NRT and RRT Lessons Learned from Incidents and Exercises

Title: Involving Federally Recognized Tribes in Response Planning
Date: 1999
Location: New England
Contact Person: Scott Lundgren, USCG
Telephone #: 617-223-8434
Number of Participants: approx. 20
Type: workshop

Summary of Events: EPA and USCG partnered to bring EPA OSCs and USCG planning officers and tribal representatives together for a day of mutual education, culminating in a discussion of next steps for involvement of federally recognized tribes in the RRT and Area Committees.

Lessons Learned: Multi-Jurisdictional Issues. The practice of investing in mutual education followed by frank discussions of participants' needs was useful. Using the expertise of the EPA tribal program and DOI was essential. Avoid scheduling outreach meetings during the outreach subject's busy season. Early notice to the tribes might have uncovered important conflicts with the date before it was too late.

Title: ACP Exercise
Date: 1999
Location: New York/New Jersey
Contact Person: LTJG Rob Keramidas, USCG, 718-354-4132
Number of Participants: approx. 20
Type: Tabletop Exercise

Summary of Events: RRT 2 Area Committee members participated in a tabletop exercise at the Area Committee meeting. The exercise focused on finding content in ACPs, identifying gaps, and brainstorming other changes and improvements. While all exercises are focused on improving our contingency plans, very few plans are actually opened and exercised in many drills. This exercise was designed to focus only on whether the plan contained needed information/references and if this information was easily found. The Exercise significantly improved the familiarity of Area Plans to many participants, and resulted in numerous recommendations for improvements.

Lessons Learned: Tips for Conducting an Exercise. A short, simple exercise focused only on the contingency plan helps familiarize responders with plan. The focused attention also helps uncover planning gaps.

Title: Environmental Risk Assessment in Dispersant Use Planning
Date: 1999
Location: Long Island Sound
Contact Person: Scott Lundgren, USCG
Telephone #: 617-223-8434
Number of Participants: approx. 20
Type: coordinating preapproval agreements

Summary of Events: The RRT 2 Area Committee Workgroup assessed the pros and cons of dispersant use in Long Island Sound using EPA's Ecological Risk Assessment approaches, as adapted for dispersant use evaluation at the 1996 Baltimore "10 meter" workshop. After orientation presentations, discussion meetings, and provision of requested references, various risk matrices were assigned to state trustees, which allowed them to draw their own conclusions on appropriate dispersant use situations. Results were

discussed with larger concurrence network, and the expected result (in process) is an agreement providing for expedited decision-making for trial dispersant use within Long Island Sound.

Lessons Learned: Technical Issues (Including Scientific Methods and Wildlife Recovery). Use of Ecological Risk Assessment matrices were useful tools to build consensus on the need for expedited dispersant decision-making within Long Island Sound. Areas for possible use were better understood, and expected tradeoffs were documented in the planning process.

Title: ICS Environmental Unit
Date: 1999
Location: MSO Hampton Roads
Contact Person: Dave Butler (USCG)
Telephone #: 757 398-6586.
Number of Participants:
Type: Mid-Atlantic Government Led Area Exercise

Summary of Events: There was a broad spectrum of technical specialists from the following agencies; Virginia Department of Environmental Quality, North Carolina Enforcement, State Parks, National Oceanic and Atmospheric Administration, the Virginia Institute of Marine Science, and the U.S. Coast Guard (USCG). The technical specialists were formed into an "Environmental Unit" with the USCG District Five District Response Advisory Team Environmental Specialist as the Unit Leader. This unit was responsible for the following functions: resources at risk, in-situ burning, dispersants, shoreline assessment, cleanup methods and control, disposal, etc. This pool of expertise assisted in addressing specific environmental issues during the press briefings.

Lessons Learned: Staff Mobilization and 24-Hour Operations. This was a positive move which enabled the personnel who could best handle long range strategic planning to work as one unit. Assigning one person to be in charge of this unit to coordinate the efforts of the Environmental Unit was positive. Add an Environmental Unit to the Planning Section of the ICS. This is where technical specialists can work together on the following duties: resources at risk, in-situ burning, dispersants, shoreline assessment, cleanup methods and control, disposal, and any other issues requiring technical specialist input.

