Radiological Emergency Response Implementing Procedure, Rev. 3, February 2011, 4 pages.

Capability Element: Planning

Analysis: It was not clear why the Dose Assessment Team was assigned to the HOC table. Their main function is radiological dose assessment and typically they go to the SEOC.

The Dose Assessment Team Leader pointed out that although her team is assigned to go to the SEOC in a Vermont Yankee incident, her team is able to operate to some level of effectiveness anywhere. In her mind that could be the SEOC, HOC, the Incident Command Post, at home, etc.

In a Vermont Yankee incident the Dose Assessment Team goes to the SEOC and performs tasks in addition to just running a computer model of the plume. They provide support to the Radiological Health Advisor, the Health Services Coordinator and to communicate with the Plume Tracking Teams and the Sampling Teams. Part of the communications with the plume and sampling teams is to obtain data being collected by the teams and part is to request missions to obtain specific data from specific points or areas. This communication is to support

the Radiological Health Advisor who can be overwhelmed with tasks as he has no staff assigned. Team members interact with SEOC IT and GIS personnel to provide visual displays useful in making decisions.

There was concern expressed by the participants about whether the Radiological Health Advisor would remain at the SEOC or go to the Incident Command Post (ICP). If he went to the Incident Command Post, should the Dose Assessment Team go with him to the ICP? It was not clear to the team what communications capabilities or facilities they would have at the ICP if they went there? It was also not apparent to the Dose assessment Team whether they were to exclusively support the Radiological Health Advisor and the Health Services Coordinator or whether they were also to support the State EOC with data and visuals.

This uncertainty could impact the timeliness and effectiveness of the Dose Assessment Team in this less common scenario or others like it.

Recommendations:

1. The VDH Office of Public Health Preparedness (OPHP) and Vermont Emergency Management should jointly review and analyze radiological incidents other than Vermont Yankee to determine where the Dose Assessment Team should be assigned. Is it the HOC, the SEOC, an ICP or some other location?
2. Inherent in the above review and analysis is the determination of who the Dose Assessment Team is supposed to directly support.
3. This joint review should also ensure that the Health Services Coordinator and the Radiological Health Advisor are properly supported with technically trained and experienced staff no matter where they are located.
4. If the decision is locate the Dose Assessment Team somewhere other than the SEOC, there must be an effective and timely way to display data and provide decision makers recommendations.

Observation 1.7: Strength: The Dose Assessment Team was fully trained, experienced and prepared to provide support.

References:

- Vermont Department of Health Emergency Operations Plan, June 1, 2006, 64 pages.
Vermont Department of Health Radiological Emergency Plan, Rev. 0, April 30, 2008, 30 pages.
Health Services Coordinator Radiological Emergency Response Implementing Procedure, Rev. 4, February, 2011, 16 pages.
Radiological Health Advisor Radiological Emergency Response Implementing Procedure, Rev. 4, February, 2011, 30 pages.
VDH Dose Assessment Team Radiological Emergency Response Implementing Procedure, Rev. 8, February, 2011, 38 pages.
Vermont Department of Health Laboratory Radiological Emergency Response Implementing Procedure, Rev. 3, February 2011, 4 pages.

Capability Element: Training

Analysis: Over a period of at least fifteen years the Dose Assessment team has improved and matured in their procedures, training and resources in a response to an incident at Vermont Yankee Nuclear Power Station in southern Vermont. This has occurred through numerous improvement projects and in multiple exercises and drills involving the Radiological Health Advisor, the Plume Tracking and Sampling Teams, the SEOC, the VDH Lab and others. This has provided team members with opportunities to work with many of the moving parts in a radiological incident response. They have both the micro and the macro view of such an incident. They are experienced in using and coordinating with federal resources and resources from other states.

The Dose Assessment Team had several members present in this exercise and they expressed their confidence in their technical abilities. They were able to confer with participants from other states and the federal government with positive results.

This training and experience increases the preparedness level and capability of the Vermont Department of Health (VDH) in radiological incidents other than Vermont Yankee Nuclear Power Station

Recommendations:

1. The Dose Assessment Team should continue to train and participate in applicable drills and exercises.
2. The VDH Office of Public Health Preparedness (OPHP) should recognize the need to continue supporting the Dose Assessment Team and ensure that new personnel are being recruited and trained to ensure continuity of performance when team members leave or retire.

Observation 1.8: Area for Improvement: There was uncertainty at the HOC table about who was ultimately in charge of the incident and how that affected VDH resources and operations.

References:

Vermont Department of Health Emergency Operations Plan, June 1, 2006, 64 pages.
Vermont Department of Health Radiological Emergency Plan, Rev. 0, April 30, 2008, 30 pages.
Health Services Coordinator Radiological Emergency Response Implementing Procedure, Rev. 4, February, 2011, 16 pages.
Radiological Health Advisor Radiological Emergency Response Implementing Procedure, Rev. 4, February, 2011, 30 pages.
VDH Dose Assessment Team Radiological Emergency Response Implementing Procedure, Rev. 8, February, 2011, 38 pages.
Vermont Department of Health Laboratory Radiological Emergency Response Implementing Procedure, Rev. 3, February 2011, 4 pages.

Capability Element: Planning

Analysis: A significant challenge presented and discussed by participants at many, if not all, of the tables was the issue of overall command of this type of incident. It was stated by the Vermont Emergency Management Deputy Director in module 3 that all incidents are local and therefore the Hartford Fire Department Incident Commander was in charge until he or she requested to be relieved of that responsibility.

The problem with that, in the minds of some HOC participants, was that no local fire department in Vermont, even one of the largest paid full time departments, is staffed and equipped to handle a fast moving and long term incident that covers a significant portion of the state. Although many fire departments and towns are experienced at handling common events such as floods and fires, very few have experience or training in radiological incidents. Very few, if any, local emergency operations centers are staffed and equipped to support their fire departments in a long term incident of this magnitude for an area much larger than their own jurisdiction. Additionally the normal fire department emergency workload would probably continue in addition to this incident. Even with mutual aid this could overwhelm a local fire department.

If this issue was fully resolved between the SEOC and the Hartford Fire Department, that information did not filter down to the HOC. At some point the Governor of the State of Vermont would have been compelled by public pressure to have the state take a more active role in this incident. There has been a lot of discussion by experienced responders about whether NIMS properly addresses the State and Local Interface in this type of large scale incident. When do States and / or the Federal Government assume some kind of coordinating or decision making authority over an incident that crosses multiple jurisdictional boundaries? The Federal Government, many States and local jurisdictions practice this in Nuclear Power Station exercises but outside of those Emergency Planning Zones (EPZs) this is rarely discussed. This exercise may have been one of the first in Vermont to have a scenario to pose this question so clearly. Few if any local responders in Vermont outside of the Vermont Yankee EPZ are equipped and trained to respond to this type of incident and even in the EPZ the responders are limited in their response capability.

HOC participants (specifically the Dose Assessment Team members) were using their Radiological Emergency Response Plan procedures from Vermont Yankee which relies on the Governor or his designee to be making the major decisions after he declares a state of Emergency. The exercise scenario in Module 3 had the Governor declaring a state of emergency for five towns sometime between 2215 hours 10-23-12 and 0800 on 10-24-12 (6.25 to 16 hours after the incident occurred.) It is reasonable to presume that the Governor of Vermont would want some decision making role in a scenario that affected nearly a quarter of the state.

This situation left the HOC participants unsure of how to respond and what channels of communications would be used. It was unclear to them how the coordination and communications would flow. Would every town affected by the plume have an Incident Command Post (ICP) or would the Town of Hartford set up some type of unified command that included all of those towns? Would the SEOC communicate directly with each affected town and how would the HOC support this effort?

Recommendations:

1. Vermont Emergency Management should convene a facilitated discussion with state and local response leaders including VDH officials to determine a protocol to manage situations with multiple jurisdictions, particularly with technical incidents.
2. Vermont Emergency Management should reduce the findings of this facilitated discussion into additions to and revisions of the State Emergency Operations Plan.
3. Vermont Emergency Management should provide training on this protocol and the resulting changes to the Emergency Operations Plan to state and local response agencies.
4. The VDH Office of Public Health Preparedness (OPHP) should review and revise the VDH Radiological Emergency Plan and any applicable Job Action Sheets (JAS) to reflect these changes.
5. Incident Command System (ICS) courses taught in Vermont should reflect the decisions made above.

Capability 3: Emergency Public Information and Warning

Observation 1.9: Strength: HOC personnel discussed how and when New Hampshire would be alerted to a possible release of radioactive material near the border of Vermont.

References:

State Emergency Operations Plan
NIMS

Capability Element: Culture

Analysis: Personnel at the HOC table discussed how and when New Hampshire would be notified of the traffic crash involving a fire and potential release of radioactive material. The players felt that this was a very important issue to resolve immediately as it was not clear to the participants who was responsible for alerting a bordering state. A message was sent directly to the IC table to clarify this question. This was great initiative by the participants at the HOC table. Something this important cannot be overlooked. VDH personnel should be very cautious when communicating beyond the SEOC. In this scenario communicating directly with the Incident Command System structure on the ground could lead to confusion. The roles of the HOC are not defined or well known in the first responder community and in this scenario the HOC is functioning as a Department Operations Center in support of the SEOC SSF#8 function. A question such as alerts and notifications may better be answered by the SSF#8 position.

Recommendations:

1. Sustain good communications between the HOC and IC structures and establish a communication procedure within VDH EOP to help define roles and avoids confusion.

Capability 4: Emergency Operations Center Management

Observation 1.10: Area for Improvement: The Vermont Department of Health (VDH) does not define the roles and responsibilities of the Health Operations Center (HOC) and its staff during an emergency response clearly within the VDH Emergency Operations Plan which led to confusion during the exercise.

References:

Vermont Department of Health Emergency Operations Plan
National Incident Management System
CPG 101

Capability Element: Planning

Analysis: It was noted during the exercise that the executive manager of the Health Operations Center (HOC) was identified as the Incident Commander and this is not appropriate for this scenario. NIMS defines an Incident Commander as that person(s) who is (are) in the field at the Incident Command Post and has overall responsibility to manage the incident, develop incident objectives, create an incident action plan and implement the strategies developed to carry out the objectives. If this is the role of the executive within the HOC and the HOC is the Incident Command Post (ICP) then it's a proper title. If the HOC is not the ICP and is operating as a Department Operations Center in support of the SSF#8 Function at the State Emergency Operations Center (SEOC) then this is an inappropriate title. There can only be one Incident Commander per incident unless in Unified Command. The titling of Incident Commander by all entities within one incident (ICP, local or state emergency operations center, or various department operations center such as the HOC will lead to confusion of role responsibilities.

Also during the entire exercise some of the participants used the terms Incident Command Post (ICP) and HOC interchangeable, which led to confusion of roles and responsibilities. Some players appeared to think the HOC was the ICP for this incident and the use of the title Incident Commander for the chief executive at the HOC added to the confusion. The National Incident Management System is very clear in that the entity in the field, in this case "I-91 Hartford Command", was the Incident Command Post. This is where the incident action plans; its objectives and strategies are developed. All other entities are in support of the incident command post in the field. The HOC is a department operations center which in this scenario is a location where VDH brings staff together to support the SSF#8 Function at the State Emergency Operations Center. This confusion can lead to conflicts with the management of incident and its tactics, strategies, priorities, resource management (ordering, deploying, utilizing, demobilizing, tracking), communications, alerts, and emergency public information. All of these elements of good management (NIMS) must be coordinated thoroughly with the ICP and EOCs to ensure everyone is on the same common operating picture. While reviewing

the VDH Emergency Operations Plan there was no clear explanation of responsibilities for the HOC. Emergency responders and supporting personnel within an ICS structure (ICP, EOCs, Department Operations Centers) must understand the roles of each entity to avoid confusion. Having this defined in a plan and exercising the plan goes a long way in preventing confusion.

In reviewing the Department of Health's Emergency Operations Plan it was noted that the plan lacked clear guidance as to what the roles and responsibilities will be for the Health Operations Center and its staff members during an emergency response or pre-planned event. In reviewing the plan on pages 25 through 27 it defines roles and responsibilities for other ICS structures such as Incident Command, various Emergency Operations Centers and other functions that may be found in support of an emergency response or pre-planned event but not for the HOC. The plan defines how the HOC will be established at the various alert levels, under the principles of ICS and each of the five functions of ICS (Planning, Operations, Logistics, Command, Finance) but not why it will be established.

Defining of roles for the HOC and memorializing it within the Department of Health's Emergency Operations Plan is critically important during a response to an incident or preplanning for an event, as it provides clarity to what staff member's responsibilities are. Defining roles within a plan provides the framework for effective communications between the elements, support and coordination of resources, efficient information flow and an overall understanding by everyone what functions the HOC serves. If roles are not defined it can lead to confusion as to who is responsible for both the command and control at the incident as well as who are the support and coordination elements. This confusion can lead to resource mismanagement, poor situational awareness, lack of clear messaging and alerts to the public. Planning is a key element to preparedness and an efficient response. With proper planning role responsibilities are defined and conflicts can be identified prior to an emergency.

Recommendations:

1. It is recommended that VDH examine what roles the HOC played in recent incidents, pre-planned events or exercises and its chief executive and document these roles within the emergency operations plan, training to it and exercise the plan

Observation 1.11: Area for Improvement: The HOC participants were unclear about their role and responsibilities in this type of scenario.

References:

- Vermont Department of Health Emergency Operations Plan, June 1, 2006, 64 pages.
- Vermont Department of Health Radiological Emergency Plan, Rev. 0, April 30, 2008, 30 pages.
- Health Services Coordinator Radiological Emergency Response Implementing Procedure, Rev. 4, February, 2011, 16 pages.
- Radiological Health Advisor Radiological Emergency Response Implementing Procedure, Rev. 4,

February, 2011, 30 pages.

VDH Dose Assessment Team Radiological Emergency Response Implementing Procedure, Rev. 8, February, 2011, 38 pages.

Vermont Department of Health Laboratory Radiological Emergency Response Implementing Procedure, Rev. 3, February 2011, 4 pages.

Capability Element: Planning

Analysis: There was a sense by the HOC participants from the Dose Assessment Team that this scenario was primarily a health related incident and therefore the HOC was in charge of the state response and that the SEOC was in more of a support role. Therefore they began to make decisions and deploy resources without involving the SEOC. They indicated that they would respond to instruction from VDH authorities such as the Health Services Coordinator and the Radiological Health Chief but were not as likely to confer with SEOC staff. It was not clear to what extent the SEOC was clued into what the HOC was doing or planning to do. HOC members may have been focused on Paragraph 6 on page 3 of the VDH Radiological Emergency Plan (below).

“The VDH will activate its Health Operations Center (HOC) for command and control of the radiological event response from the public health perspective using its VDH Emergency Operations Plan. HOC activation levels will vary depending on the scale of the radiological emergency. Command and general staff at the HOC will use principles of the Incident Command System (ICS) to manage its emergency response activities.”

Contrast that with the statement on page 8 of the VDH Emergency Operations Plan:

“HOC Level IV activation occurs when the SEOC is activated. At this point, the SEOC assumes a leadership role relative to radiological emergency response.”

Although several members of the HOC and Dose Assessment Team had copies of plans and procedures with them they spent very little, if any, time referring to them. It was not clear to the participants at the HOC table just how the chain of command connected the HOC, the SEOC, the ICP and other states and the Federal Government. Several important issues which would have involved coordination with multiple jurisdictions described in the VDH Radiological Emergency Plan on pages 3, 4 and 6 did not come up in discussion including the SEOC such as activation of Reception Centers for the public, emergency worker monitoring and decontamination for an expanding number of responders, the Patient Coordination Unit in the event of hospital evacuation, the Office of the Chief Medical Examiner and the use of an incident Field Office.

It was not clear to participants whether they should be using the VDH Radiological Emergency Plan or the Radiological Emergency Response Plan for Vermont Yankee. In discussion Dose

Assessment Team staff were more apt to refer to the Radiological Emergency Response Plan implementing procedures for Vermont Yankee. There are Job Action Sheets referred to on page 62 of the VDH Emergency Operations Plan but participants who mentioned guidance documents most often mentioned Radiological Emergency Response Plan implementing procedures for Vermont Yankee. Because the JAS were not accessible it is not known if they would have helped in this scenario or not.

On page 28 of the Vermont Department of Health Radiological Emergency Plan it is made clear that incidents that are not at a fixed nuclear power station are covered by this plan and not the Radiological Emergency Response Plan. There is a multipage table defining the roles and responsibilities of various organizations in this type of radiological incident. This table is fine as far as it goes but the plan does not have radiological specific implementing procedures or an instruction recommending use of the Radiological Emergency Response Plan implementing procedures. Many participants felt most comfortable with a position specific checklist and were inclined to use the only one they had.

These conflicting views of the chain of command and guidance documents would have required clarification from some higher authority or the lack of communication and coordination with the SEOC would have caused serious problems.

Reviewer Note: "In discussion Dose Assessment Team staff were more apt to refer to the Radiological Emergency Response Plan implementing procedures for Vermont Yankee." This may be due to their lack of familiarity working within the HOC structure as the Dose Assessment Team typically works in the SEOC during a Vermont Yankee event

Recommendations:

1. The VDH Office of Public Health Preparedness (OPHP) and Vermont Emergency (VEM) should jointly review the various plans, Implementing Procedures (IPs) and Job Action Sheets (JAS) to determine if there needs to be a separate set of radiological specific checklists to support the Vermont Department of Health Radiological Emergency Plan or if the existing Radiological Emergency Response Plan implementing procedures can be modified or annotated for use in all radiological emergencies.
2. OPHP and VEM should jointly either write radiological specific checklists to support the Vermont Department of Health Radiological Emergency Plan or modify or annotate the existing Radiological Emergency Response Plan implementing procedures to cover all radiological emergencies.
3. The VDH Office of Public Health Preparedness (OPHP) should conduct training to include drills and exercises to prepare staff to use whichever checklists that OPHP and VEM decide to write.
4. HOC training, including drills and exercises, should include the escalation of HOC activation levels and coordination with the SEOC. Vermont Emergency Management

should either participate in these drills and exercises or provide a control cell to give HOC staff more realistic experience and training.

5. HOC training, including drills and exercises, should include a variety of scenarios, some of them common emergencies for VDH and some not so common such as the scenario in this exercise.

Observation 1.12: Area for Improvement: The VDH EOP does not appear to contain clear information regarding how HOC personnel would be kept informed of an evolving incident so they can continue to support and coordinate with emergency personnel.

References:

SEOP
VDH EOP
NIMS

Capability Element:

Planning, Training

Analysis: During module 1 several discussions occurred with participants at the HOC table relative to gaining information to understand what was occurring at the incident. Specifically participants stated that the Radiological Health Advisor along with VTRANS would have firsthand knowledge about what was in the vehicle since the vehicle transporting the radioactive material was inspected by state personnel hours before the crash. The participants questioned who and how this information would be shared. There was further discussion about a formal communications link between the ICP at the scene to the SEOC SSF#8 Function and how this information gained by this direct link would be communicated to the HOC. Finally there was a discussion about how the State Hazardous Material Team would be speaking directly to the SSF#8 at the SEOC and the Dose Assessment Unit, which would be residing at the HOC.

In reviewing the VDH EOP and the SEOC Annex for SSF#8 there did not appear to be specific language as to who would be responsible for keeping the HOC informed of an emerging incident. It is vitally important that all supporting and coordinating elements be kept informed of incidents by a formal process that is written within an emergency operations plan. By designating this responsibility and memorializing it into a plan it leaves no doubt whose responsibility it is to keep the HOC informed. The HOC is operating as a department operations center and providing key information about dose assessment and safety precautions to the field. It is not enough for the HOC to receive information through these informal channels such as direct discussions with the HAZMAT Team. Much more information exists that is relevant to supporting the mission of the personnel at the HOC. By keeping all elements within an ICS structure informed it provides for a single common operating picture. This consistent “picture”

provides situational awareness that is vital in making sound decisions and prompts forward thinking decision makers to ask relevant questions. Decisions could include alerts and warnings to the public, consistent communications to the public of the incident, requesting of the right resources and the appropriate time, safety of the public and first responders and many other elements of managing an incident.

Further, VDH should examine how it can assign personnel to the incident command structure in the field during significant incidents that have a profound impact on the health and safety of people that would help improve communications between the entities. In this scenario it makes sense for VDH to assign personnel to the IC structure. These positions include technical specialist in the planning section who can provide the incident commander with technical information. Further a VDH staff member could also be assigned as an agency representative who has the authority to make decisions for their agency. This agency representative provides that direct link from the field to the SSF#8 Function for total situational awareness. Finally, VDH should consider assigning a qualified staff member within Unified command once the situation becomes stabilized and the transition period from response to recovery begins.

Recommendations:

1. It is recommended that specific language be inserted into the VDH EOP and SSF#8 Annex to the SEOC as to the process for obtaining and communicating information internal to the response and recovery of the incident as well as examine how VDH can assign key personnel to the incident command structure.

Observation 1.13: Strength: Executive Manager for the HOC fully knowledgeable of the emergency plans that govern the HOC.

References:

VDH EOP
SEOP
NIMS

Capability Element: Planning

Analysis: Throughout the exercise the HOC Incident Commander understood the VDH EOP and how to implement it within this scenario. He took charge and discussed how they would determine the incident management team in the HOC, how they would be notified/alerted and how the staff within the HOC would coordinate health department resources during this emergency. This experience is crucial to an effective response.

Recommendations:

1. Sustain this experience by continuing to train personnel and participate in exercises.

Observation 1.14: Area for Improvement: VDH lacks depth in trained personnel to sustain operations in the HOC and other support locations for a significant period of time.

References:

VDH EOP
SEOP (COOP and COG Annex)
NIMS

Capability Element: Resource (Personnel)

Analysis: During discussions at the HOC table one participant stated that VDH would be “spread thin” during this type of scenario and it would be difficult to staff the HOC and other operations for a long period of time. This type of disaster would have the potential for far reaching health consequences over a large area thus draining qualified personnel in any department not just VDH. Specific technical assistance in a radiological disaster requires qualified personnel over a long period of time and would likely contribute to the drain of resources locally and regionally. Discussion during the exercise did include regional resources being obtained through the NERH Compact. The consequences of not having adequate staff for a long duration are a significant issue. This type of scenario would likely drain the pool of available trained personnel almost immediate and regional personnel thereafter. This type of scenario will leave staff exhausted, stressed and at risk of making poor decisions. Finding qualified personnel to staff the HOC, SEOC and potentially field deployment will be difficult but not impossible. Per the VDH EOP it is the responsibility of the Emergency Preparedness Unit to develop COOP plans for VDH. While initial COOP plans exist more extensive planning must be done to ensure that all ideas of obtaining qualified personnel are explored.

Reviewer comment: “Per the VDH EOP it is the responsibility of the Emergency Preparedness Unit to develop COOP plans for VDH” should read “It is the responsibility of the VDH Business Operations Unit (within the Commissioner’s Office) to develop COOP plans for VDH.”

Recommendations:

1. It is recommended that the EPU conduct a workshop with other relevant partners to assess where internal and external resources from the state as well as outside the state may be obtained to supplement VDH staff. This information should be memorialized into the VDH EOP and VDH COOP Plans.

Observation 1.15: Area for Improvement: Vermont does not have a sufficient depth of trained staff to support emergency operations for an extended period of time.

References:

Vermont Department of Health Emergency Operations Plan, June 1, 2006, 64 pages.
Vermont Department of Health Radiological Emergency Plan, Rev. 0, April 30, 2008, 30 pages.
Health Services Coordinator Radiological Emergency Response Implementing Procedure, Rev. 4, February, 2011, 16 pages.
Radiological Health Advisor Radiological Emergency Response Implementing Procedure, Rev. 4, February, 2011, 30 pages.
VDH Dose Assessment Team Radiological Emergency Response Implementing Procedure, Rev. 8, February, 2011, 38 pages.
Vermont Department of Health Laboratory Radiological Emergency Response Implementing Procedure, Rev. 3, February 2011, 4 pages.

Capability Element: Resources- Personnel

Analysis:

HOC participants were very clear that in past incidents, such as Tropical Storm Irene, that they had difficulty operating even one full and one light shift for ten days. It was clear to them that they would need additional trained staff early on to maintain continuous operations. Although Tropical Storm Irene was serious, it may not have presented as much of a challenge as this exercise scenario. The Tritium incident at Vermont Yankee lasted much longer but was not nearly as intense. The state was monitoring events at Vermont Yankee but did not have to manage the event itself. Much of the HOC staffing occurred during normal business hours and allowed for staff to do at least some of their normal jobs. The type of scenario in this exercise would be much more demanding.

Not only does the state and VDH have a shortage of highly technical people such as the Radiological Health Advisor, discussed in a previous observation, but it also has a shortage of trained and experienced people to staff the HOC, the SEOC and other response and recovery positions with 24/7 coverage. If VDH sends more people to the SEOC to support the Health Services Coordinator and the Radiological Health Advisor, they have fewer personnel to staff the HOC and reinforce district offices in the response and recovery area. This is not a recently discovered problem. As more state agencies form their own operations centers, their ability to send personnel to the SEOC to provide additional staff is reduced. The SEOC has a long history of having difficulty in recruiting and training staff. VDH has a similar problem. Additionally if state personnel are needed to staff Incident Command Posts (ICPs), area commands, etc. the shortage only becomes worse. It is difficult to understand how with a state of Vermont workforce of approximately 8,000 full time employees that sufficient staff cannot be trained and used in the various operations centers. This shortage will affect the timeliness and performance of the State and the Department of Health in future intense and extended response and recovery periods.

Recommendations:

1. The Department of Public Safety (DPS) and the Vermont Department of Health (VDH) should jointly convene a facilitated discussion with key members of the administration to include the Department of Human Resources and other critical departments to determine how to provide qualified and trained personnel in the event of an emergency.
2. DPS and VDH should jointly review and revise appropriate plans to accommodate the additional staffing provided in the above discussion.
3. DPS and VDH should each provide appropriate training to the additional staff provided to include experience in various drills and exercises.
4. Drills and exercises, where possible, should include at least one shift change to ensure that the staff can properly conduct a shift change and to provide second shift personnel training and experience. It does no good to have a large bench if only the first shift gets to participate in a meaningful way.

Observation 1.16: Area for Improvement: Some staff members at the HOC table do not understand the processes of ordering resources during an emergency that has a fully expanded ICS structure (ICP, EOCs, DOCs).

References:

NIMS
SEOP (Incident Annex X)
VDH EOP
New England Compact Interstate Radiation Assistance Plan

Capability Element:

Planning, Training

Analysis: During play in module 1-3 many participants at the HOC table expressed concern about the management of resources. Specifically, they did not know what the criteria would be for ordering and tracking resources. During Module 1, participants questioned what the “triggers” were to request resources from the New England Radiological Health Compact and how they would be deployed and managed. During modules 2 and 3 participants questioned how “resources would be ordered, deployed and accounted for” at the HOC.

Emergency management and incident response activities require carefully managed resources (personnel, teams, facilities, equipment, and/or supplies) to meet incident needs. Utilization of the standardized resource management concepts such as typing, inventorying, organizing, and tracking will facilitate the dispatch, deployment, and recovery of resources before, during, and after an incident. Efficient and effective deployment of resources requires that resource

management concepts and principles be used in all phases of emergency management and incident response. Resource management during an incident is an extremely difficult task but it will be problematic and lead to resource mismanagement if entities involved in the support and coordination efforts don't understand what the process is for managing resources. Failure to understand will lead to inefficient use of resources, failure to track and account for resources, injury, deaths as well as the inability to reimburse for the resources. Further, in a scenario such as this all resources requested would be managed by the SEOC once the ICP exhaust all of its resources to include local mutual aid. The SEOP designates the Planning Section of the SEOC as the entity that would identify the resource request, order and deploy it to the requesting Incident Command, re-deploy resources from the various IC structures if relevant, demobilize and reimburse the entity.

All resource requests must first be generated and approved by the Incident Commander in support of the Incident Action Plan or the State Emergency Operations Center in support of the incident. Late in Module 2 play a representative of the Federal table (CDC) came to the HOC table and requested to know if a certain type of resource was needed to which the VDH participant replied yes. These two discussed the request in private and nothing was reported out. This occurred after a fully functional ICS system was in operation and local and state EOCs were functioning. Once a fully functional ICS structure is in place there is only one single resource ordering system established. This means that resource requests are approved by the incident commander and are channeled through either a local or state emergency operations center. If the local EOC does not have the resource then the request is moved up to the SEOC where the responsible SSF Function is tasked to find the resource. In this case the SSF #8 Function has the ability to reach back to the HOC to request resources or contact federal entities directly depending upon the SEOP and VDH EOP. Any bifurcation of this system will cause confusion and inefficient use of resources. All department operations centers must act in concert with the ICP and it is incumbent upon all entities to communicate with the Incident Command Post through the state emergency operations center if they assess that a certain resource is needed to complete a new objective. These clear communications helps foster good resource efficiency and helps avoid the many missteps that have occurred throughout the history of response to emergencies. The VDH EOP must identify roles and responsibilities of the HOC.

Recommendations:

1. Coordinated planning, training to a common plan, and relevant exercises provide a foundation for the coordinated resource management process for this scenario. Jurisdictions should work together in advance of a disaster to develop plans for identifying, ordering, managing, and employing resources. The planning process should include identifying resource needs based on past experiences of the jurisdiction and develop alternative strategies to obtain the needed resources. Finally, the resource management process that exists in the SEOP should be referenced in the VDH EOP.

2. The VDH should update their EOP to define the process for ordering resources if the HOC is the ICP or reference the SEOP Resource ordering process while the HOC is a support and coordination entity for SSF #8 Function of the SEOC.

Observation 1.17: Strength: Representative from the New England Radiological Health Compact understood how resources from the Compact are obtained in an emergency.

References:

VDH EOP
Radiological Annex to SEOP
Title 18 VSA 1601

Capability Element: Training

Analysis: During module 2 participants at the HOC table received information from the NERHC representative as to how radiological resources would be obtained from the participating states. He explained in detail that the designated representative from each state (for Vermont it's the commissioner of VDH) would contact the "Secretary" of the Compact (Connecticut) and request the resources needed. The secretary would then send out the requests to the participating states. The representative explained what information he would need to make the requests for the resources such as what type of resources, type of incident, where they would report, etc. The representative of NERHC gave a clear understanding of the process.

Recommendations:

Sustain

Observation 1.18: Area for Improvement: The HOC participants discussed having no plan for the disposition of contaminated waste that would result from this disaster.

References:

VDH EOP
SEOP
National Response Framework

Capability Element: Planning

Analysis: The HOC participants discussed the issue of contaminated debris that would result from this scenario (disaster) and that there was no ability within Vermont to deal with radioactive debris. The participants are to be commended for thinking ahead during a potentially complex problem. In this scenario all participants agreed that there would be a

significant amount of radioactive debris that would not be able to be disposed of with internal resources.

In planning for a contingency as complex as the disposal of radioactive material, experts would need to be consulted ahead of time to ensure proper planning and execution of the disposal of this energized debris. The disposal of large amounts of radioactive debris as a result of an incident would be necessary to safeguard the general public for generations. Having a framework of how to dispose of such debris is worth discussing and memorializing (in general outline) in the State Emergency Operations Plan with references to this annex in the VDH EOP. While the SEOP does have an annex for debris removal it does not have specific information about radioactive material. Vermont has a nuclear power plant within its borders. Radioactive material is transported across our highways on a consistent basis. The potential for a small footprint of radioactive contamination is a realistic scenario and by having a general outline of how to manage such a monumental task would alleviate the anxiety that would be present in such an incident.

Recommendations:

1. Conduct a small workshop with relevant stakeholders to outline the process that would be needed to decide what the proper disposal would be for a large amount of radioactive contaminated debris.
2. This information should be memorialized within the management of debris annex of the SEOP and referenced in the VDH EOP.

Observation 1.19: Strength: The Health Operations Center (HOC) has had significant experience in certain kinds of emergencies which increases their preparedness for future emergencies.

References:

- Vermont Department of Health Emergency Operations Plan, June 1, 2006, 64 pages.
- Vermont Department of Health Radiological Emergency Plan, Rev. 0, April 30, 2008, 30 pages.
- Health Services Coordinator Radiological Emergency Response Implementing Procedure, Rev. 4, February, 2011, 16 pages.
- Radiological Health Advisor Radiological Emergency Response Implementing Procedure, Rev. 4, February, 2011, 30 pages.
- VDH Dose Assessment Team Radiological Emergency Response Implementing Procedure, Rev. 8, February, 2011, 38 pages.
- Vermont Department of Health Laboratory Radiological Emergency Response Implementing Procedure, Rev. 3, February 2011, 4 pages.

Capability Element: Training

Analysis:

The Vermont Health Department (VDH) Health Operations Center (HOC) has been activated several times in the last few years for extended periods of time. The Tritium incident at the Vermont Yankee Nuclear Power Stations and the H1N1 flu incident are but just two such incidents. The HOC has been activated to some level for many incidents that were resolved quickly or never reached their potential seriousness.

This frequent activation has provided various VDH staff members opportunities to play a variety of roles in the HOC structure and to work out many potential issues in their response. They also participate in Vermont Yankee exercises. These activations provide VDH with a skilled and experienced workforce in the event of an emergency. The discussion by participants included examples of different activations of the HOC where certain challenges were avoided or overcome. Tropical Storm Irene was certainly a benchmark for many of the participants even though there was nothing radiological about it.

Discussions by the participants demonstrated a certain level of confidence that they could work together to achieve tasks assigned based on past success. Participants had copies of procedures and plans that they would normally use in other types of incidents. They seemed familiar with those plans and procedures and were planning to use them.

Participants were used to working with each other in various roles and were able to focus on the problem at hand with a minimum of “jockeying for position”. Participants welcomed participants from other states and their ideas into the discussion with a minimum of resistance.

HOC staff members are at a high level of preparedness for the types of emergencies that they have experienced or trained for in the past and are better prepared for the unexpected than they would be without this training and experience.

Recommendations:

1. The HOC should continue to activate as frequently as required to maintain their readiness and experience. This has a twofold benefit:
 - a) Early activation puts the department and the State of Vermont in a higher level of preparedness if the incident escalates into something greater.
 - b) Staff members get realistic training about their roles and opportunities to explore better ways to accomplish their tasks.
2. Activations should be made with selected members assuming different roles to provide them with more and different skills. This will also provide the HOC and the department with additional depth on the bench.
3. There should be periodic training where the experiences of recent and older activations are compared and analyzed to determine trends and challenges for the future.

Observation 1.20: Area for Improvement: There was a lack of direction from the Vermont State Emergency Operations Center (SEOC) about how the HOC, Dose Assessment and other VDH resources should be deployed and the proper chain of command to be used which was not clarified by the HOC.

References:

- Vermont Department of Health Emergency Operations Plan, June 1, 2006, 64 pages.
- Vermont Department of Health Radiological Emergency Plan, Rev. 0, April 30, 2008, 30 pages.
- Health Services Coordinator Radiological Emergency Response Implementing Procedure, Rev. 4, February, 2011, 16 pages.
- Radiological Health Advisor Radiological Emergency Response Implementing Procedure, Rev. 4, February, 2011, 30 pages.
- VDH Dose Assessment Team Radiological Emergency Response Implementing Procedure, Rev. 8, February, 2011, 38 pages.
- Vermont Department of Health Laboratory Radiological Emergency Response Implementing Procedure, Rev. 3, February 2011, 4 pages.

Capability Element: Planning

Analysis: It may be the nature of Table Top Exercises with multiple tables that inter table communication is often limited. It took repeated urging by the facilitator to get participants to go to the SEOC table and for them to get answers to questions. Because plans and procedures did not appear to provide clear direction to either the SEOC or the HOC participants for this type of scenario, participants tended to react to the situation in a “seat of the pants” fashion. The HOC participants viewed their role to be somewhat independent of the SEOC because they were not receiving guidance, requests and data from the SEOC or the ICP in Hartford.

There were a number of questions about New England Compact, Federal agencies, the Poison Center, and resources from other states. These questions included how and when to request them and how to integrate them. It was not clear whether the SEOC was in charge of this or the HOC.

There was a representative from New Hampshire at the HOC table. It was not clear if communication and coordination between New Hampshire and Vermont operations were to be done at the SEOC, the HOC or at the ICP in Hartford. There was willingness by all to cooperate fully since New Hampshire had a share of the affected area but it was not clear how to go about this. In a Vermont Yankee incident this is commonly initially handled between SEOCs by

conference calls with agreed upon specified interaction at the field level. Participants were unsure of how it should occur in this scenario.

There seemed to be a sense by participants that the HOC could request some additional support such laboratory support but it was not made clear how that information would be provided to the SEOC either as a decision already made or as a request for authorization. Reading the table of responsibilities on page 28 – 31 of the VDH Radiological Emergency Plan does not reveal any requests to interstate or federal resources. It is reasonable to assume that the State Emergency Operations Plan may cover this and require that such requests be channeled through the SEOC to ensure fiscal control and ensure that nothing slides between the cracks or is double ordered.

Communication and coordination between the SEOC and other agency operations centers and Incident Command Posts is vital to a successful response and recovery effort. Valuable time can be wasted trying to figure this out while Rome burns.

Recommendations:

1. VDH and VEM should jointly review and revise the State Emergency Operations Plan and the VDH Radiological Emergency Plan to ensure that there are no gaps or overlaps of responsibility.
2. VDH and VEM should jointly provide periodic training on the various plans to key personnel in the SEOC and the HOC to ensure that these plans are fully understood. This training should include discussion periods to discover and resolve issues.

Observation 1.21: Area for Improvement: There were some information and decision making choke points between key Vermont Department of Health (VDH) personnel.

References:

- Vermont Department of Health Emergency Operations Plan, June 1, 2006, 64 pages.
- Vermont Department of Health Radiological Emergency Plan, Rev. 0, April 30, 2008, 30 pages.
- Health Services Coordinator Radiological Emergency Response Implementing Procedure, Rev. 4, February, 2011, 16 pages.
- Radiological Health Advisor Radiological Emergency Response Implementing Procedure, Rev. 4, February, 2011, 30 pages.
- VDH Dose Assessment Team Radiological Emergency Response Implementing Procedure, Rev. 8, February, 2011, 38 pages.
- Vermont Department of Health Laboratory Radiological Emergency Response Implementing Procedure, Rev. 3, February 2011, 4 pages.