Title: Professional Food Systems (PFS) Ammonia Response (Combined response from EPA and USCG)
Date: March 1999
Location: Bedford, VA
Contact Person: Linda Marzulli (EPA) or LT Sarah Walsh (USCG)
Telephone #: 215 814-3256 (EPA) or 757 398-6620 (USCG)
Number of Participants:
Type: ammonia release

Summary of Events: There was a significant response to an ammonia release from the Professional Food Systems (PFS) facility located in Bedford, Virginia. PFS is a distributor for higher-end beef products with a million dollar-plus inventory. The incident began when the facility received a supply of ammonia. A leak occurred at the check valve, and the valves could not be isolated to get the situation under control to determine whether they were open or not. EPA was notified after the fire department stabilized the situation, but noted that high ammonia levels were still present.

Poor information regarding the design of the system created a significant problem. It was a complicated system with approximately 10,000 pounds of ammonia, which could result in a 36-hour continuous release that could not be contained. Issues of concern included the safety hazards inside the building and

the close proximity to homes, a school, and a major highway. If the power supply was cut, the inventory of meat would spoil.

A gadget was devised to begin to bring the incident under control and capture the ammonia released at the valve. It was a plastic jug that fit over the valve to contain escaping ammonia and routed it to another part of the system. The technical support team conducted a Level A entry to install it on the system.

The device worked very well and each had a lifetime of about 8-12 hours. This allowed responders the time to consider how best to vent the release and slowly lower ammonia levels. Responders calculated the release using the building volume and average ammonia concentrations, running multiple scenarios; establishing a meteorological station; identifying susceptible populations and travel times to them; and finally developing prudent venting parameters.

The venting was closely monitored using Drager tubes. Working with the USDA, responders established workplace-monitoring goals.

There was not much media interest in this incident as there was very little disruption to the community and levels were low off-site.

This was not a typical emergency response for several reasons: the ammonia release could not be stopped in a timely manner and the response teams entering the plant to control the dangerous gas levels required Level A personal protective equipment. A unified team was an essential part of the emergency response. After the Virginia Department of Emergency Services requested EPA assistance at the site, a federal, state and local team isolated and contained the leak. EPA, and the state worked with the United States Coast Guard, the National Oceanic and Atmospheric Administration, and town officials to manage activities while protecting the community. The On-Scene Coordinator described the Unified Command as low key and highly effective.

Lessons Learned:

- Population Contamination Control. The stabilization/containment of the release was achieved using a "low tech" solution that the unified team at this site improvised. They used 5-gallon water bottles cut in half and a water spray to convert the ammonia gas to a liquid, which was then contained to prevent runoff. After the team stabilized the ammonia release, Professional Food Service was able to repair the refrigeration system.

- Direction and Control. A Unified Command does not need to be complicated or overly formal to be highly effective.

Title: Modeling Versus Real Life
Date: 1999
Location: Louisiana coast
Contact: Jim Furrh (EPA) or Welcome Duncan (USCG)
Telephone #: 214 665-7444 (EPA) or 504 589-6255 (USCG)
Number of Participants:
Type: oil spill

Summary of Events: During a spill on the coast of Louisiana, a spill trajectory model predicted spill movement to the offshore arena. The oil actually returned to the shoreline on a strong flooding tide. This unpredicted movement negated the planned use of dispersants.

Lessons Learned: Technical Issues (Including Scientific Methods and Wildlife Recovery). This spill brought to the forefront the absolute necessity to rapidly ground truth the actual behavior of a spill with trained observers to verify location and movement in order to gain the tactical upper hand.