Capability Element: Planning

Analysis: Participants in Module 1 specifically identified that the Radiological Health Advisor particularly and the Health Services Coordinator generally were information and decision bottlenecks. The participants at the HOC table agreed that the person filling the Radiological Health Advisor role would need to be “cloned” fairly early on in a major radiological incident and perhaps multiple times. It was pointed out that the VDH Radiological Emergency Plan needed to have a “trigger” to initiate a request to some other state or federal agency to obtain one or more trained and experienced replacements for the person filling the Radiological Health Advisor role. The New England Radiological Compact was identified by participants as being a likely source of a trained and experienced replacement. This was with complete admiration for the person filling the role of Radiological Health Advisor. It was a recognition that one person alone could not do justice to the role in an emergency. He needed one or more deputies and assistants to alleviate the bottle neck. While he was on the phone to one organization he was unable to communicate with the others. This type of scenario would overwhelm the current staffing. In the event that the person currently filling this role was unavailable for any reason there appears to be no back up person in VDH with sufficient training and experience. It is unreasonable to expect one person to cover both 12 hour shifts of an extended incident.

If the Health Services Coordinator and the Radiological Health Advisor were to go to the SEOC or an ICP without sufficient trained support, they would become overwhelmed by the number of entities that depend upon frequently communicating directly with them by various means. The HOC participants indicated that most of their communications with the SEOC would be routed through either the Radiological Health Advisor or the Health Services Coordinator. If the Radiological Health Advisor opted to relocate to the ICP in Hartford it was unclear how communications that would normally go to the SEOC would be routed.

The Health Services Coordinator, the SEOC, and the HOC all depend upon having frequent communications and guidance from the Radiological Health Advisor. Participants expressed concern that this would bring operations to the pace of one person despite their abilities and training. In Vermont Yankee drills and exercises this difficulty is mitigated by both the Radiological Health Advisor and the Health Services Coordinator being located at the SEOC and supported by the Dose Assessment Team and the SEOC staff. Even so, all of the technical data and the technical decisions have to flow through one person. That person has to make recommendations to the decision makers including the Health Services Coordinator.

The consequence of this situation is that the ability of VDH and the State of Vermont to respond to a radiological incident in a timely manner is fragile. While the Health Services Coordinator position can be filled by either the VDH Commissioner or a trained designee, there

does not appear to be a trained and experienced replacement for the Radiological Health Advisor in state. Even when both Health Services Coordinator and the Radiological Health Advisor positions are filled with the best qualified persons there is insufficient staff support to enable the positions to perform well. It should also be understood that in many scenarios, like the one presented in this exercise, that many, if not all, nearby states that could provide timely assistance may be fully involved in this situation or others.

Recommendations:

1. The VDH Office of Public Health Preparedness (OPHP) should review and revise the VDH Radiological Emergency Plan to address the lack of staff support for the Radiological Health Advisor and the Health Services Coordinator positions.
2. The VDH Office of Public Health Preparedness (OPHP) should review and revise the VDH Radiological Emergency Plan to address the lack of in state redundancy in the Radiological Health Advisor position.
3. The VDH Office of Public Health Preparedness (OPHP) should review and revise the VDH Radiological Emergency Plan to determine realistic methods of requesting and receiving technical assistance in a timely manner to include in state personnel to backfill the Radiological Health Advisor position and to determine what situations or events trigger that step through a variety of sources including the New England Radiological Compact.
4. Vermont Emergency Management (VEM) and the VDH Office of Public Health Preparedness (OPHP) should jointly review and revise the Radiological Emergency Response Plan to address this lack of redundancy in and the support to the Radiological Health Advisor position in Vermont Yankee scenarios.
5. Vermont Emergency Management (VEM) and the VDH Office of Public Health Preparedness (OPHP) should jointly develop a trained cadre of deputies and assistants for the Health Services Coordinator and the Radiological Health Advisor positions. Properly mentored deputies could develop into temporary or second shift replacements for the Radiological Health Advisor when needed in an emergency.

Table 2: On Scene Responders

Capability 1: Public Information and Warning – Response Mission

Observation 2.1: Strength – Acknowledging a lack of capability within his own resources, the Incident Commander, when prompted, requested a Public Information Officer be dispatched to the ICP from State resources.

References:

Town of Hartford Emergency Operations Plan
NIMS ICS instruction manuals 100, 200, 300, 400

Analysis: The Incident Commander was asked how he intended to make sure the public was adequately warned of the danger and kept informed throughout the incident. His response was to request PIO staffing from the State EOC to assist in manning the local public information function.

The consequences of failing to recognize staffing limitations of any sort are a potential breakdown in the ICS system. An IC overwhelmed with responsibilities that they have not delegated due to a lack of available trained staff leads to these areas performing poorly. In the case of information messaging to the public, if this area performs poorly, the public has no idea of what is going on and an uninformed public is an out of control public.

Currently ICS training has been inappropriately focused only on training first responders to fill all the roles within the incident command system. The system needs to draw from the ranks of more qualified personnel, who are not first responders, when offering ICS training in the State. In recognizing his limitations and the limitations of his available staff, the IC made a good decision to enlist trained staff for this task/role but the number of trained PIOs who could take on this role at the local level is severely limited and would be taxed severely as this incident continued to expand.

Recommendations:

1. ICS training needs to stress this type of action and the ability to recognize when one has reached their limitations.
2. There is a need for trained personnel to be available to staff local incidents.
3. ICS 400, and lower courses should stress the need to assess your own capabilities and delegate accordingly.

Capability 2: On Site Incident Management

Observation 2.2: Strength: The responding Fire Department Chief acted in the capacity required of an Incident Commander, and was able to sustain operations and awareness throughout the incident. This indicates a high level of familiarity and experience with ICS protocols, which benefits the entire operation.

References:

Hartford Fire Department, *Standard Operating Procedures*;
Organization Chart, p. 7; representing members' roles in ICS format
Section I, Fire—Incident Command System, p. 44; 11-page description of the ICS system and actions, accompanied by specific-incident response command structure charts

Capability Element: Training

Analysis: From the initial arrival at the scene of the traffic accident, the Fire Chief stepped into the role of Incident Commander, adopting the procedures outlined in the Department's standard operating procedure,,: priorities of

1. Life Safety
2. Incident stabilization
3. Property conservation

In recognizing that the incident involved a placarded vehicle, the Chief ordered responders to pull back from the scene, putting the safety of his personnel first in response priorities.

As the incident expanded and personnel arrived on scene from other departments and agencies, the existing Incident Command structure expanded to incorporate the other representatives on site. With the confirmation of radiological material involved, the local Fire department adapted its response to the dictates of the specialized response teams arriving. The Chief maintained his position within the Unified Command, and his jurisdiction over the local incident.

The demonstration of the ability to respond and adapt to an evolving and multi-jurisdictional situation is a leadership strength, itself, and it establishes a positive approach when handling a large-scale incident. The consistency of process and action built into the ICS structure enables a person to react with confidence, and to engage with others on a common ground.

This scenario highlighted the benefits of regular and consistent review and practice of ICS procedures. This can be a challenging area for departments who feel they are "too small" to continually train in ICS, but shows how important it is to be comfortable within the structure.

Recommendations:

1. Engage other departments in various methods of training in and practicing ICS on a

regular basis

2. Work with other area departments, and different response agencies, to expand the training and exercising opportunities of ICS protocols

Observation 2.3: Area for Improvement: In the process of preparing for an evacuation, the Hospital determined that the evacuation site itself was within the affected zone.

References:

Verbal only, from Ascutney Hospital representative.

Capability Element: Planning

Analysis: In the discussion of preparing for an evacuation, the Hospital determined that the evacuation site itself was within the affected zone. This realization led to reconsidering the feasibility of sheltering-in-place.

For many situations, the evacuation location would be fine, and as part of the development of emergency plans, is a reasonable starting point. It is likely that many agencies have plans with only one level of contingencies; as plans are further developed and revised, secondary provisions need to be added.

In the scenario presented, the 25-bed hospital would need to evacuate its patients, but their Emergency Operations plan only identified one alternate site, and that was within the same evacuation zone. Since this was not an option, there ensued a discussion about sheltering-in-place for the patients and providers. However, there was the issue of local residents arriving at the hospital with real and perceived radiation concerns, and the ability to control traffic in and out of the facility became another concern.

These questions were primarily raised by—and will be brought back to the hospital by—the agency representative at the table. On a larger scale, it challenges all agencies to assess emergency plans for less-traditional, less likely, incidents and to push the assumptions upon which the plan was originally written.

This scenario also reinforces the importance of, at a minimum, reviewing the plans, and ideally, testing them in some manner. Plans should be discussed from not just the perspective as presented, but from a “devil’s advocate” point of view where experience and assumptions do not apply. This facilitates a more thorough look at plans under the All Hazards potential.

Recommendations:

1. Review current plans and identify places where only one back-up or contingency plan exists; expand plans to include additional options or resources

2. At least annually, invite a group of people who are not familiar with specific plans to review and discuss the potential scenarios and how they are addressed in the plan

Observation 2.4: Area for Improvement – There is a lack of a clear understanding of who the NERHC resources work for and who is responsible for tracking them be it for purposes of payment (Timesheets, etc) or Health (radiation exposure, etc) and once they have been deployed, who has operational authority over them.

References:

Vermont Radiological Emergency Response Plan (Rev 7 February 2011)

State of Vermont Emergency Operations Plan (September 30, 2009)

Analysis: The players associated with NERHC were aware of the process for their deployment. They would be requested by the State of Vermont and would become State employees once deployed to an event like this. Beyond that process, including how they fit into the local incident command structure, was more confusing. There was not a clear understanding of how they would interact with the local incident commander and how they would be tracked either for purposes of payment/reimbursement or for purposes of monitoring their personal safety. When asked by the Radiological officer from VDH where or how they would report and who would be responsible for tracking their actions, the answer was inconclusive.

While the State EOP indicates all disasters are local, there is some confusion about when a state resource is deployed to an incident, if the State retains control over the resource or does the Incident Commander have the ability to direct them.

The consequences associated with this confusion are that these resources could get lost and not adequately tracked by either the State or the IC. The consequences of the lack of tracking would be the possibility that inadequate records are kept for purposes of reimbursement to the State or to the local municipality depending on who has control over these resources. A second consequence would be the potential for radiation overexposure of these resources, inadequate decontamination and risk to life.

The root cause of this confusion lies with the conflict between State and local authority once an incident exceeds the capacity of local officials and State assistance is required. State statute provides for the Governor to take control over local resources when a declaration of emergency has been made but this authority and the resulting coordination are not considered an acceptable action.

Recommendations:

1. The State of Vermont should reevaluate current statutes and actions in regards to possible State control of incidents and State control of resources.

2. Once evaluated, there needs to be clear communication of those policies to local municipalities.
3. State government, via the governor's statutory authority, need to accept the responsibility of command and control when local authorities have overwhelmed their capacities. In an event such as this, there is a clear need for either an Area Command to be set up or for the State to take on the authority to manage the entire incident.
4. Alternatively, if local control is to be retained by the local community, resources dispatched to the IC should become property of the IC including that the IC has full responsibility for tracking, management and payment for the resources utilized.
5. For either approach, State resources such as what the NERHC have become, should have a clear line of authority and associated resource tracking methods.

Observation 2.5: Area for improvement – There was an overall lack of understanding of the difference between an Incident Command Post and an Emergency Operations Center under the ICS system by local officials. This includes poor understanding of the role of IC vs other officials in their directing of operations.

References:

Town of Hartford Emergency Operations Plan
NIMS ICS instruction manuals 100, 200, 300, 400
ICS 402 for Executives

Analysis: The Incident Commander from the Town of Hartford Fire Dept. made reference to an Incident Command Post and an Emergency Operations Center interchangeably indicating a lack of understanding of the different roles of each facility. When referencing a unified command, it was indicated that that function would probably be conducted out of the local EOC. The unified command structure is often difficult to operate during a large incident requiring a single operations section chief carrying out the tactics and strategy approved by a group of leaders. And that difficulty is exacerbated by direction coming from multiple locations. The IC in an incident like this does not need to have eyes on the scene and therefore, should relinquish that task to the Operations Section Chief. The ICP can then be located away from the scene and operate as was designed.

The consequences associated with this confusion are such that command and control functions may become confused and multiple commanders can appear. Orders can come from the EOC and from the ICP as each facility may believe they have a portion of command responsibility. If there is not clear command and control exercised in this type of incident, the public and general population, as well as first responders, can be at risk because of conflicting orders.

The root cause of this issue is the lack of training, practice and the resultant inability of local

governments to institute and conduct ICS operations at the level required in a unified command structure

Recommendations:

1. ICS training as conducted within the State of VT should acknowledge the difficulty in operating under a unified command for a small community and strengthen the instruction around the difference between an ICP and an EOC.
2. Teaching models should reflect the difference between the two facilities and show who sits where.
3. Stressing unified command as a normal operating system is preferred
4. Exercises should be designed to encourage implementation of unified command.
5. ICP/EOC training should be expanded to emphasize the differences.
6. ICS training needs to acknowledge the difference between on-scene operations and Command as would be set up at an off-site ICP.

Table 3: State Emergency Operations Center

Capability 1: Communications

Observation 3.1: Strength: The SEOC's roles and responsibilities were performed with consistency, expedient teamwork through established and exercised relationships, and timely decision-making.

References:

SEOP 2010

Capability Element: Training

Analysis: Once the situational awareness was established through information from the Duty Officer, the State Emergency Operations Center came together in expedient, practiced fashion. The clarity of the information coming from Vermont Department of Health and Incident Command quickly dictated the expediency of full State Support Function staffing, eventually including data analysts from Vermont Center for Geographic Information and full ramp-up of the Joint Information Center. Initial reports from Incident Command and confirmation from Vermont Department of Health on truck's contents dictated Dr. Irwin's decision to sit with the State Emergency Operations Center. The State Emergency Operations Center immediately notified FEMA and began constant communications with the HAZMAT team, affirming notifications to the VA and Mt. Ascutney Hospital. At the same time, Vermont Emergency Management began in-depth examination, with Vermont Department of Health, of critical facilities in the area. The decision was made to keep the Joint Information Center at the State Emergency Operations Center. The Agency of Natural Resources was queried about water contamination and Vermont Center for Geographic Information was asked to begin supplying modeling based on incoming plume information. State Emergency Operations Center confirmed that all information from Incident Command would flow through the Duty Officer. Throughout the exercise, the State Emergency Operations Center was asked about its role vis-a-vis Incident Command, and the answer was clear and unequivocal: the State Emergency Operations Center was supporting the Incident Commander until/if decisions were made at a higher level to change. This was especially critical in confirming the decision chain with Federal partners. (For instance, tracking team information would flow through Vermont Department of Health to the State Emergency Operations Center and then on to Federal partners.) The State Emergency Operations Center also confirmed with Vermont Department of Health that any mapping would be coordinated by Vermont Department of Health, with non-public health related information funneled to the State Emergency Operations Center for Disaster LAN and State Support Function utilization. The State Emergency Operations Center also confirmed with Vermont Department of Health that the latter would continue tracking and be responsible for the NE

Compact resources. The State Emergency Operations Center coordinated all alternate/additional forms of communication to and from local EOCs and field teams, including RACES, the VSP mobile command post, coordination with COWs, CERT trailers, and of course, Disaster LAN. The State Emergency Operations Center was also prepared to execute all requests for assistance, with EMAC, IMAT, state and Federal declarations, National Guard, etc.

Recommendations:

1. Continuing opportunities for training & exercising a non-Vermont Yankee event should be pursued, and include all SSFs, in addition to partners such as the VCGI team and CERT teams where practical, in addition to southeastern Vermont's VY-related resources.
2. Training and exercising opportunities should include all alternate means of communications, including RACES and CERT, given the ever-present dangers of cell tower overload or non-coverage and lack of DLAN training and/or utilization.

Observation 3.2: Area for Improvement: With an incident as complex as this, that involves several sources and layers of technical data, many questions arose about the ability for the SEOC to gather, analyze, and utilize the information in a thorough and expedient manner for coordinating health and safety plans.

References:

Exercise

Capability Element: Training

Analysis: The exercise presented all the participants with almost overwhelming probable and possible amounts of data that needed to be coordinated and utilized as efficiently as possible. As the situational awareness information began to match up with the Vermont Department of Health's existing knowledge of the vehicle and its contents, information and data with high levels of sophistication and detail began to flow into the State Emergency Operations Center through State Support Function 8 and 10, among other resources. The need for technical assistance at the State Emergency Operations Center was recognized and fulfilled, and Disaster LAN was utilized to tap into the existing Critical Facilities database.

Detailed mapping and testing of the emerging radioactive plume and the resulting impact on people, animals, and water supplies was easily threatening to become overwhelming. Having Vermont Center for Geographic Information at the State Emergency Operations Center was invaluable, but the exercise could not fully test the flow of information through and among the State Support Functions most in need of that information at various times. The ability of Disaster LAN to absorb and keep all the information updated on needed timely basis –

especially the GIS layers -- was questioned at various times during all three modules, as was the flow of information necessary for this to occur. In addition, the complexity of how the data needed to be used was cause for concern during the exercise, even though this incident could be construed as being comparable to a Vermont Yankee event. How efficiently could the impacts be defined, analyzed, and communicated for: victim exposure, water resources and watershed impact, crops, animals, TCPs and evacuation routes, continuing likelihood of emergency and volunteer worker exposure, and shelters, just to name the basic areas of issue.

Recommendations:

1. Since it would be difficult to provide written plans that would cover all the areas of data coordination, further training and exercising just in the area of data collection and utilization should be pursued – especially with the use of highly sophisticated, fast-changing, and widely-impacting data and conditions such as contamination.
2. It was noted, that in addition to technical experts on all shifts, that for an event with widespread contamination, a Safety Officer should be with the State Emergency Operations Center to advise on the status of emergency workers.

Observation 3.3: Strength: The impact of contamination on water resources was quickly recognized by the most impacted State Support Functions, who then expediently began tracking, then communicating with all impacted partners.

References:

SEOP; Vermont Department of Health EOP

Capability Element: Training & Planning

Analysis: There was much to draw upon from the periodic exercising of a Vermont Yankee incident, not the least of which was the impact of contamination on water sources and supplies. Once State Support Function 11 was in the State Emergency Operations Center, they began utilizing the information that was being disseminated by Vermont Department of Health on the extent of the contamination. Vermont Center for Geographic Information was called upon to begin modeling the risk to surface water supplies. These supplies were quickly identified by Vermont Department of Health, as many of the towns in the emerging path of the contamination plume were supplied by reservoirs. The Agency of Natural Resources also began alerting all agricultural resources in the suspected path of the plume, with shelter-in-place orders for livestock and other farm animals who would otherwise be exposed to contaminated drinking water. Vermont Department of Health began to identify critical facilities to alert them to the plume's track and probable effects, with warnings to immediately switch to stored or bottled water. Both Vermont Department of Health and Agency of Natural Resources cited

ongoing communications with the Joint Information Center as the latter would have to include these warnings in all press releases, similar to VY procedures. Alerts for campers and recreational activities on all rivers, lakes, and campgrounds in the path of the plume were coordinated with the Joint Information Center. Through Vermont Department of Health, alerts by way of EAS messages included the ban on drinking water from public supplies. Discussions during the response phase included the recognized need to continue mapping the affected watersheds to determine how long the downstream effects would be in place, and the support needed to analyze and advise water treatment plants all along the affected corridor of contamination.

Recommendations:

1. In addition to the Vermont Yankee exercises, periodic exercises should exercise the ability to call upon, and coordinate, resources for tracking, mapping and identifying contaminated areas outside of VY events and the EPZ.
2. These exercises should include the need to call upon the various southern, Vermont Yankee teams for when that portion of the state would not be affected by a non-VY event and their resources would be needed.

Capability 2: Emergency Operations Center Management

Observation 3.4: Area for Improvement: It was not determined, during the table top, as to who would be identifying the reception center(s) required for this response since it has happened outside of the Vermont Yankee Plan area.

References:

Vermont Department of Health Emergency Operations Plan; June 1, 2006

Capability Element: Planning

Analysis: The accident that started the table top exercise was severe enough the area had to be evacuated and those with possible exposure to the toxins would need to go through possible decontamination. It was briefly mentioned by the group that a Reception Center would need to be identified for those evacuating from the area. No one at the table came forward with an appropriate location but did have a short discussion about possible locations. Then the request was no long discussed.

Review of the Vermont Department of Health Emergency Operations Plan; June 1 2006 states the Vermont Department of Health was responsible for, along with other non shelter/reception center not listed here:

- Coordinate the medical care for standard and special medical needs shelters to include providing interim nursing support to all shelters until the American Red Cross can provide the function.
- Coordinate the medical care of the special medical needs shelters to include reimbursing the facility for replacement of medical supplies (when necessary); ensure sufficient medical staff are available to open shelters and approve admissions; maintain and ensure confidentiality of medical records; assist shelterees in making arrangements for essential medical equipment, as the situation allows.

There is no mention in the above responsibilities for identifying and opening a Reception Center in the plans that were reviewed.

A Reception Center for this type of event would need to be set up quickly and require special screening tools and decontamination equipment to complete the required tasks. A plan should be in place to respond anywhere in the state with the needed equipment and trained personnel to accomplish the goal.

Recommendations:

1. Provide and maintain a listing of all facilities suitable for a Reception Center. Identify those with locations in reasonable proximity to the interstate first then move out from there.
2. Specific details and agreements for these potential locations would not be relevant at this time.
3. Continue working with the agencies in the task group established for the Vermont Yankee Reception Center working to identify the Reception Center(s).
4. Widen this task group to begin to identify how the Reception Center responsibilities could be used when a center needs to be opened outside the Vermont Yankee area.

Observation 3.5: Area for Improvement: With the large amount of information coming into the Health Operations Center the coordination between the Health Operations Center and their liaison at the State Emergency Operations Center needs to be often, concise and thorough.

References:

Radiological Emergency Plan; April 20 2008

Vermont Department of Health Emergency Operations Plan; June 1, 2006

Capability Element: Planning, Training

Analysis: As the table top exercise unfolded the liaison between the Health Operations Center and the State Emergency Operations Center was instantly very busy contacting a large number of other agencies from the local response to the Department of Energy requesting response support. At the same time he was communicating with the Health Operations Center and

getting feedback as to what they were doing. At the same time he indicated he would be communicating with the onsite Incident Commander to identify their needs. He would also be discussing with the incident commander how to stay safe at the scene.

With all of this going on in the initial response phase it makes for a large amount of information coming into the Health Operations Center and to the Liaison. With just a couple of people at the Health Operations Center and the State Emergency Operations Center gathering this information there is a concern in identifying how the information will be documented and what is relevant to pass on during briefings at both the Health Operations Center and the State Emergency Operations Center. Disaster Lan was mentioned but in the initial phases to input data and be able to filter through the information would be difficult. Not hearing conversation on possible missed information that may have come into the Health Operations Center and not been given to the liaison at the State Emergency Operations Center was not apparent at the table top exercise but could be a real possibility. Setting up a system for ease of information sharing between operations centers would be a positive action giving both centers the tools and information they need to make positive and proactive decisions.

Recommendations:

1. Training of additional staff to document and pass relevant information between the two operations centers. This staff would need to be trained with a knowledge base that would allow them to give the information in order of importance.
2. Develop a paper format for the training and response use that would allow the assigned staff to “short hand” the information that comes in for both areas. This would allow for enough relevant information to proceed with the response knowing all relevant information.
3. Have the additional staff also trained in Disaster Lan so as time permits the information can be put in there. Part of this training would include how to identify the given information as to order of importance.

Observation 3.6: Area of Strength: There is a large number of listed technical resources available to the State Emergency Operations Center to support a response and provide solutions as needed.

References:

Interstate Radiation Assistance Plan; January 2008

Capability Element: Planning

Analysis: As identified in this type of an event and for this table top exercise there are so many variables for a response of this magnitude. The Interstate Radiation Assistance Plan; January 2008 offers a substantial amount of information as to what the participating states have in

inventory along with contact information.

The plan identifies the following as to the duties of the states for support in the event technical support needs to be brought into the state:

Professional or technical personnel having special skills or training related to radiation protection may be made available to a party state upon request. Such requests should be transmitted through the NERHC Secretary, and have approval of the respective Compact Administrators or Designees. The requesting state shall reimburse the lending state in accordance with Article III and each compact holder State's statutes:

Duties of States.

- i. It shall be the duty of each party state to formulate and put into effect an intrastate radiation incident plan which is compatible with the interstate radiation incident plan formulated pursuant to this compact.
- ii. Whenever the compact administrator of a party state requests aid from the compact administrator of any other party state pursuant to this compact, it shall be the duty of the requested state to render all possible aid to the requesting state which is consonant with the maintenance of protection of its own people. The compact administrator of a party state may delegate any or all of his authority to request aid or respond to requests for aid pursuant to this compact to one or more subordinates, in order that requests for aid and responses thereto shall not be impeded by reason of the absence or unavailability of the compact administrator. Any compact administrator making such a delegation shall inform all the other compact administrators thereof, and also shall inform them of the identity of the subordinate or subordinates to whom the delegation has been made.

This, in addition to other technical support that could be brought in from the Department of Energy will provide the on scene responders what they will need to respond to this type of event. It was noted that Vermont Yankee, although on alert for a possible response at their plant, would still be there to support as technical advisors.

Recommendations:

1. Continue communication, support and leadership with agencies and states that would be called upon in an event of this type in the state.
2. Update the Interstate Radiation Assistance Plan; January 2008 to reflect inventory and other resources to reflect 2012.

Observation 3.7: Area of Strength: It was clear by the liaison from the Health Operations Center to the State Emergency Operations Center that this event was run by the on scene Incident Commander and he was a resource support for them.

References:

Discussion at the table.

Capability Element: Training,

Analysis: As the table top exercise unfolded one of the first actions by the liaison was identifying how the Health Operations Center and State Emergency Operations Center would support the response. He would immediately make contact with the Incident Commander to assess their needs before the HAZMAT Team could arrive at the Incident Scene to assist. As with the State Emergency Operations Center the Health Operations Center liaison saw them as the support mechanism for the response.

The liaison also identified the 3 high priority areas he would be looking at; road safety and restrictions, critical facilities in the plume area, air and water safety. All of these areas would be support in the response by other State Support Functions in the Emergency Operations Center with the guidance and support from the Health Operations Center liaison.

Recommendations:

1. Continue the collaboration between the Health Operations Center and the State Operations Center through the liaison and his staff.
2. Continue offering training to local fire and police departments around the state on basic response to this type of an event.

Table 4: Federal Support Agencies: DOE, FDA, NNSA, CDC, EPA, HHS, FEMA, DOD, DOT, Army Corps of Engineers, US Dept of Homeland security

Capability 1: Communications

Observation 4.1: Area for Improvement. The Federal Agencies represented at the TTX do not have a common operating picture for events leading to a lack of understanding and scope of a developing incident.

References:

There were no plans available for any of the entities at the Federal Table.

Capability Element: Culture

Analysis: Each Federal Agency would be notified at different times as the incident presented in the exercise played out and escalated. There was no central coordinating entity or information network that would allow each agency to follow the progression of events that would help determine if their agency had a role in the incident and at what point their resources may be needed. It was discussed that the Homeland Security Information Network (HSIN) might provide a common operating picture (COP) but was determined that the information would not be timely or useful due to complexity in finding information on the secure federal site. The consequence of not having a COP would be negative because the information available would not be known in its entirety, which would slow down involvement of federal resources when needed.

There are technical obstacles to having a COP and they include the various firewalls set up within each federal agency for security purposes. Some federal agencies cannot communicate internally due to security issues, let alone the prospect of communicating across agencies.

FEMA is tasked as a federal coordinating body for natural disaster events but is not tasked to perform that function when it is not clear when another type of a disaster may not meet qualifying requirements for engagement. FEMA is limited by the Governor of a state declaring a disaster or emergency and the US President declaring a federal disaster. Eligibility guidelines must be met. In the case of the TTX, the event began as a local accident that escalated into a radiological event with multi-state impacts, immediate and long-term. The EPA would typically take the lead on this type of incident initially, but when it became apparent that there would be a release of radioactive material, the NRC, USDOT, CDC, and others would play a major role. It is possible that Homeland Security, the FBI and others could also be involved if the incident

were intentional. No one federal entity was tasked to take the lead and coordinate the federal resources at the event. No one federal agency was responsible for providing a COP and setting up a federal unified coordinating group using the required incident command system (ICS). The result of the lack of a clear COP at the federal level would result in slow response to the incident.

As the scenario developed there was discussion on how each federal agency would be notified of an unfolding incident. As the incident progressed and got worse, there was an overall concern as to how the federal agencies would get information and updates as they clearly would have jurisdiction over certain parts of the incident due to the wide range of impacts. Each agency would have some information flow coming in from their state or federal points of contact but it would not necessarily be complete, timely or accurate information. It was clear that no one federal agency had the authority to provide a clear COP except FEMA but only under qualifying events.

The consequences would be negative due to lack of information flow that would clearly describe the incident and a COP that would provide for a coordinated system of information flow for clear decision making on resources needed.

Firewalls for security are necessary however they have created a barrier for sharing among agencies. Planning across federal agencies for a multi-jurisdictional event is critical. Federal agencies need to coordinate their knowledge and share information beyond their immediate jurisdiction for an overall COP. Plans and procedures using technology for sharing critical information are needed.

Recommendations:

1. Plans should be developed for a platform to provide a common operating picture when multiple federal agencies are responsible for events. Technology can provide an avenue for a COP through shared information. Possible solutions – Ex: Virtual USA, easier to use HSIN.
2. Federal agencies should use the Incident Command System for responding to events that they have jurisdiction over. This includes the use of a federal joint information center or system.

Observation 4.2: Area for Improvement. There is no clear notification process among federal agencies for communicating with each other on critical incidents where they may have jurisdiction.

References:

There were no plans available for any of the entities at the Federal Table.

Capability Element: Planning

Analysis: Each federal agency has a unique method of being notified if an incident occurs where they may have jurisdiction. Many federal agencies have state liaisons or offices within each state. For instance, in the case of a hazardous material spill on federal highways over a large water body, the EPA and USDOT would each be notified by their respective contacts in the state responsible for this type of incident. The issue under analysis is that they may not have complete information on the incident from their sources, and they may not have enough information available to know if the incident may escalate into a larger event where more federal agencies may need a “heads up”. Additional types of information that would be valuable to know might include: the radiological contents of vehicle, wind direction, population in the vicinity, nearby hospitals, evacuation zones, etc. The notification of federal agencies should contain critical, timely and accurate information as the basis for making informed decisions

Federal agencies have no formal or established process to receive notifications that something may be happening or has occurred where they may have jurisdiction or shared interest in an incident. When an incident occurs, it is at the local level and there are response entities that are responsible for responding and requesting additional resources when they are overwhelmed. When a federal agency learns that it may have some response or recovery responsibility, they try to get as much information as possible from resources that may not have the whole picture, accurate information, or timely information for decision making.

If accurate and timely information is not flowing through an established information system, it can cause the wrong resources to be applied to the incident, or frustration to the chain of command.

There is no centrally established process for making notifications to federal agencies when they may need to get accurate and timely information.

Recommendations:

1. Develop a central website and establish a chain of information to flow from the state’s emergency operations center joint information system to federal agencies.
2. A clear notification system and process for using it should be developed for federal agencies to get accurate and timely information when incidents occur.

Observation 4.3: Area for Improvement: Interoperability: There were no procedures in place to ensure all agencies would receive real time, accurate and up to date information throughout the event.

References:

There were no references made to any specific plan. There was mention of a National Operations Center conducting daily conference calls, NRC operational reports, consequence

management assessment reports, cell phones providing effective coverage, and limited use of shared radio communication.

Capability Element: Resource-Equipment/organization

Analysis: A group discussion occurred regarding how each of the agencies would receive real time information throughout the span of the event that was accurate and up to date. It was during this discussion that it became evident that each of the agencies appeared to be very familiar with their own communication plans, equipment and processes. This conversation then segued into a discussion of how communications would occur during a large scale disaster across multiple jurisdictions and disciplines. All of the agencies concurred that they would all have a difficulty or an inability to communicate with each other and therefore would not be able to access the same information at the same time or in the same platform.

Many of the agencies either did not possess what they described as the necessary equipment. And several references were made to security concerns not allowing for the equipment to be shared outside of each individual agency. Even within the DOD each branch of the service did not allow for sharing data. The participants voiced frustration with this problem. Several of them discussed that this has been identified as an issue previously but it had yet to be addressed. They all agreed that the ideal situation would be to have a mechanism to receive real time information collectively. This would enable the responding agencies to share a common understanding of the situation and would reduce confusion and redundancy. After conducting some research about what technology is available for this very complex issue I discovered an interesting article about the Army Capabilities Integration Center (ARCIC) dated 10/22/12 and FEMA dated September 22, 2011. Both articles have been included in the appendices and highlighted for sections most pertinent to what the players discussed would be the type of equipment that would be useful. The articles have been referenced as part of the recommendation.

It appears that an effort to provide this technology has been underway for some time and perhaps has just not been implemented to all departments or levels such as the participants that were involved in this exercise. Clearly a platform exists and is being used in some capacity at various locations and agencies. Each agency should follow up by whatever means internal procedures dictate to request this equipment upgrade. However, one potential drawback for this being made available as a tool for the participants could be the cost of the system, but it is worth exploring further. Please reference article in the appendices for information on the desktop alert notification system.

Recommendations:

1. Each agency should determine the feasibility of the program discussed in the analysis and appendices.
2. Each agency should follow up by whatever means internal procedures dictate to request

this equipment upgrade.

Capability 2: On Site Incident Management

Observation 4.4: Area of Strength- The participants were able to identify what equipment and personnel would be able to be deployed upon activation and referenced a variety of specialty teams and equipment that would be made available to respond to the incident.

References:

NNSA Consequence Management Plan, National framework, New England Compact Radiological Health Protection Plan & Radiation Control Program

Capability Element: Resources- Equipment and Personnel

Analysis: During a discussion following a request from the New England Compact for resources it became clear that all of the agencies represented had some resources that would be available to them to be deployed if requested during this type of significant emergency event.

The Dept of Energy and the National Nuclear Security Agency appeared to be the agency that would be sending the largest amount of personnel and equipment to the scene. They seemed to have almost an unlimited amount of specialty teams and equipment and appear to be very well equipped to respond with a variety of testing equipment and subject matter experts. They referenced each of the following as being made available and were deemed necessary to respond to this incident.

[Aerial Measuring System \(AMS\)](#) – AMS characterizes ground-deposited radiation from aerial platforms. These platforms include fixed wing and rotary wing aircrafts with radiological measuring equipment, computer analysis of aerial measurements, and equipment to locate lost radioactive sources, conduct aerial surveys, or map large areas of contamination.

[National Atmospheric Release Advisory Center \(NARAC\)](#) – NARAC is a computer-based emergency preparedness and response predictive capability. NARAC provides real-time computer predictions of the atmospheric transport of material from radioactive release.

[Federal Radiological Monitoring and Assessment Center \(FRMAC\)](#) – FRMAC is an interagency entity that coordinates federal offsite radiological monitoring and assessment activities for nuclear accidents or incidents. FRMAC is responsible for providing a single source of compiled, quality controlled monitoring and assessment data to the lead federal agency involved in the incident response.

Radiological Assistance Program (RAP) – RAP provides advice and radiological assistance for incidents involving radioactive materials that pose a threat to the public health and safety or the environment. RAP can provide field deployable teams of health physics professionals equipped to conduct radiological search, monitoring, and assessment activities.

Radiation Emergency Assistance Center/Training Site (REAC/TS) – REAC/TS provides medical advice, specialized training, and onsite assistance for the treatment of all types of radiation exposure accidents.

Recommendations:

1. Continue to conduct joint TTX's, trainings and meetings to ensure a state of readiness continues.

Observation 4.5: Area of Strength: The participants demonstrated the ability to prioritize and call upon certain resources and assets for improved effectiveness during response operations.

Analysis: As the exercise progressed it became clear that the agencies were deploying resources as the situation necessitated. As outlined in the NNSA **Consequence Management Plan** the following steps for its initial and continued response were discussed and the resources were implemented as the situation warranted.

For example in the initial stages of the response following notification of a radiological incident the National Nuclear Security Agency immediately determined the need to deploy their **Aerial Measuring System** to ascertain the location and extent of the contamination. They also determined the consequence management team would need to be deployed to the emergency scene to conduct assessments of the situation. A Phase I CMRT, consisting of technical and management personnel can depart within four hours of notification, and can reach any location in the United States within 6-10 hours. As the situation unfolded and it became apparent that this was going to be an incident of National significance it prompted the need for implementation of the **Federal Radiological Monitoring and Assessment Center**. The Phase I CMRT initiates all technical components of a FRMAC response, and is supported soon after by the Phase II CMRT, and interagency personnel. The NNSA explained that the complete FRMAC, is fully operational in 24-36 hours after the initial request for assistance. The FRMAC integrates into the unified command with the coordinating agency, state, and local responders and establish priorities to develop a monitoring and assessment plan for FRMAC response.

At a mutually agreed upon time, the NNSA will transfer control of the FRMAC to the EPA to continue long-term monitoring activities. The NNSA and other federal agencies will continue to provide resources. Radiological emergency response professionals within the Department of Energy's national laboratories support the **Radiological Assistance Program (RAP)**, **National Atmospheric Release Advisory Center (NARAC)**, **Aerial Measuring System (AMS)**, and the

Radiation Emergency Assistance Center/Training Site (REAC/TS) . These teams supplement the FRMAC to provide: atmospheric transport modeling; radiation monitoring; radiological analysis and data assessments; and Medical advice for radiation injuries.

In support of field operations the FRMAC provides geographic information systems, communications, mechanical, electrical, logistics and administrative support. The size of the FRMAC is tailored to the incident and may consist of as few as 60 or as many as 500 professionals from state and local emergency response teams, and across the federal government. The DOD and FEMA would send liaisons to the state EOC, the DOT would send subject matter experts to assist with traffic redirection and would lock down airspace, the EPA also offered the Montgomery lab to come from Alabama to assist where needed.

Recommendations:

1. Continue to conduct joint TTX's, trainings and meetings to ensure a state of readiness continues.

Observation 4.6: Area for Improvement- There seemed to be a lack of clarity as to who was responsible for coordinating the federal agency's response. The participants were clear on who was in charge of the incident scene but were unclear as to who the lead agency was that would coordinate the response effort at the federal level.

References: Stafford Act, NIMS, National Response Framework

Capability Element: Training

Analysis: Throughout all phases of the exercise the question came up again and again of who was responsible for coordinating the federal response. During one point in the exercise the participants were discussing that this would be considered a significant national incident, and that they would be responding to it under that assumption. The discussion led into how the response would be funded and who would be coordinating the resources. There was some consensus reached that a disaster declaration needed to be in place prior to any response. Some of the participants thought that FEMA would be the lead agency. FEMA suggested they defer to NIMS or reference the state emergency action plan for a multi state declaration compact to be activated. But the representative from FEMA was adamant that at this point in the event without a disaster declaration they would not even be responding. He seemed most concerned with this primarily because the financial resources that would be needed during an event of this magnitude would not be provided for without a declaration.