Title: Alternate Technology - *In Situ* Burn
Date: Fall 1999
Location: Texas
Contact: Jim Furrh (EPA) or Welcome Duncan (USCG)
Telephone #: 214 665-7444 (EPA) or 504 589-6255 (USCG)
Number of Participants:
Type: *in situ* burn exercise

Summary of Events: These *In Situ* Burn Exercises, held off the coast of Texas, have verified that the logistics necessary to support this technology take time to assemble and deploy and are subject to significant limitations of weather.

Lessons Learned: Technical Issues (Including Scientific Methods and Wildlife Recovery). The deployment of a video camera on board an orbiting aircraft with a live broadcast to the command post, linked with a vessel GPS tracking system, enhanced the Incident Commander's situational assessment of the exercise events as they unfolded. This capability would enhance any offshore/nearshore spill response oversight by the Incident Commander, as well as the Planning and Operations Section Chiefs.

Title: Whatcom Creek Oil Pipeline Spill
Date: June 10, 1999
Location: Whatcom Creek, Bellingham, WA
Contact: Beth Sheldrake (EPA) or LT Jerry A. Hubbard (USCG)
Telephone #: 206-553-0220 (EPA) or 206-220-7210 (USCG)
Number of Participants:
Type: spill

Summary of Events: A section of pipeline transporting unleaded gasoline ruptured, spilling more than 277,000 gallons into the environment. The spill occurred immediately adjacent to the City of Bellingham water treatment plant in Bellingham, Washington. Gasoline reached Whatcom Creek and flowed approximately two miles downstream before the vapors were ignited resulting in a tremendous fire. One youth fishing in Whatcom Creek was overcome by the gasoline vapors and drowned; two other youths, who were along the creek bank, died as a result of third-degree burns from the fire. Ecologically, the burn area was severely impacted. Also, one home adjacent to Whatcom Creek was heavily damaged by the fire.

Lessons Learned:

- Staff Mobilization and 24-Hour Operations. At such a large incident, be prepared for the use of unexpected resources. For example, Washington Department of Natural Resources and USCG MSO personnel showed up on site to help, but were not initially used to their full potentials. Being able to recognize these resources and then assign tasks to them frees up the Unified Command to look more at the big picture.

- Staff Mobilization and 24-Hour Operations. Planning, training, and exercising ICS with the local, state, and PRP contacts is absolutely critical. In this case many of the key players were well versed in ICS and it was obvious that this is a big reason why the response went relatively smoothly.

Title: Ying Fa Response
Date: May 1999

Location: Adak Island, AK
Contact: Mary Goolie (EPA) or T. Mitch Deely (USCG)
Telephone #: 907-271-3414 (EPA) or 907-463-2816 (USCG)
Number of Participants:
Type: Incident

Summary of Events: The YING FA response occurred on Adak Island, approximately 1,100 miles southwest of Anchorage. While there was a large Navy base there, most of the infrastructure associated with the Navy presence is shut down. By having a portable satellite phone, a laptop computer, an e-mail account, a digital camera, and access to a phone line, responders were able to send a steady stream of reports and digital pictures back to Anchorage and beyond, as well as make reports directly from the scene.

The ICS requirement for a site safety plan was a critical element of the YING FA response. YING FA was an anhydrous ammonia release and the nature of that substance required many precautions to be taken by the responders. In addition to the safety of the actual response crew, there was a functioning fish plant using the pier where the YING FA was located, a small human population relatively close to the site, and very little in the way of medical treatment facilities. The nearest full-scale medical facilities were 1,100 miles away in Anchorage.

Lessons Learned: Facilities, Equipment, and Displays. The response to the YING FA ammonia release lasted 10 days. During that time the air compressor for the Strike Team failed, and by the last day only three of eight SCBA's were fully functional. With only two commercial flights into Adak a week, and the distance of the area from AIRSTA Kodiak, getting parts to the response scene was difficult. If the response had lasted much longer, it risked getting temporarily shut down because of the absence of parts for the SCBAs. This demonstrates that it cannot be assumed that equipment will be available in remote, non-populated areas. Therefore, response plans must include procedures for delivery of spare parts over a sustained period of time.