The CDC pointed out that the Nuclear Regulatory Commission (NRC) was the lead agency in response to all nuclear emergency incidents according to the National Response framework. However, the NRC was not a participant in the exercise therefore this could not be verified nor

could the participants determine how that process would be implemented if they were in fact the lead.

Overall it appeared that the other agencies would respond despite not knowing who was in charge. It was never made clear who they would report to, where they would report or how they would know exactly where to go or what to provide for support to the incident. They also appeared to be unsure as to how their resources once deployed would be coordinated in order to avoid duplicity in the response. Other concerns were that the personnel or equipment could be misdirected or misappropriated. During this discussion I noted that none of the agencies cited a plan or procedure specific to their own agency as a reference point for this issue. However, several of them referenced the Stafford act and as previously stated the CDC deferred to the National Response framework. Since we were not provided any of the agency's plans it was difficult to ascertain if the mechanisms were written into their existing plans to address this confusion. Research indicated that the CDC was correct in saying that according to the National Framework the NRC is the Coordinating Agency for radiological events. As a Coordinating Agency, NRC has technical leadership for the Federal government's response to the event. If the severity of an event rises to the level of General Emergency, or is terrorist-related, [Department of Homeland Security \(DHS\)](#) will take on the role of coordinating the overall Federal response to the event, while NRC would retain a technical leadership role. The framework explains the roles and responsibilities of all agencies at local, tribal, state, and federal level. Because there are several categories of potential incidents and impacted entities, this annex identifies the different Federal agencies as "coordinating agencies" and "cooperating agencies" and associated strategic concepts of operations based on the authorities, responsibilities, and capabilities of those departments or agencies. In addition, this annex describes how other Federal departments and agencies support the Department of Homeland Security (DHS) when DHS leads a large-scale multiagency Federal response. The specific role of each coordinating agency is to be determined by the scope of their particular authorities over relevant aspects of the incident. If the agencies do not already specify this information in the existing response plans, it would be beneficial to them to review the tables in this annex and incorporate the information as it pertains to their agency.

Recommendations:

1. A review of the National Response Framework with an emphasis on the Nuclear/Radiological Incident Annex should be conducted by all stakeholders so that they understand how their roles are defined when responding to incidents.

Capability 3: Emergency Operations Center Management

Observation 4.7: Area for Improvement. When an event occurs where there are multiple federal agencies with jurisdiction, there is a question of who pays for certain types of response and

recovery.

References:

There were no plans available for any of the entities at the Federal Table.

Capability Element: Planning

Analysis: When there is an incident that occurs like the one in the TTX as presented, several federal agencies may have jurisdiction over certain parts of the incident. They may also have resources that include technical specialists, equipment or funding that may be able to respond either in the short-term or long-term. If there is a Presidential declaration under the Stafford Act, it is clear that FEMA is the responsible entity to manage and fund the recovery. Under the radiological event as in the TTX, it was not clear who would fund the damages that occurred on a wide-scale multi-state level. Damages would include: uninhabitable homes/property, municipal infrastructure, contaminated people, contaminated soils in several states, schools, hospitals, federal property and contaminated waterways, farms and businesses. Insurance from the trucking company carrying the radioactive material would not be able to afford the losses incurred. Private insurance companies could not afford the cost of the losses, and the federal entities involved through their own laws would not individually be able to fund the recovery and decontamination.

It became clear that a large radiological event could severely impact a wide multi-state area with contaminated soils, waterways and property, and that no one entity would be able to afford the cleanup necessary. Insurance funds for radiological incidents may not cover the circumstances where a vehicle from a business in Canada has a spill in Vermont, causing contamination throughout New England.

The consequences of not knowing who would be responsible for cleaning up a huge environmental and health incident from a radiological incident would be extremely negative and would hamper recovery and clean-up efforts.

The lack of clear plans and procedures for a massive cleanup to contaminated people and properties are a problem. The Nuclear Regulatory Commission (NRC) was not present at the TTX and they may have plans in place that define the question of who pays.

Recommendations:

1. The NRC as a key player in radiological incidents should be contacted to determine if they have information and/or plans regarding who would pay for decontamination and cleanup under the scenario that was presented in the TTX.
2. If all plans are lacking details on how the decontamination or cleanup would occur on a large scale, federal agencies should be tasked with developing catastrophic plans for decontamination and cleanup and determine who would take the lead on the effort.

Observation 4.8: Area of Strength. Each federal agency at the TTX was clear on their role in an incident where they had jurisdiction or shared jurisdiction.

References:

There were no plans available for any of the entities at the Federal Table.

Capability Element: Training

Analysis: Each federal agency was clear in their support role during an incident. No one agency would assume ownership of the scene or the event. They were each there in support of what the local incident commander and state would require for technical assistance or other resources.

Each federal agency was well versed in what they could provide or contribute to support an incident at the local and state levels. They were willing to work together to provide technical resources and/or equipment as requested if available.

There was positive approach to problem solving for an incident and a willingness to work together.

Each agency's representative was well trained as to their roles and responsibilities within their agency's rules and regulations.

Recommendations:

1. Continue to coordinate with partners in other federal agencies to improve in the areas of notification and a common operating picture.

Table 5: Joint Information Center

Capability 1: Communication

Observation 5.1: Area of Strength: Vermont Emergency Management, Vermont Department of Health, and Vermont 211 PIOs maintain healthy and cooperative inter relationships

References:

N/A

Capability Element: Resource (Personnel)

Analysis: Throughout all three modules of this exercise the Vermont Emergency Management PIO, Vermont Department of Health PIO, and representative from Vermont 211 seemed well tuned into each other's job functions. The interaction between all showed a high level of respect and understanding for the job task. When asked through the scenario how each would receive information for dissemination both the VDH and VT211 PIO indicated their information flow came directly from the VEM PIO. The VEM PIO was quick to indicate the dissemination of information to both agencies in this incident.

This level of respect and knowledge between these agencies and understanding of the job expectations allows for mutual trust between these PIOs.

The cooperative working relationship enjoyed by these agencies is consistent with continued collaborative training, and continued real world working experience.

Recommendations:

1. Continue to collaboratively train together.
2. Consider adding other state local, federal, and private PIOs, and media types to the fold when training.

Capability 2: Emergency Public Information and Warning

Observation 5.2: Area for Improvement: The location for the Joint Information Center (JIC) was not specifically identified nor was the plan referenced. It was questioned whether to be at the State Emergency Operations Center (SEOC), the Health Operations Center, and or a location closer to the incident.

References:

State of Vermont Emergency Operations Plan, September 30, 2009. Tab F – Annex 14 – Public

Information: The Joint Information Center, Operational Plan
National Incident Management System, December 2008

Capability Element: Planning

Analysis: Throughout module play during this exercise there was constant discussion as to when was the Joint Information Center activated and where was located. The incident location situated approximately 65 miles to the southeast of Waterbury, Vermont and the Vermont Emergency Management Emergency (VEM) State Emergency Operations Center (SEOC). The Town of Hartford had activated its EOC following Incident Command System (ICS) protocol which would include a Public Information Officer (PIO) position. Until such time that Hartford Incident Command requested State PIO support the JIC would not be activated. Any information released from the VEM PIO in reference to the Hartford Incident prior to any transfer or request would violate NIMS/JIC protocols.) The Vermont Department of Health (VDH) would establish their Health Operation Center (HOC) with its own PIO staff, due to the contamination from the radiological dispersal and the impending long term recovery and health issues. AT this time in the module play there would essentially be three (3) Public Information and Warning apparatus' in play with media at each location. The enormity of this type incident would require a JIC under NIMS. According to the Vermont State Emergency Operation Plan dated September 30, 2009, Tab F Annex 14, The JIC will be located at the SEOC. Once established it will serve as the single, multi-agency source for official information. Following the current plan would have answered some of the noted questions during module play. During discussion and the need for coordinated information it was found that due to the nature and scope of the incident an additional VDH PIO would need to be located at the JIC with direct contact with the HOC, over and above the VDH personnel manning the State Support Function (SSF). This same line of reasoning should be followed with all agencies involved such as Vermont 211.

Recommendations:

1. Conduct updated and review training of current plan.
2. Establish list of hazard specific PIOs needed in JIC
3. Further collaboration with partner agencies, state, local and private PIOs

Observation 5.3: Area for Improvement: In some cases such as this incident the demands for public information may overwhelm the State VEM Lead PIO who approves all information disseminated may impact the need for timely information and warning to the public.

References:

National Incident Management System, December 2008

Capability Element: Resource (Personnel)

Analysis: A critical aspect of keeping the public informed is ensuring the correct information is available and erroneous information is corrected in a timely manner to inform and or warn the public. With the extent of this exercise, with a radiological dispersal site 65 miles southeast of the State Emergency Operations Center and the Joint Information Center it was discussed by the PIO panel that there is a major choke point with one VEM PIO to assess and approve all outgoing information. Adding to this chokepoint the VEM PIO workflow includes the updates to social media to include Facebook, Twitter, etc. An incident of this magnitude may very well overwhelm the capacity of the PIO function.

Vermont 211 Rep and Vermont Department of Health requested that there be some preapproved informational messages that are hazard specific such as precautions with “Cobalt 60” as in this scenario. Under NIMS obtaining approval/clearance from those in authority is meant to ensure that the information is accurate, complete, and current. The approval process should be streamlined, however, to ensure that the information is released in a timely manner. This streamlined process should be addressed during planning and preparation.

Recommendations:

1. Identify trusted personnel, train as PIOs to NIMS standards, and commit to exercise personnel in the event that Lead PIO is unavailable or requires additional JIC manpower.
2. Conduct a threat and vulnerability assessment of the State of Vermont, conclude the likeliest of hazards and prepare authorized pre-scripted preparedness, safety, health and or recovery information for early dissemination.

Capability 3: On Site Incident Management

Observation 5.4: Area for Improvement: There was a brief discussion during exercise play on the use of Incident Command System specific to hospitals (HICS) during emergencies and by Vermont Department of Health staff at the Health Operations Center.

References:

Vermont State Emergency Operations Plan SSF Annex 14 09/30/09, p. 178

Capability Element:

Training (although culture and ingrained attitudes are key contributors).

Analysis: During the discussion, there were comments made indicating the use of the Hospital

Incident Command System by Vermont Department of Health personnel at Health Operations Center. This is contradictory to the common operating language that is outlined in the National Incident Management System and within the Vermont Emergency Operations Plan SSF Annex 14, p. 175. The VT EOP states that *'The focus of this document is to provide a plan for activating, maintaining, and deactivating the JIC within the framework of the Incident Command System / Unified Command System (ICS/UCS).'*

While this was not a primary focus during discussion, it is noteworthy given the need for common language by JIC staff during emergency activations. The likely root cause for this Area for Improvement is training. VDH staff that operate at both the Health Operations Center and the Joint Information Center, along with others involved, should be trained in the same ICS structure, format, and terminology.

Recommendations:

1. Recommend establishing a common training program for JIC and Public Information Officer staff.
2. Creation or expansion of current multi-agency training opportunities.

SECTION 4: CONCLUSION

The New England Radiological Health Compact Tabletop Exercise was designed to bring together key personnel with the goal of understating, coordinating, and improving the operational response to a critical incident that necessitates the activation of the New England Compact. Participants were able to discuss their capabilities in the areas of Communications, Emergency Public Information and Warning and On Site Incident Management. Federal, state and local agencies were represented and built upon already established positive working relationships. There were many areas of significant strength identified through the discussions, as well as areas for improvements participants were able to examine and discuss potential resolutions. The conclusion made by the group as a whole regarding the importance of establishing a Working Group will have a long term positive effect on the emergency operations centers.

All represented agencies should continue to build upon this positive exercise through the implementation of the Improvement Plan, continuing training and exercising, and building upon the strong working relationships already established in this area.

APPENDIX A: IMPROVEMENT PLAN

This IP has been developed specifically for participants of the New England Radiological Health Compact Tabletop Exercise conducted on October 23, 2012. These recommendations draw on both the After Action Report and the After Action Conference.

Table A.1 *Improvement Plan Matrix*

Capability	Observation Title	Recommendation	Corrective Action Description	Capability Element	Primary Responsible Agency	Agency POC	Completion Date
Health Operations Center							
Communications	1.1: Strength: Vermont Department of Health Emergency Operation Plan (VDH EOP) provides for a solid notification process should an incident/emergency such as the one of this scenario.	1. Continue sustaining this capability through training and exercises that assess VDH's ability to communicate between the SEOC SSF#8 function and the HOC.	Sustain monthly HOC trainings to reinforce this strength	Training	VDH	Bill Irwin taking to Chris Bell	2/1/2013
	1.2: Strength: The HOC IC advised that it (VDH) has a robust communications redundancy plan.	1. Sustain communications redundancy by continuing to fund these methods of communications and using them in actual or simulated incidents.	Sustain use of less familiar communications methods through regular training activities that currently occur.	Training	VDH	Bill Irwin taking to Chris Bell	2/1/2013

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	1.3: Area for Improvement: VDH HOC does not have a written communications plan within the VDH EOP.	1. Establish a Communication Annex within the VDH EOP that identifies all of the communications methods utilized as identifying primary and alternate communications modes.	Write Communication Annex for the VDH EOP.	Planning	VDH	Bill Irwin taking to Chris Bell	6/1/2013
On Site Incident Management	1.4: Strength: The Dose Assessment Team advised they could provide initial assessments of the scene for first responders once they received the data needed from the HOC.	1. Sustain this activity by consistently training and exercising this function at the HOC.	N/A	N/A	N/A	N/A	N/A
		Rewritten Recommendation #1: Sustain this activity by consistently training and exercising this function.	Reinforce this strength by developing companion assessment capability for chemical emergencies	Planning	VDH	Bill Irwin	1/1/2014
	1.5: Area for Improvement: The HOC discussed establishing an Incident Safety Plan but there was no	1. Establish roles and responsibilities for the HOC and document them within the VDH EOP relative to coordinating with the build out of the safety plan.	Task Working Group established in 1.5 Recommendation #2 to explore health and safety issues.	Planning	DEMHS	Ross Nagy	8/1/2013

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discussion with the Incident Command Table.	2. Roles can be better understood by completing ICS training up to the 300 levels and the G-191 ICP and EOC Interface.	Establish working group to explore SEOC and other state and local operations center and ICP relationships	Planning	DEMHS	Ross Nagy	2/1/2013
	3. Further, VDH should consider deploying technical specialist for the planning sections in the ICP and in some cases an incident commander to the field for unity of effort.	No action necessary, disregard this recommendations.	N/A	N/A	N/A	N/A
1.6: Area for Improvement: The Dose Assessment Team was unclear about where they should operate and what organization they should directly support.	1. The VDH Office of Public Health Preparedness (OPHP) and Vermont Emergency Management should jointly review and analyze radiological incidents other than Vermont Yankee to determine where the Dose Assessment Team should be assigned. Is it the HOC, the SEOC, an ICP or some other location?	See Observation 1.5, recommendation 2	Planning	DEMHS	Ross Nagy	8/1/2013
	2. Inherent in the above review and analysis is the determination of who the Dose Assessment Team is	See Observation 1.5, recommendation 2	Planning	DEMHS	Ross Nagy	8/1/2013

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		supposed to directly support.				
		3. This joint review should also ensure that the Health Services Coordinator and the Radiological Health Advisor are properly supported with technically trained and experienced staff no matter where they are located.	Recruit and train additional staff from VDH and other state agencies to provide greater depth in scientific support for radiological events.	Training	VDH	Bill Irwin 2/1/2015
		4. If the decision is locate the Dose Assessment Team somewhere other than the SEOC, there must be an effective and timely way to display data and provide decision makers recommendations.	See Observation 1.5, recommendation 2	Planning	DEMHS	Ross Nagy 2/1/2013
	1.7: Strength: The Dose Assessment Team was fully trained, experienced and prepared to	1. The Dose Assessment Team should continue to train and participate in applicable drills and exercises.	Continue to train and exercise as per usual.	Training	VDH	N/A N/A

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	provide support.		Reinforce dose assessment team capabilities for radiological events by developing companion capabilities for chemical events.	Planning	VDH	Bill Irwin	1/1/2014
		2. The VDH Office of Public Health Preparedness (OPHP) should recognize the need to continue supporting the Dose Assessment Team and ensure that new personnel are being recruited and trained to ensure continuity of performance when team members leave or retire.	See Observation 1.6, recommendation 3	Training	VDH	Bill Irwin	2/1/2015
		Rewritten #2: VDH Environmental Health should recognize the need to continue supporting the Dose Assessment Team and ensure that new personnel are being recruited and trained to ensure continuity of performance when team members leave or retire.	See Observation 1.6, recommendation 3	Training	VDH	Bill Irwin	2/1/2015

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<p>1.8: Area for Improvement: There was uncertainty at the HOC table about who was ultimately in charge of the incident and how that affected VDH resources and operations.</p>	<p>1. Vermont Emergency Management should convene a facilitated discussion with state and local response leaders including VDH officials to determine a protocol to manage situations with multiple jurisdictions, particularly with technical incidents.</p>	<p>See Observation 1.5, recommendation 2</p>	<p>Planning</p>	<p>DEMHS</p>	<p>Ross Nagy</p>	<p>2/1/2013</p>
	<p>2. Vermont Emergency Management should reduce the findings of this facilitated discussion into additions to and revisions of the State Emergency Operations Plan.</p>	<p>See Observation 1.5, recommendation 2</p>	<p>Planning</p>	<p>DEMHS</p>	<p>Ross Nagy</p>	<p>8/1/2013</p>
	<p>3. Vermont Emergency Management should provide training on this protocol and the resulting changes to the Emergency Operations Plan to state and local response agencies.</p>	<p>See Observation 1.5, recommendation 2</p>	<p>Planning</p>	<p>DEMHS</p>	<p>Ross Nagy</p>	<p>8/1/2013</p>
	<p>4. The VDH Office of Public Health Preparedness (OPHP) should review and revise the VDH Radiological Emergency Plan and any applicable Job Action Sheets (JAS) to reflect</p>	<p>VDH will revise the VDH REP and JAS</p>	<p>Planning</p>	<p>VDH</p>	<p>Bill Irwin</p>	<p>1/1/2014</p>

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		these changes.					
		5. Incident Command System (ICS) courses taught in Vermont should reflect the decisions made above.	The working group established in Observation 1.5 recommendation 2 will invite the Criminal Justice Training Council to their meetings to gain involvement.	Planning	DEMHS	Ross Nagy	8/1/2013
			Working Group will determine how to disseminate the information contained in the policy that is created by the working group	Planning	DEMHS	Ross Nagy	8/1/2013
			Working Group will engage Administration in the policy that is created.	Planning	DEMHS	Ross Nagy	8/1/2013

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Emergency Public Information and Warning	1.9: Strength: HOC personnel discussed how and when New Hampshire would be alerted to a possible release of radioactive material near the border of Vermont.	Sustain good communications between the HOC and IC structures and establish a communication procedure within VDH EOP to help define roles and avoid confusion	See Observation 1.5, recommendation 2	Planning	DEMHS	Ross Nagy	8/1/2013
			The working group policy decisions need to be reflected in any communications plan.	Planning	DEMHS	Ross Nagy	8/1/2013
Emergency Operations Center Management	1.10: Area for Improvement: The Vermont Department of Health (VDH) does not define the roles and responsibilities of the Health Operations Center (HOC) and its staff during an emergency response clearly within the VDH Emergency Operations Plan which led to	1. It is recommended that VDH examine what roles the HOC played in recent incidents, pre-planned events or exercises and its chief executive and document these roles within the emergency operations plan, training to it and exercise the plan	OPHP will revise its EOP and consider this information during the revision; look at new roles and responsibilities for those roles.	Planning	VDH	Bill Irwin to Chris Bell	1/1/2014

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<p>confusion during the exercise.</p>						
<p>1.11: Area for Improvement: The HOC participants were unclear about their role and responsibilities in this type of scenario.</p>	<p>1. The VDH Office of Public Health Preparedness (OPHP) and Vermont Emergency (VEM) should jointly review the various plans, Implementing Procedures (IPs) and Job Action Sheets (JAS) to determine if there needs to be a separate set of radiological specific checklists to support the Vermont Department of Health Radiological Emergency Plan or if the existing Radiological Emergency Response Plan implementing procedures can be modified or annotated for use in all</p>	<p>See Observation 1.8 Recommendation 4</p>	<p>Planning</p>	<p>VDH</p>	<p>Bill Irwin</p>	<p>1/1/2014</p>

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		radiological emergencies.				
		2. OPHP and VEM should jointly either write radiological specific checklists to support the Vermont Department of Health Radiological Emergency Plan or modify or annotate the existing Radiological Emergency Response Plan implementing procedures to cover all radiological emergencies.	See Observation 1.8 Recommendation 4	Planning	VDH	Bill Irwin 1/1/2014
		3. The VDH Office of Public Health Preparedness (OPHP) should conduct training to include drills and exercises to prepare staff to use	After Observation 1.8 recommendation 4 is completed, there will be training scheduled.	Training	VDH	Bill Irwin 1/1/2015

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		whichever checklists that OPHP and VEM decide to write.					
		4. HOC training, including drills and exercises, should include the escalation of HOC activation levels and coordination with the SEOC. Vermont Emergency Management should either participate in these drills and exercises or provide a control cell to give HOC staff more realistic experience and training.	VDH will invite the SEOC to participate in those HOC trainings that would lead to activation of the SEOC.	Training	VDH	Bill Irwin to Chris Bell	2/1/2013
		5. HOC training, including drills and exercises, should include a variety of scenarios, some of them common emergencies for VDH and some not so common such as the scenario in this exercise.	Encourage increasing complexity of scenarios to challenge participants as they mature in their roles.	Exercise	VDH	Bill Irwin to Chris Bell	1/1/2014

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<p>1.12: Area for Improvement: The VDH EOP does not appear to contain clear information regarding how HOC personnel would be kept informed of an evolving incident so they can continue to support and coordinate with emergency personnel.</p>	<p>1. It is recommended that specific language be inserted into the VDH EOP and SSF#8 Annex to the SEOP as to the process for obtaining and communicating information internal to the response and recovery of the incident as well as examine how VDH can assign key personnel to the incident command structure.</p>	<p>Working Group established in 1.5 Recommendation 2 will establish mechanism for a common operating picture.</p>	<p>Planning</p>	<p>DEMHS</p>	<p>Ross Nagy</p>	<p>8/1/2013</p>
<p>1.13: Strength: Executive Manager for the HOC fully knowledgeable of the emergency plans that govern the HOC.</p>	<p>1. Sustain this experience by continuing to train personnel and participate in exercises.</p>	<p>Continue to train and exercise as per usual.</p>	<p>Training</p>	<p>VDH</p>	<p>N/A</p>	<p>N/A</p>
<p>1.14: Area for Improvement: VDH lacks depth in trained personnel to sustain operations in the HOC and other support locations for a significant period of time.</p>	<p>1. It is recommended that the EPU conduct a workshop with other relevant partners to assess where internal and external resources from the state as well as outside the state may be obtained to supplement VDH staff. This information should be</p>	<p>N/A - Rewritten</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>

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		memorialized into the VDH EOP and VDH COOP Plans.					
		Rewritten #1: It is recommended that the OPHP conduct a workshop with other relevant partners to assess where internal and external resources from the state as well as outside the state may be obtained to supplement VDH staff. This information should be memorialized into the VDH EOP and VDH COOP Plans.	Currently in progress.	Exercise	VDH	Bill Irwin to Chris Bell	1/1/2014
	1.15: Area for Improvement: Vermont does not have a sufficient depth of trained staff to support emergency operations for an extended period of time.	1. The Department of Public Safety (DPS) and the Vermont Department of Health (VDH) should jointly convene a facilitated discussion with key members of the administration to include the Department of Human Resources and other critical	Discussions between DPS with HR and Administration are underway	Planning	DEMHS	Ross Nagy	1/1/2014

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		departments to determine how to provide qualified and trained personnel in the event of an emergency.					
		2. DPS and VDH should jointly review and revise appropriate plans to accommodate the additional staffing provided in the above discussion.	No action necessary.	N/A	N/A	N/A	N/A
		3. DPS and VDH should each provide appropriate training to the additional staff provided to include experience in various drills and exercises.	Part of the discussion in 1.15 #1	Planning	DEMHS	Ross Nagy	1/1/2014
		4. Drills and exercises, where possible, should include at least one shift change to ensure that the staff can properly conduct a shift change and to provide second shift personnel training and experience. It does no good to have a large	Will be exercised as part of CAT2 in March 2014	Exercise	DEMHS	Ross Nagy	4/1/2014

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		bench if only the first shift gets to participate in a meaningful way.					
		New Recommendation: Mutual Aid Agreements should be included in the exercise process.	IEMG and EMAC will be exercised (simulated) in CAT2	Exercise	DEMHS	Ross Nagy	4/1/2014
			Statewide Mutual Aid exercise for fire service is under planning	Exercise	Fire Service	Chris Herrick	6/1/2013
		New Recommendations: Explore further public health mutual aid opportunities.	Research legal compact requirements; include the EMAC capabilities during this research	Planning	VDH	Nancy Erickson to Chris Bell	6/1/2013

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	<p>1.16: Area for Improvement: Some staff members at the HOC table do not understand the processes of ordering resources during an emergency that has a fully expanded ICS structure (ICP, EOCs, DOCs).</p>	<p>1. Coordinated planning, training to a common plan, and relevant exercises provide a foundation for the coordinated resource management process for this scenario. Jurisdictions should work together in advance of a disaster to develop plans for identifying, ordering, managing, and employing resources. The planning process should include identifying resource needs based on past experiences of the jurisdiction and develop alternative strategies to obtain the needed resources. Finally, the resource management process that exists in the SEOP should be referenced in the VDH EOP.</p>	<p>The Working Group established in Observation 1.5 recommendation 2 will consider the process for consistent logistics and resource management.</p>	<p>Planning</p>	<p>DEMHS</p>	<p>Ross Nagy</p>	<p>8/1/2013</p>
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			Appropriate recommendations from the Working Group established in Observation 1.5 recommendation 2 will be incorporated in the VDH EOP and SEOP	Planning	DEMHS/VDH	Ross Nagy/Bill Irwin to Chris Bell	8/1/2013 and 1/1/14 for VDH
		2. The VDH should update their EOP to define the process for ordering resources if the HOC is the ICP or reference the SEOP Resource ordering process while the HOC is a support and coordination entity for SSF #8 Function of the SEOC.	Appropriate recommendations from the Working Group established in Observation 1.5 recommendation 2 will be incorporated in the VDH EOP and SEOP	Planning	DEMHS/VDH	Ross Nagy/Bill Irwin to Chris Bell	8/1/2013 and 1/1/14 for VDH
1.17: Strength: Representative from the New England Radiological Health Compact understood how resources from the Compact are obtained in an emergency.	Sustain		The AAR/IP from TTX and FSE in 2012 conference will be a focus of the 2013 conference	Planning	NERHC	Tony Honnellio	1/1/2014

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	1.18: Area for Improvement: The HOC participants discussed having no plan for the disposition of contaminated waste that would result from this disaster.	1. Conduct a small workshop with relevant stakeholders to outline the process that would be needed to decide what the proper disposal would be for a large amount of radioactive contaminated debris.	Schedule a workshop for state partners to determine the procedures for debris management; include EPA	Exercise	ANR	Chuck Schwer	7/1/2013
		2. This information should be memorialized within the management of debris annex of the SEOP and referenced in the VDH EOP.	Should be included in the SEOP	Planning	DEMHS	Ross Nagy	9/1/2013
	1.19: Strength: The Health Operations Center (HOC) has had significant experience in certain kinds of emergencies which increases their preparedness for future emergencies.	1. The HOC should continue to activate as frequently as required to maintain their readiness and experience. This has a twofold benefit: a) Early activation puts the department and the State of Vermont in a higher level of preparedness if the incident escalates into something greater. b) Staff members get realistic training about their roles and opportunities to explore better ways to accomplish their tasks.	Continue to train and exercise as per usual.	Training	VDH	N/A	N/A

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	2. Activations should be made with selected members assuming different roles to provide them with more and different skills. This will also provide the HOC and the department with additional depth on the bench.	Continue to train and exercise as per usual.	Training	VDH	N/A	N/A
	3. There should be periodic training where the experiences of recent and older activations are compared and analyzed to determine trends and challenges for the future.	Continue to train and exercise as per usual.	Training	VDH	N/A	N/A
1.20: Area for Improvement: There was a lack of direction from the Vermont State Emergency Operations Center (SEOC) about how	1. VDH and VEM should jointly review and revise the State Emergency Operations Plan and the VDH Radiological Emergency Plan to ensure that there are no gaps or overlaps of responsibility.	The Working Group established in Observation 1.5 recommendation 2	Planning	DEMHS	Ross Nagy	8/1/2013

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<p>the HOC, Dose Assessment and other VDH resources should be deployed and the proper chain of command to be used which was not clarified by the HOC.</p>	<p>2. VDH and VEM should jointly provide periodic training on the various plans to key personnel in the SEOC and the HOC to ensure that these plans are fully understood. This training should include discussion periods to discover and resolve issues.</p>	<p>The Working Group established in Observation 1.5 recommendation 2</p>	<p>Planning</p>	<p>DEMHS</p>	<p>Ross Nagy</p>	<p>8/1/2013</p>
<p>1.21: Area for Improvement: There were some information and decision making choke points between key Vermont Department of Health (VDH) personnel.</p>	<p>1. The VDH Office of Public Health Preparedness (OPHP) should review and revise the VDH Radiological Emergency Plan to address the lack of staff support for the Radiological Health Advisor and the Health Services Coordinator positions.</p>	<p>Consider this during the revision of the VDH REP and JAS</p>	<p>Planning</p>	<p>VDH</p>	<p>Bill Irwin</p>	<p>1/1/2014</p>
	<p>2. The VDH Office of Public Health Preparedness (OPHP) should review and revise the VDH Radiological Emergency Plan to address the lack of in state redundancy in the Radiological Health Advisor position.</p>	<p>Consider this during the revision of the VDH REP and JAS</p>	<p>Planning</p>	<p>VDH</p>	<p>Bill Irwin</p>	<p>1/1/2014</p>

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		<p>3. The VDH Office of Public Health Preparedness (OPHP) should review and revise the VDH Radiological Emergency Plan to determine realistic methods of requesting and receiving technical assistance in a timely manner to include in state personnel to backfill the Radiological Health Advisor position and to determine what situations or events trigger that step through a variety of sources including the New England Radiological Compact.</p>	<p>Consider this during the revision of the VDH REP and JAS</p>	<p>Planning</p>	<p>VDH</p>	<p>Bill Irwin</p>	<p>1/1/2014</p>
		<p>4. Vermont Emergency Management (VEM) and the VDH Office of Public Health Preparedness (OPHP) should jointly review and revise the Radiological Emergency Response Plan to address this lack of redundancy in and the support to the Radiological Health Advisor position in Vermont Yankee scenarios.</p>	<p>Currently in progress.</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>

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		5. Vermont Emergency Management (VEM) and the VDH Office of Public Health Preparedness (OPHP) should jointly develop a trained cadre of deputies and assistants for the Health Services Coordinator and the Radiological Health Advisor positions. Properly mentored deputies could develop into temporary or second shift replacements for the Radiological Health Advisor when needed in an emergency.	Currently exists.	N/A	N/A	N/A	N/A
On Scene Responders							
Public Information and Warning – Response Mission	2.1: Strength – Acknowledging a lack of capability within his own resources, the Incident Commander, when prompted, requested a Public Information Officer be dispatched to the ICP from State	1. ICS training needs to stress this type of action and the ability to recognize when one has reached their limitations.	Share this lesson learned with the Criminal Justice Training Council	Planning	DEMHS	Andrea Young to Rick Hopkins	2/1/2013
			Include this information in the PIO training course	Training	DEMHS	Mark Bosma	3/1/2013
		2. There is a need for trained personnel to be available to staff local incidents.	Development of Incident Management Assistance Teams is currently in progress.	Planning	DFS	Chris Herrick	1/1/2014

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	resources.	3. ICS 400, and lower courses should stress the need to assess your own capabilities and delegate accordingly.	duplicate of #1, remove.	N/A	N/A	N/A	N/A
On Site Incident Management	2.2: Strength: The responding Fire Department Chief acted in the capacity required of an Incident Commander, and was able to sustain operations and awareness throughout the incident. This indicates a high level of familiarity and experience with ICS protocols, which benefits the entire operation.	1. Engage other departments in various methods of training in and practicing ICS on a regular basis	Share this lesson learned with the Criminal Justice Training Council	Planning	DEMHS	Andrea Young to Rick Hopkins	2/1/2013
			Encourage involvement of local first responders in exercise program	Exercise	DEMHS	Andrea Young to the T&E Working Group	2/1/2013
		2. Work with other area departments, and different response agencies, to expand the training and exercising opportunities of ICS protocols	Share this lesson learned with the Criminal Justice Training Council	Planning	DEMHS	Andrea Young to Rick Hopkins	2/1/2013
	2.3: Area for Improvement: In the process of preparing for an evacuation, the Hospital determined that the evacuation	1. Review current plans and identify places where only one back-up or contingency plan exists; expand plans to include additional options or resources	VDH needs to conduct a statewide needs assessment for evacuation to ensure resources are not used duplicitavely	Planning	VDH	Bill Irwin to Chris Bell	1/1/2014

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site itself was within the affected zone.	2. At least annually, invite a group of people who are not familiar with specific plans to review and discuss the potential scenarios and how they are addressed in the plan	See 2.3 Recommendation 1	Planning	VDH	Bill Irwin to Chris Bell	1/1/2014
2.4: Area for Improvement – There is a lack of a clear understanding of who the NERHC resources work for and who is responsible for tracking them be it for purposes of payment (Timesheets, etc) or Health (radiation exposure, etc) and once they have been deployed, who has operational authority over them.	1. The State of Vermont should reevaluate current statutes and actions in regards to possible State control of incidents and State control of resources.	The NERHC and DPS will specify operating responsibilities for interstate mutual aid resources	Planning	DPS/NERHC	Ross Nagy/Tony Honnellio	1/1/2014
	2. Once evaluated, there needs to be clear communication of those policies to local municipalities.	See 2.4 recommendation 1	Planning	DPS/NERHC	Ross Nagy/Tony Honnellio	1/1/2014
	3. State government, via the governor’s statutory authority, need to accept the responsibility of command and control when local authorities have overwhelmed their capacities. In an event such as this, there is a clear need for either an Area Command to be set up or for the State to take on the authority to	Do not implement	N/A	N/A	N/A	N/A

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		manage the entire incident.					
			Conduct a session at the Emergency Preparedness Conference to address the questions identified here.	Planning	DEMHS	Ross Nagy with Chris Herrick	10/1/2013
		4. Alternatively, if local control is to be retained by the local community, resources dispatched to the IC should become property of the IC including that the IC has full responsibility for tracking, management and payment for the resources utilized.	Already in place	N/A	N/A	N/A	N/A
		5. For either approach, State resources such as what the NERHC have become, should have a clear line of authority and associated	The Working Group established in Observation 1.5 recommendation 2	Planning	DEMHS	Ross Nagy	8/1/2013

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		resource tracking methods.					
<p>2.5: Area for improvement – There was an overall lack of understanding of the difference between an Incident Command Post and an Emergency Operations Center under the ICS system by local officials. This includes poor understanding of the role of IC vs other officials in their directing of operations.</p>	1.	ICS training as conducted within the State of VT should acknowledge the difficulty in operating under a unified command for a small community and strengthen the instruction around the difference between an ICP and an EOC.	This was not an issue in this exercise.	N/A	N/A	N/A	N/A
	2.	Teaching models should reflect the difference between the two facilities and show who sits where.	This was not an issue in this exercise.	N/A	N/A	N/A	N/A
	3.	Stressing unified command as a normal operating system is preferred	This was not an issue in this exercise.	N/A	N/A	N/A	N/A
	4.	Exercises should be designed to encourage implementation of unified command.	This was not an issue in this exercise.	N/A	N/A	N/A	N/A
	5.	ICP/EOC training should be expanded to emphasize the differences.	This was not an issue in this exercise.	N/A	N/A	N/A	N/A

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		6. ICS training needs to acknowledge the difference between on-scene operations and Command as would be set up at an off-site ICP.	This was not an issue in this exercise.	N/A	N/A	N/A	N/A
State Emergency Operations Center							
Communications	3.1: Strength: The SEOC's roles and responsibilities were performed with consistency, expedient teamwork through established and exercised relationships, and timely decision-making.	1. Continuing opportunities for training & exercising a non-Vermont Yankee event should be pursued, and include all SSFs, in addition to partners such as the VCGI team and CERT teams where practical, in addition to southeastern Vermont's VY-related resources.	Will be exercised as part of CAT2 in March 2014	Exercise	DEMHS	Andrea Young to Jessica Stolz	4/1/2014
		2. Training and exercising opportunities should include all alternate means of communications, including RACES and CERT, given the ever-present dangers of cell tower overload or non-coverage and lack of DLAN training and/or utilization.	Will be exercised as part of CAT2 in March 2014	Exercise	DEMHS	Andrea Young to Jessica Stolz	4/1/2014

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<p>3.2: Area for Improvement: With an incident as complex as this, that involves several sources and layers of technical data, many questions arose about the ability for the SEOC to gather, analyze, and utilize the information in a thorough and expedient manner for coordinating health and safety plans.</p>	<p>1. Since it would be difficult to provide written plans that would cover all the areas of data coordination, further training and exercising just in the area of data collection and utilization should be pursued – especially with the use of highly sophisticated, fast-changing, and widely-impacting data and conditions such as contamination.</p>	<p>Objectives for data collection and utilization will be incorporated into further VY and non=rad exercises to identify needs and solutions and ensure robust situational awareness.</p>	<p>Planning</p>	<p>DEMHS</p>	<p>Ross Nagy to Erica Bornemann</p>	<p>6/1/2013</p>
	<p>2. It was noted, that in addition to technical experts on all shifts, that for an event with widespread contamination, a Safety Officer should be with the State Emergency Operations Center to advise on the status of emergency workers.</p>	<p>Incorporate Safety into the next VY exercise</p>	<p>Exercise</p>	<p>DEMHS</p>	<p>Ross Nagy to Erica Bornemann</p>	<p>6/1/2013</p>

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	<p>3.3: Strength: The impact of contamination on water resources was quickly recognized by the most impacted State Support Functions, who then expediently began tracking, then communicating with all impacted partners.</p>	<p>1. In addition to the Vermont Yankee exercises, periodic exercises should exercise the ability to call upon, and coordinate, resources for tracking, mapping and identifying contaminated areas outside of VY events and the EPZ.</p>	<p>Reinforce in VY exercise and potentially CAT2</p>	<p>Exercise</p>	<p>DEMHS</p>	<p>Ross Nagy to Erica Bornemann</p>	<p>6/1/2013</p>
		<p>2. These exercises should include the need to call upon the various southern, Vermont Yankee teams for when that portion of the state would not be affected by a non-VY event and their resources would be needed.</p>	<p>Already in radiological emergency plan</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p>Emergency Operations Center Management</p>	<p>3.4: Area for Improvement: It was not determined, during the table top, as to who would be identifying the reception center(s) required for this</p>	<p>1. Provide and maintain a listing of all facilities suitable for a Reception Center. Identify those with locations in reasonable proximity to the interstate first then move out from there.</p>	<p>Establish a working group to utilize lessons learned from VY reception centers to determine how to establish reception centers across the state.</p>	<p>Planning</p>	<p>DEMHS</p>	<p>Ross Nagy to Erica Bornemann</p>	<p>1/1/2014</p>

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<p>response since it has happened outside of the Vermont Yankee Plan area.</p>	<p>2. Specific details and agreements for these potential locations would not be relevant at this time.</p>	<p>Establish a working group to utilize lessons learned from VY reception centers to determine how to establish reception centers across the state.</p>	<p>Planning</p>	<p>DEMHS</p>	<p>Ross Nagy to Erica Bornemann</p>	<p>1/1/2014</p>
	<p>3. Continue working with the agencies in the task group established for the Vermont Yankee Reception Center working to identify the Reception Center(s).</p>	<p>Establish a working group to utilize lessons learned from VY reception centers to determine how to establish reception centers across the state.</p>	<p>Planning</p>	<p>DEMHS</p>	<p>Ross Nagy to Erica Bornemann</p>	<p>1/1/2014</p>
	<p>4. Widen this task group to begin to identify how the Reception Center responsibilities could be used when a center needs to be opened outside the Vermont Yankee area.</p>	<p>Establish a working group to utilize lessons learned from VY reception centers to determine how to establish reception centers across the state.</p>	<p>Planning</p>	<p>DEMHS</p>	<p>Ross Nagy to Erica Bornemann</p>	<p>1/1/2014</p>

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<p>3.5: Area for Improvement: With the large amount of information coming into the Health Operations Center the coordination between the Health Operations Center and their liaison at the State Emergency Operations Center needs to be often, concise and thorough.</p>	<p>1. Training of additional staff to document and pass relevant information between the two operations centers. This staff would need to be trained with a knowledge base that would allow them to give the information in order of importance.</p>	<p>Include information and situational awareness in SEOC and HOC exercises, to include VY and CAT2.</p>	<p>Exercise</p>	<p>DEMHS</p>	<p>Ross Nagy to Erica Bornemann</p>	<p>4/1/2014</p>
	<p>Update SEOP HOC EOP to identify how information is shared between HOC and SEOC.</p>	<p>Update the SEOP to include how information is shared with the HOC</p>	<p></p>	<p>DEMHS</p>	<p>Ross Nagy</p>	<p>3/1/2013</p>
	<p>2. Develop a paper format for the training and response use that would allow the assigned staff to “short hand” the information that comes in for both areas. This would allow for enough relevant information to proceed with the response knowing all relevant information.</p>	<p>Not needed.</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>

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		3. Have the additional staff also trained in Disaster Lan so as time permits the information can be put in there. Part of this training would include how to identify the given information as to order of importance.	Conduct a DLAN training that has SEOC and HOC operating simultaneously.	Training	DEMHS	Ross Nagy to Bob Weinert	4/1/2013
3.6: Area of Strength: There is a large number of listed technical resources available to the State Emergency Operations Center to support a response and provide solutions as needed.	1. Continue communication, support and leadership with agencies and states that would be called upon in an event of this type in the state.	The tabletop AAR/IP will be brought to NERHC in 2013		Planning	NERHC	Tony Honnellio	1/1/2014
	2. Update the Interstate Radiation Assistance Plan; January 2008 to reflect inventory and other resources to reflect 2012.	Revise the NEC Interstate Radiation Assistance Plan.		Planning	NERHC	Tony Honnellio	1/1/2014
3.7: Area of Strength: It was clear by the liaison from the Health Operations Center to the State Emergency Operations Center that this event was	1. Continue the collaboration between the Health Operations Center and the State Operations Center through the liaison and his staff.	Through exercises identified above		N/A	N/A	N/A	N/A
	2. Continue offering training to local fire and police departments around	Through exercises identified above		N/A	N/A	N/A	N/A

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	run by the on scene Incident Commander and he was a resource support for them.	the state on basic response to this type of an event.					
Federal Support Agencies							
Communications	4.1: Area for Improvement. The Federal Agencies represented at the TTX do not have a common operating picture for events leading to a lack of understanding and scope of a developing incident.	1. Plans should be developed for a platform to provide a common operating picture when multiple federal agencies are responsible for events. Technology can provide an avenue for a COP through shared information. Possible solutions – Ex: Virtual USA, easier to use HSIN.	The Federal Recommendations will be brought to partners for discussion.	Planning	DEMHS/NER HC	Ross Nagy/Bill Irwin	1/1/2014
		2. Federal agencies should use the Incident Command System for responding to events that they have jurisdiction over. This includes the use of a federal joint information center or system.	The Federal Recommendations will be brought to partners for discussion.	Planning	DEMHS/NER HC	Ross Nagy/Bill Irwin	1/1/2014
	4.2: Area for Improvement. There is no clear notification process	1. Develop a central website and establish a chain of information to flow from the state’s emergency	The Federal Recommendations will be brought to partners for discussion.	Planning	DEMHS/NER HC	Ross Nagy/Bill Irwin	1/1/2014

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	among federal agencies for communicating with each other on critical incidents where they may have jurisdiction.	operations center joint information system to federal agencies.					
		2. A clear notification system and process for using it should be developed for federal agencies to get accurate and timely information when incidents occur.	The Federal Recommendations will be brought to partners for discussion.	Planning	DEMHS/NER HC	Ross Nagy/Bill Irwin	1/1/2014
4.3: Area for Improvement: Interoperability: There were no procedures in place to ensure all agencies would receive real time, accurate and up to date information throughout the event.		1. Each agency should determine the feasibility of the program discussed in the analysis and appendices.	The Federal Recommendations will be brought to partners for discussion.	Planning	DEMHS/NER HC	Ross Nagy/Bill Irwin	1/1/2014
		2. Each agency should follow up by whatever means internal procedures dictate to request this equipment upgrade.	The Federal Recommendations will be brought to partners for discussion.	Planning	DEMHS/NER HC	Ross Nagy/Bill Irwin	1/1/2014

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On Site Incident Management	<p>4.4: Area of Strength- The participants were able to identify what equipment and personnel would be able to be deployed upon activation and referenced a variety of specialty teams and equipment that would be made available to respond to the incident.</p>	<p>1. Continue to conduct joint TTX's, trainings and meetings to ensure a state of readiness continues.</p>	<p>The Federal Recommendations will be brought to partners for discussion.</p>	Planning	DEMHS/NER HC	Ross Nagy/Bill Irwin	1/1/2014
	<p>4.5: Area of Strength: The participants demonstrated the ability to prioritize and call upon certain resources and assets for improved effectiveness during response operations.</p>	<p>1. Continue to conduct joint TTX's, trainings and meetings to ensure a state of readiness continues.</p>	<p>The Federal Recommendations will be brought to partners for discussion.</p>	Planning	DEMHS/NER HC	Ross Nagy/Bill Irwin	1/1/2014

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	<p>4.6: Area for Improvement- There seemed to be a lack of clarity as to who was responsible for coordinating the federal agency's response. The participants were clear on who was in charge of the incident scene but were unclear as to who the lead agency was that would coordinate the response effort at the federal level.</p>	<p>1. A review of the National Response Framework with an emphasis on the Nuclear/Radiological Incident Annex should be conducted by all stakeholders so that they understand how their roles are defined when responding to incidents.</p>	<p>The Federal Recommendations will be brought to partners for discussion.</p>	<p>Planning</p>	<p>DEMHS/NER HC</p>	<p>Ross Nagy/Bill Irwin</p>	<p>1/1/2014</p>
<p>Emergency Operations Center Management</p>	<p>4.7: Area for Improvement. When an event occurs where there are multiple federal agencies with jurisdiction, there is a question of who pays for certain types of response and recovery.</p>	<p>1. The NRC as a key player in radiological incidents should be contacted to determine if they have information and/or plans regarding who would pay for decontamination and cleanup under the scenario that was presented in the TTX.</p>	<p>The Federal Recommendations will be brought to partners for discussion.</p>	<p>Planning</p>	<p>DEMHS/NER HC</p>	<p>Ross Nagy/Bill Irwin</p>	<p>1/1/2014</p>

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		2. If all plans are lacking details on how the decontamination or cleanup would occur on a large scale, federal agencies should be tasked with developing catastrophic plans for decontamination and cleanup and determine who would take the lead on the effort.	The Federal Recommendations will be brought to partners for discussion.	Planning	DEMHS/NER HC	Ross Nagy/Bill Irwin	1/1/2014
	4.8: Area of Strength. Each federal agency at the TTX was clear on their role in an incident where they had jurisdiction or shared jurisdiction.	1. Continue to coordinate with partners in other federal agencies to improve in the areas of notification and a common operating picture.	The Federal Recommendations will be brought to partners for discussion.	Planning	DEMHS/NER HC	Ross Nagy/Bill Irwin	1/1/2014
Joint Information Center							
Communications	5.1: Area of Strength: Vermont Emergency Management, Vermont Department of Health, and Vermont 211 PIOs maintain healthy	1. Continue to collaboratively train together.	Currently underway	N/A	N/A	N/A	N/A
		Consider adding other state local, federal, and private PIOs, and media types to the fold when training.	Currently underway	N/A	N/A	N/A	N/A

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	and cooperative inter relationships						
Emergency Public Information and Warning	5.2: Area for Improvement: The location for the Joint Information Center (JIC) was not specifically identified nor was the plan referenced. It was questioned whether to be at the State Emergency Operations Center (SEOC), the Health Operations Center, and or a location closer to the incident.	1. Conduct updated and review training of current plan.	Update the JIC operational plan to reflect when centralized JIC is necessary or not.	Planning	DEMHS	Mark Bosma	1/1/2014
			Ensure JIC representation on the working group established in Observation 1.5 recommendation 2 above.	Planning	DEMHS	Mark Bosma	8/1/2013
		2. Establish list of hazard specific PIOs needed in JIC	Include this list in the JIC update	Planning	DEMHS	Mark Bosma	1/1/2014
		3. Further collaboration with partner agencies, state, local and private PIOs	Currently underway	N/A	N/A	N/A	N/A
	5.3: Area for Improvement: In some cases such as this incident the demands for public information may overwhelm the	1. Identify trusted personnel, train as PIOs to NIMS standards, and commit to exercise personnel in the event that Lead PIO is unavailable or requires additional JIC manpower.	Currently done.	N/A	N/A	N/A	N/A

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	State VEM Lead PIO who approves all information disseminated may impact the need for timely information and warning to the public.	2. Conduct a threat and vulnerability assessment of the State of Vermont, conclude the likeliest of hazards and prepare authorized pre-scripted preparedness, safety, health and or recovery information for early dissemination.	Currently done	N/A	N/A	N/A	N/A
			Updated JIC plan should clarify the process of message approval.	Planning	DEMHS	Mark Bosma	1/1/2014
			Updated JIC plan should include pre-approved information that can be shared.	Planning	DEMHS	Mark Bosma	1/1/2014
On Site Incident Management	5.4: Area for Improvement: There was a brief discussion during exercise play on the use of Incident Command System specific to hospitals (HICS) during emergencies and by Vermont Department of	1. Recommend establishing a common training program for JIC and Public Information Officer staff.	See below.	N/A	N/A	N/A	N/A
			Include hospitals in future exercises to ensure cross training and education of the way each other work.	Exercise	VDH	Bill Irwin to Chris Bell	1/1/2014
		2. Creation or expansion of current multi-agency	See above.	N/A	N/A	N/A	N/A

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	Health staff at the Health Operations Center.	training opportunities.					
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APPENDIX B: ACTION ITEMS AND HOTWASH

Hotwash Items

State Emergency Operations Center

Sustain:

Teamwork
General knowledge of ICS
State/Fed Interaction

Improve:

Rotate Bill Irwin/technical expertise
Lack of SME/resources
More recovery planning is needed

Local Entities

Sustain:

Coordination Exercises/Face to Face
NERHC Conferences

Improve:

More focus on field operations
Include more workers in coordinating actions
Establish backup methods of transportation for resources

Federal Agencies

Sustain:

Tabletops
Communicating
Quarterly RISC meetings with FEMA

Improve:

Get some guidance on IA for nuclear and NRC role in non-nuclear power plant radiological emergency recovery
Investigate virtual USA or other means for Common Operating Picture
Asset mapping

Joint Information Center

Sustain:

Good EOC-HOC relations
Social media use

Role of local PIO clarified

Improve:

PIO staffing thin especially long term event
Use of DLAN
Better info-sharing with federal partners

Health Operations Center

Sustain:

Meeting broad range participants
Identify parties responsible for responder safety and health
Communication issues addressed

Improve:

PIO lack @HOC
Lack of specific tx for event

Module 1 Key Items

State Emergency Operations Center

- Resolve where science resources for chemical, biological and radiological resources respond from – the HOC or SEOC
- Coordinated notification to the Governor and Staff
- Where will the JIC reside

Local Entities

- Establishing access control will exceed time to break
- Life safety: victims (NG), Responders, citizens in evacuation zone
- Establishing incident command center

Federal Agencies

- Who is in charge/Feds
 - Common Operating Picture – Info?
 - Intentional or Accident
- Money – who is paying
 - What does state need
 - Who notifies NRC/Feds
- Impact on Fed Facilities
 - VA – Highway

Joint Information Center

- Coordination of Info through VEM PIO To – SSFs, Support Agencies
- NH?
- Create knowledge of resources

Health Operations Center

- How to obtain situational awareness about the scene (include if container breached, release; coordinate w/VHMRT, NH...)
- Need to provide info to JIS (incl. towns to be evacuated)
- Notify NERHC – additional resources

Module 2 Key Items

State Emergency Operations Center

- Identify adequate reception centers/contingency planning
- Coordinating all field data amongst agencies
- Worker exposure and technical resource management

Local Entities

- Switching to Unified Command (HFD, HAZMAT, VSP)
- Coordination of multi-jurisdictional multi-EOC event
- Clear direction and communication regarding evacuation and shelter in place throughout the corridor of plume includes hospitals

Federal Agencies

- Role of NRC?
- Who is in charge?
- EPA in unified command with locals
- Request for presidential declaration
- Relationship with JIC

Joint Information Center

- Who is in charge/has authority of the incident and information
- Coordination with town PIO
- Where do compact and federal personnel sit? Where do they fit in state Incident Command Structure?

Health Operations Center

- Addressing worker protection: Can we /How do we effectively ensure that we have an accurate roster of an in-and-out of state responders for whom we can assess dose.

- In real-time hours, we are approaching night time. We are also in an area w/a lot of rural roads. How do we make the decision of whether to evacuate or shelter in place is a prudent recommendation. Who coordinates evacuation resources?
- Do we have messages created to disseminate to health care providers about proper response re: triage, PPE, etc for this type of situation?

Module 3 Key Items

State Emergency Operations Center

- Does the whole event apply for the Stafford Act
- Financial Impacts, tracking
- Health and safety plans

Local Entities

- Dosimeters for all workers
- Supplies to facilities treaties
- Staffing > Compact

Federal Agencies

- Communications – still a problem
- Paying for long term recovery
- Joint field office
- Long term rotations
- Sustained Operations
- Recovery responsibility

Joint Information Center

- SEOC capacity to “house” other partners to assist in PIO functions (FEMA, States)
- When does it become a regional issue with regional PIO (2 independently functioning systems)?
- If D-LAN is primary method of communications in VT during an incident, have a dedicated staffer at HOC to monitor

Health Operations Center

- Identification, integration and management of resources to fully verify contaminated terrain and establish/confirm hot/cold boundaries
- Sourcing/coordination of resources for field-deployed personnel (PPE, dosimeters)
- Coordination/networking of lab assets (multi-state) including linked data management/analysis and translation

APPENDIX C: COMMUNICATIONS ARTICLES

ARCIC | The U.S. Army Capabilities Integration Center Selects Desktop Alert Mass Notification System

DESKTOP ALERT MASS NOTIFICATION PLATFORM CONTINUES U.S. ARMY EXPANSION WITH SELECTION BY THE U.S. ARMY CAPABILITIES INTEGRATION CENTER.

Chatham, NJ (PRWEB) October 22, 2012

Desktop Alert announced today that U.S. Army Capabilities and Integration Center has selected Desktop Alert Mass Notification products and services.

The Army Capabilities Integration Center leads the development and integration of force capabilities across the DOTMLPF (Joint Capabilities Integration and Development System, or JCIDS) for the Army within a Joint and Multinational environment to support Joint Force Commanders.

The Army Capabilities Integration Center (ARCIC) is the Army's leader in the identification, design, development, and synchronization of capabilities into the Army current Modular Force and the future Modular Force, bringing together all the Army agencies as well as Joint, Multinational and other DoD agencies to manage rapid change. The ARCIC supports TRADOC in providing adaptive Soldiers, leaders and units by contributing to the development of doctrine, TTPs, and the collective training experience.

"We are honored by the ARCIC selection. Our company is the leading provider of IP-Based mass notification to the U.S. Army worldwide. ARCIC and numerous other Army locations are selecting Desktop Alert as a result of our industry leading 'less than one minute notification', superior past performance reports and assurance that when they procure our MNS platform, the platform arrives day one with lessons learned, best practices and real-world usage at iconic U.S. Army locations such as Fort Hood, Fort Gordon, Fort Knox, USMA at West Point, Fort Leavenworth, Fort Leonard Wood, Fort Campbell, Fort Bragg, Fort Rucker, Fort Polk, Fort Lee, Fort McAlester Army Depot as well as the National Guard and Air National Guard Enterprise deployment of our award winning notification platform", said Howard Ryan, Founder & Chief Research and Development at Desktop Alert Inc.

About Desktop Alert: <http://www.desktopalert.net>

Worldwide U.S. Military organizations such as The United States National Guard, The United States Air Force Academy, The United States Military Academy at West Point, Multi-National Forces in IRAQ, The U.S. Air Force, The U.S. Army now utilize the Desktop Alert mass notification platform daily for their organizations emergency communication requirements. Desktop Alert can contact thousands of users with desktop alerts and require receipt confirmation of the message. Those not verified can then be listed on a report and/or sent as a "Target Package" to be automatically contacted by other means such as email, SMS, phone calls and other devices

FEMA Emergency Operations Center Successfully Deploys Desktop Alert Mass Notification Platform

SYSTEM ENABLES FEDERAL WARNING EMERGENCY COMMUNICATION OFFICIALS TO ACCESS MULTIPLE BROADCAST AND OTHER COMMUNICATIONS PATHWAYS FOR THE PURPOSE OF CREATING AND ACTIVATING ALERT AND WARNING MESSAGES RELATED TO ANY HAZARD IMPACTING PUBLIC SAFETY AND WELL-BEING.

The unification of these critical federal agencies will significantly bolster America's homeland security efforts in the event of an emergency." said Howard Ryan, CEO and Founder Desktop Alert Inc.

Washington D.C. (PRWEB) September 22, 2011

[Desktop Alert Inc.](#) a world class provider of Secure Mass Notification Systems (MNS) and recent winner of the [U.S. Army Fort Hood Mass Notification Award](#) today announced that the [FEMA](#) emergency operations center (EOC) at Mount Weather has successfully installed Desktop Alert into their current suite of incident management tools.

The Mount Weather Emergency Operations Center is a civilian command facility in Virginia used as the center of operations for the Federal Emergency Management Agency (FEMA). Also known as the "High Point Special Facility" (HPSF), its preferred designation since 1991 is "SF". The facility is a major relocation site for the highest level of civilian and military officials in case of national disaster, playing a major role in U.S. continuity of government (per the Continuity of Operations Plan).

Desktop Alert Provides Interoperable Mass Notification Platforms Using [Message-Oriented Middleware](#). Desktop Alert will be used by the FEMA EOC to alert and notify civilian and military personnel by activating alert and warning messages related to any hazard impacting public safety and well-being when an emergency happens anywhere in North America. The system utilizes the international message sharing standard [Common Alerting Protocol \(CAP\)](#) and [FEMA's IPAWS-OPEN aggregator](#) for sending and receiving messages throughout the United States. This will allow the FEMA EOC to be interoperable with disparate incident management software systems throughout the United States and Canada. The Desktop Alert software application constantly polls for IPAWS-OPEN CAP messages. **This enables the EOC to be at the very crux of every situation possible.**

"We are honored that Desktop Alert has been selected by FEMA and deployed at the FEMA emergency operations center. The new FEMA network alerting capability will interoperate with the Desktop Alert Mass Notification System deployed nationwide within the [U.S. National Guard](#) and [U.S. Air National Guard](#). The unification of these critical federal agencies will significantly bolster America's homeland security efforts in the event of an emergency." said Howard Ryan, CEO and Founder Desktop Alert Inc.

The Desktop Alert Mass Notification System sends an unlimited number of emergency scenario alert messages at the click of a single button. This system is also a [one stop shop](#) offering a single point of entry for viewing NWS weather (tropical storm, blizzard, and tornado patterns), United States Geological Survey (USGS) maps and data, traffic models, etc. from a single interface.

The Desktop Alert Mass Notification Platform is currently serving the National Guard and The Air National Guard nationwide for alerting requirements in both land and air across the United States during an emergency. The alerting platform is the largest combined nationwide deployment of an IP-Based alerting system in U.S. History.

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About Desktop Alert:

Desktop Alert has the capacity to integrate giant voice systems, siren systems, telephony systems, mobile devices and workstations at host locations nationwide and internationally. Desktop Alert consolidates multiple warning systems into one web-based user interface enabling command operators to initiate emergency alerts to any warning devices via a single web-based interface. Desktop Alert is an Enterprise-class unified alerts management system that includes the capability to:

- Initiate emergency alerts to any warning device via single web-based interface
- Integrate user data from disparate data sources such as LDAP/Active Directory, SIDPERS and MILPDS
- Manage single repository of emergency scenarios
- Manage permission-based access for operators (unlimited administrators/moderators)
- Enable real-time tracking and reporting
- Manage integration to multiple delivery devices
- Manage real-time reports, communications, video surveillance and more
- Manage DoD Approved XMPP Live Instant Messaging

APPENDIX D: PARTICIPANT FEEDBACK

PARTICIPANT FEEDBACK FORM

Exercise Name: New England Radiological Health Compact Tabletop Exercise

Exercise Date: October 23, 2012

Participant Name (optional): _____ **Title:** _____

Agency: _____

Part I – Recommendations and Action Steps

1. Based on discussions today and any tasks identified, list the top 3 strengths and activities to sustain those strengths.

Compact Resources Availability

Interaction of participants

Willingness to work together, drills & exercises

Lots of resources available – not sure how they would get to the scene

What the NERHC would bring to the table

We had a good facilitator

Many at the table provided good information

Interaction among participants at my table

Internal capacity with hazmat and VDH

Coordinated compact effort

Sample policy development for health care agencies

Good comms/Coord on our team

A Controllable site for emergencies

Good set up for decontamination

Strong commitment of players to protect Vermonters

Good working relationship/history/training at HOC& EOC

Resolved difference of opinion about local PIO roles

NIMS knowledge is strong

Strong communications with state agencies

Strong knowledge of emergency response with VEM & Partners

Meeting new partners – mtg, conferences

Monitoring worker safety issues – continued training and exercises

Internal coordination in HOC – continued training and exercises

Staff worked very well as a unit

Dose estimation and plume modeling

Coordination of HOC and Radiological Response Plan

Great meeting & Sharing

Working with NE Compact and state resources
Identifying tasks within existing plans
Response plans early in the incident
Small state everyone knows each other
Able to do effective communications
Keep Training together with Compact and local Responders
Interagency cooperation – repeated exercises, training
Friendly surroundings
Lots of expertise @ table
Well-defined dose team procedures
VDH-HOC Rad Event plan seemed to accommodate tabletop well
VDH-HOC <-> VT-SEOC communications seem good
Meeting everyone involved with response operations
Discussion of responder safety and health. We need more follow up though.
Discussing the logistics of the compact
Convening the group – bringing together old and new partners
Increased clarity of roles in certain groups
Identification of some apparent confusion or redundant activities – opportunities to deconflict plans
Responder safety and health was well discussed
Knowledge of resources – trainings helpful
Understanding resources/collaboration available from other states & Feds
Good discussions
Our moderator was very effective (Hopkins)
Began to see how state of VT would interact with other states resources
The impressive mix of resources at all levels to handle incidents
The sincere attitude of all parties who participated
The realistic nature of the scenario used today
Exercise facilitators were excellent
Very well organized and kept to schedule
Andrea did a great job keeping the entire group on track
This exercise procedure outstanding – repeat
Basic system in place for response – continue to build out
Excellent knowledge base of participants
People know their agencies capabilities/limitations
The leadership is out there, but who is in charge?
Great SME in the various agencies
At this level willingness and desire to learn in/help
Moderator was outstanding
Utilization of liaison officer between agencies
Cooperative working attitude amongst federal agencies
Commitment of agencies at all levels of government to work to improve response operations
State relationship with federal partners very strong

Existing knowledge of ICS principles – throughout the room. Sustain by reinforcement through these exercises
Understanding of ICS
Collaboration and support across agencies
Problem solving and ideas
Teamwork amongst all parties
HAZMAT team is capable and good
Overall understanding of ICS
Great concept with table team discussions
3 issues at end of each scenario were helpful
Role play was key
*Great food
Keep on exercising these scenarios, train & retrain, and exercise communications
Communicate
Follow Implementing procedures
Practice/Exercises
Small number of highly skilled people – VDH rad and VHMRT
Connected to federal resources so we can learn more, be more skilled and know who to talk to.
Train a lot including today, so we are good with rad/nuc response
Agency firewalls prevent sharing of C.O.P.
Lack of finalized laws/policies for natural incidents
Long term clean-up will deplete technical resources
Very good scenario/believable
Good questions for discussion
Other than NRC, good representation, good SMEs throughout
Technical expertise exists but not enough
Knowledge of ICS exists
More tabletop exercises for rad & Environmental Health

2. Based on discussions today and any tasks identified, list the top 3 areas for improvement and activities to make necessary changes.

Resource supply i.e. dosimetry
Shift change issues
2nd back up for hospital if evac location is involved in the incident
Dosimetry, control and tracking of the responders
What is the role of the HOC vs SEOC
Rm was very loud – hard to hear
On scene responders were LAST to speak yet in a real situation they are the first to gather information (for module 1)
Module #3 is way too long
None

Plan for equipment, supplies and PPE
Quick action to put out fire with outside help
Sample policy development for health care agencies
No survey equipment
Not enough dosimetry
Supplying our staff for extended period
Clear indication of who and when command changes
Reach mutual agreement with local PIOs in advance
Shortage of PIO resources in prolonged event
Better understanding of how to share info with feds
Protocol for JIC activation and identification of required staff
DLAN vs WEBEOC to ensure COP between state and fed
More stuff to draw from
Coordination with feds
Coordination of NERHC into areas (not incident scene) – further discussion and plan development in logistics
Initial development of hot areas to verify plume – think outside the box on where and how to collect samples
Sample data management – training on federal assets and role of FRMAC
Agreement on acceptable radiation levels post-remediation
Avoiding conflicting guidance for first responder and field sampling teams
Avoid conflicting map products with conflicting information
Communications of states available assets – additional exercises such as this
Additional education on radiological emergencies, technical stuff
Additional education of ICS
Location of Rad Dose/Plume teams – separated from Bill Irwin
Joint Information System staffing (no one in the HOC for communications)
Task redundancy – HOC at SEOC
Lack of staffing – where do we get additional technical staff for dose measurement
Communications coordination
Data management/Sample priority management/interpretations
Tabletop has limitations
No one familiar with poison center
Hard to hear large groups
Secure FTP data sharing capabilities needed
Procedure for acquiring NARAC fixed wing overflight data needs to be documented
Cross-border GIS data sharing and coordination procedures
Table arrangement made it difficult to hear
People who would be working on the group – more of them here would be great
Background reading on disaster response for rad events (just an overview of protective actions, EOC general roles, etc) may be helpful for next time so everyone can be on the same page, for next time, some may refer to decisions made today and in light of our discussion today.
Training is needed before exercising

Data management and visualization of samples
Population monitoring and registration – epi activities while begun, need continual attention/training
Integration of HOC and SEOC activities
Review of existing plans and information – work through plan with exercise
Difficult to hear at table
Decision has to be made as to where VDH scientific team will be housed. If decision is to house at HOC, many plans and procedures need to be established and or revised.
Separation of rad health advisor from his technical team presents many communication challenges
Communication of existing plans to groups that may be included/excluded in plans that may not be aware
Redundancy of efforts was observed with concern to worker protection/dose tracking
Population monitoring issues – develop plans, participate in CRCPD Rad volunteer project
Lots of questions, no solutions
VT needs to implement ICS at the state level, SEOC should be area command
Need better coordination of the vast array of federal resources
Financial responsibilities for incidents is not always clear
More careful structuring of federal resource panel for these types of exercises
N/A
Must resolve federal command and control issues
Must improve COP
Must ensure better interagency coordination both at state and local
State needs to take charge and assume a command role and not leave the communities on their own to coordinate response. They will be overwhelmed.
State needs to better communicate with fed and other state assets/agencies
Fed departments need to cross communicate better.
Need NRC – or clarify not needed
Communication – open up technical means to facilitate better comms and common operating picture
Early identification of state needs to better facilitate the federal response
Better interagency (federal) response agencies
Federal common operating picture solution is needed
Develop plan for triage of GIS work and collation of GIS work to appropriate units (SEOC vs HOC vs...)
Protocol for exchanging digital files, including GIS files between SEOC and VDH through secure channel
File naming standard for GIS files, to track originator, subject, time
Data dissemination
Communication hierarchy
Logistics
Clarify relationships between SEOC and HOC

Improve resource and personnel tracking at disasters
Need better/more gis for state stuff and coordinate between all state agencies
Maybe switch folks at tables for each scenario
More resolution discussion at end of day
Have Bill Irwin rotate among tables/Very helpful
Incident Command is constantly questioned
Ensure that GIS layers, appropriate to evaluation of potentially impacted natural resources are available
Need to consider appropriate disposal outlets for debris, PPE, used treatment media
Who is in charge?
Is it clear the structure(all groups)?
Who pays?
Identifying where does dose assessment resides – HOC or SEOC
Having sufficient technical resources for a major radiological, chemical or biological incidents
Policy makers need to set approve finalized plans (e.g. PAGs)
Need NRC at event/Federal table
More emphasis on evac and highway re-routing
Need a primer on payment mechanisms ie.emergency vs Stafford act, who pays before governor declaration
Implement of VT being a home rule state => limitations, legal, when to activate @ federal level
Need to handle Environmental Health data – loads of data mgt, coordinating of receiving and processing
Medical aspects of rad event need expertise local, ID doctor

3. List the policies, plans, and procedures that should be reviewed, revised, or developed. Indicate the priority level for each.

How and when is the compact involvement considered to be through long term mitigation recovery
More focus on the actual operations less on EOC, JICs, etc
If responders come into the state, how will they be taken care of – dosimetry for workers.
At times I could not hear all that was said by speakers – other tables and Director of Table Top Exercise
Radiological event and Rx policy
Review alternate evacuation site
Coordination with local and federal partners should be clearly communicated to all CERC Plan for Radiology Emergencies (priority high)
JIC plan (priority high)
Role and responsibilities for dedicated HOC/PIO DLAN liaison
State JIC plan

Need to update NERHC response plan for the region
Environmental Sampling Data Management Plan for both lab samples and real-time surveys
I would like to see the org chart drawn on the yellow pad in a semi-formal document
Radiological Emergency Plan
How to bring Compact and Federal resources into the state and work with them?
Need procedure?
Capacity planning
HAN inclusion
Knowledge of stockpiles
A comprehensive DLAN user manual needs to be developed and distributed to all DLAN users
High: Planning responder resources for rad events. How many shifts will be necessary
REP, RERP (VY specific), CDC Toolkits – Review, Train
Non-VY Rad Plan – include some VY plans referred to
Methodology for keeping track of dose for emergency responders
Idet(??) State EOP and VDH Rad Annex to include modefuel(??) plans and procedures of essential entities related to VY related releases
Rad Response Plan
HOC chain of command/roles structure
NERHC activation, create inventory of available resources
Population monitoring plans
NCP, NRE, annexes
High priority: Federal response plans, roles, responsibilities
High: Procedures for requesting field assistance
High: Communication procedures to ensure their accuracy and completeness
Top issues were funding, communication, lines of responsibility
Fed interplay between Stafford Act /National Contingency Plan/Price Anderson
[needs legal /legislative action]
Take a harder look at ICS within the state. Command and Control should be better defined
At federal level, should be regionally-based TTX @FEMA that involves both niche players (NRC) and traditional all-hazards responders
Federal Response Plans relative to rad response
Operational response unit command and control (identification of who is in charge)
“GIS in SEOC” handbook/procedure book to document GIS procedures, standards, resources in the state
Funding plans – knowing what the situation is and eligible for
Plans for positions in EOCs should be developed. Radiological response plans and resource should be further distributed so all folks know ahead of time.
#1 – Communications. #2 – financial responsibility during disasters. #3
Responsibilities of role players.
Just updated EOC “SEOP Plan”

Rad Emergency Annex

VY Rad Emergency Annex

Finalize protective action guides!

Decisions for activations at state and federal levels in a home rule state (i.e. funding for federal activation)

Rad health plan reviewed and revised with additional assistance from VDH folks.

Part II – Exercise Design and Conduct

1. What is your assessment of the exercise design and conduct?

*Please rate, on a scale of 1 to 5, your overall assessment of the exercise relative to the statements provided below, with 1 indicating **strong disagreement** with the statement and 5 indicating **strong agreement**.*

<u>Assessment Factor</u>	Rating of Satisfaction with Exercise	
	<i>Strongly Disagree</i>	<i>Strongly Agree</i>
a. The exercise was well structured and organized.		4.24
b. The exercise scenario was plausible and realistic.		4.01
c. The facilitator(s) was knowledgeable about the material, kept the exercise on target, and was sensitive to group dynamics.		4.31
d. The Situation Manual used during the exercise was a valuable tool throughout the exercise.		4.05
e. Participation in the exercise was appropriate for someone in my position.		4.32
f. The participants included the right people in terms of level and mix of disciplines.		4.32

2. What changes would you make to improve this exercise?

Please provide any recommendations on how this exercise or future exercises could be improved or enhanced.

It was impossible to hear. Location where we can hear in not in room where everyone is speaking.

Break out rooms would help.

Ideas on how to communicate when cell is down. Have a list of calling options like in nuclear power plant exercises.

Ensure there is participation by the Nuclear Regulatory Commission (NRC)!

Cobalt in transfer containers unlikely to volatilize.

None!

None

Some confusion about whether it was E10 gasoline or ethanol presented a distraction to the evaluation of the modules. This was a minor issue overall.

The exercise was well planned and executed.

I would like to see more consideration of the long term scenario.

This was a solid event, no issues!

Put times on plume modeling maps so we know the projected dose over “x” period of time. 1 REM in 24 hours is very different than 1 REM in 30 days and would result in different protective actions.

This TTX, unlike others, caused feds to examine/discuss our practices and how we would work together, and not just for our customers.

I like the simulated separated (by table) of the responders/players. It was like how things may initially unfold.

Recommend a continuation of exercises of this type (maybe continue scenario and more prompting of response of federal assets)

Room layout to include back-benches

None. Well done, I learned a great deal.

Well done to Andrea – well managed exercise – if you act like you’re in charge, you are in charge

Old folks have a hard time hearing with lots of background noise – separate rooms.

Really one of the best tabletop exercises I have participated in. Keep up the great work. Very useful for the radiological community.

Overall this was a great experience and very revealing in terms of identifying certain shortcomings and misunderstandings about the federal role in responses.

However in fairness to all, the federal table was not staffed optimally. There was no NRC presence which was clearly a problem. Moreover, some of the agencies did not have the best mix of people at the table. In my case (EPA), I would have liked to have had an on scene coordinator present. He/she could have handled many questions better than I did. Again, overall I learned a lot! My few complaints here should be taken as “praising the effort with faint damns.” Thanks to Bill Irwin and all his staff and other folks who did such a great job of putting this together.

Kevin Geiger did a super job of keeping the federal table moving and on target. Better focus the questions on the groups – ex fed should be better directed at fed responsibilities.

Training in roles and responsibilities as described in policy before ex especially w.r.t state emergency management system

IC section/table should have been at a higher level – area command?

Use actual plans – analyze their value

Need NRC representation

Have groups meet in separate rooms for breakout sessions

The tables were crowded and was difficult to hear at the table

We could not hear anything anyone was saying at our table. Room acoustics are awful. Made TTX fairly useless.

It was difficult and sometimes impossible to hear the conversation at our table.

Perhaps – smaller table (Although I am not sure how it would be broken up)

This was a great opportunity -0 thanks for organizing

Andrea did an excellent job facilitating the Tabletop.

I realize that EX planning may have suffered from some fits and starts but I’m pleased it came to be as well as it has – Thanks.

It was difficult to be able to hear across from 3 tables, but other than that, I thought it

was a great learning experience.
Rare, but plausible, so okay (scenario)
Use meeting room with better acoustics
Meet in Rutland/Bennington for multi-state participation. Establish regular event.
Partial room dividers to help keep noise under control. Move dividers in and out/module discussion/whose meeting time.
Very difficult to hear each others
In reality the HOC has PIO; this didn't occur in this exercise because all PIO types staff were located at a separate PIO table.
Our table was not large enough to accommodate the number of people we had.
Could not hear all people talking at our table. Perhaps move to separate room.
Not enough manuals.
I was unsure of my role within the exercise i.e. what parts of ICS structure were activated and where I would fit in the evolving structure.
It is very difficult to develop realistic events in transportation that would impact an area as large as defined in exercise. Many times you do not need an event as large as this to fully exercise all components of emergency response.
Only one minor complaint: room was not setup so that observers could hear conversations easily. Would suggest a 'children's table' next to the main table or second row of chairs near the discussion.
I like the 5 table format. Well done. Exercise scenario was implausible but interesting.
Could have used federal rep in our discussion.
Well done. Thank you.
None.
I used the manual only to read along with the presenter.
Better use of audio equipment, by all. Perhaps room was too large.
I think it went really well. Very hard to hear question and hard to hear our own table talking because of everyone else talking. Big issue would be dcccmtty(??) – and is everyone responding to help trained, etc.
Little hard to hear at the tables with background noise. Difficult to address, people just have to speak up at the table.
It was sometimes difficult to hear (understand) the presenter at times and each table recommendations.