Hazmat Tabletop Exercises

NIEHS
National Trainers’ Exchange

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If it can Happen!! It Will!!
Always expect the unexpected!
Hope for the Best – Prepare for the Worst!
Is this the way you Manage an emergency incident
How many Hats can you wear

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ICS PURPOSES

- Using management best practices, ICS helps to ensure:
  - The SAFETY of responders and others.
  - The achievement of tactical objectives.
  - The efficient use of resources.
ICS FEATURES

- Common terminology
- Modular organization
- Management by objectives
- Incident Action Plan (IAP)
- Chain of command and unity of command
- Unified command
- Manageable span of control
- Pre-designated incident facilities
- Resource management
- Information management
- Integrated communications
- Transfer of command
- Accountability
- Deployment
- Demobilization
Using common terminology helps to define:

- Organizational functions.
- Incident facilities.
- Resource descriptions.
- Position titles.
MODULAR ORGANIZATION

- Develops in a top-down, modular fashion.
- Is based on the size and complexity of the incident.
- Incident objectives determine the organizational size.
- Only functions/positions that are necessary will be filled.
- Each element must have a person in charge.
MANAGEMENT BY OBJECTIVES

- ICS is managed by objectives.
- Objectives are communicated throughout the entire ICS organization through the incident planning process.
Incident objectives are established based on the following priorities:

#1: Life Saving
#2: Incident Stabilization
#3: Property Preservation
NIMS is the over-arching federal program; ICS is the detailed management model.

ICS was first developed in the 1970’s following a series of fires in California.

Studies found that response problems in fires were far more likely to result from inadequate management rather than any other reason.
To enhance the ability of the United States to manage domestic incidents by establishing a single, comprehensive National Incident Management System (NIMS).

To prevent, prepare for, respond to, and recover from terrorist attacks, major disasters, and other emergencies.
Types of Command

- **Single Command**
  - Internal Plant Emergencies

- **Unified Command/Shared Command**
  - Plant Personnel and public safety agencies share incident response responsibilities
The following is a list of **some** of the federal emergency planning regulations:

1. EPA's Oil Pollution Prevention Regulation (SPCC and Facility Response Plan Requirements)
2. 40 CFR part 112.7(d) and 112.20-.21;
3. MM's Facility Response Plan Regulation - 30 CFR part 254;
4. RSPA's Pipeline Response Plan Regulation - 49 CFR part 194;
5. USCG's Facility Response Plan Regulation - 33 CFR part 154, Subpart F;
6. EPA's Risk Management Programs Regulation - 40 CFR part 68;
7. OSHA's Emergency Action Plan Regulation - 29 CFR 1910.38(a);
9. OSHA's HAZWOPER Regulation - 29 CFR 1910.120;
10. OSHA’s Fire Brigade Regulation - 29 CFR 1910.156;
12. EPA's Emergency Planning and Community Right-to-Know Act Requirements - 40 CFR part
TRAINING REQUIREMENTS:
EMERGENCY RESPONDERS

Level 1: First Responder
Awareness Level
- Sufficient training of proven experience in specific competencies. Annual Refresher

Level 2: First Responder
Operations Level
- Level 1 Competency
- + 8 hrs training or proven skills in specific competencies. Annual Refresher

Level 3: HAZMAT
Technician
- 24 Hrs of Level 2
- + proven skills in specific competencies
  Annual Refresher

Level 4: HAZMAT
Specialist
- 24 Hrs of Level 3
- + proven skills in additional competencies
  Annual Refresher

Level 5: On Scene
Incident Commander
- 24 Hrs of Level 2
- + proven skills in additional competencies
  Annual Refresher
Many communities across the country have established incident levels for hazardous releases and spills.

This allows for quick notification.

It provides for a system of community awareness.

Usually a tiered Level I, II, and III system
Small-scale incident

- Handled by the first responders
- Notifications usually local
- Minimum level of PPE
- Minimal environmental impact
- For example, natural gas, propane leaks, and small fuel spills
Level 2

Level usually requires HAZMAT Team

- Level requires local or state notifications.
- Amount of material may be larger, or is more hazardous.
- Chemical protective clothing is required.
- May require a small evacuation or isolation area(s).
- Examples are overturned gasoline tankers, a leaking propane tanker, or leaking totes in the back of a tractor trailer.
Level 3

Level requires substantial local resources

- Level requires assistance of other agencies.
- May require evacuation of effected area and a substantial isolation area.
- Release is large or the material is extremely toxic. *PSM 1910.119 EHS chemical*
- Examples include a train derailment or a substantial leak from an ammonia tank.
*Incident Tracking
*Accountability/Head Count
*Release/Product Information
The ICS uses a series of standard forms and supporting documents that convey directions for the accomplishment of the objectives and distributing information. Listed below are the standard ICS form titles and descriptions of each form:

<table>
<thead>
<tr>
<th>Standard Form Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incident Action Plan Cover Page ICS 200</td>
<td>Indicates the incident name, plan operational period, date prepared, approvals, and attachments (resources, organization, Communications Plan, Medical Plan, and other appropriate information).</td>
</tr>
<tr>
<td>Incident Briefing ICS 201</td>
<td>Provides the Incident Command/Unified Command and General Staffs with basic information regarding the incident situation and the resources allocated to the incident. This form also serves as a permanent record of the initial response to the incident.</td>
</tr>
<tr>
<td>Incident Objectives ICS 202</td>
<td>Describes the basic strategy and objectives for use during each operational period.</td>
</tr>
<tr>
<td>Organization Assignment List ICS 203</td>
<td>Provides information on the response organization and personnel staffing.</td>
</tr>
<tr>
<td>Field Assignment ICS 204</td>
<td>Used to inform personnel of assignments. After Incident Command/Unified Command approve the objectives, staff members receive the assignment information contained in this form.</td>
</tr>
<tr>
<td>Incident Communications Plan ICS 205</td>
<td>Provides, in one location, information on the assignments for all communications equipment for each operational period. The plan is a summary of information. Information from the Incident Communications Plan on frequency assignments can be placed on the appropriate Assignment form (ICS Form 204).</td>
</tr>
<tr>
<td>Medical Plan ICS 206</td>
<td>Provides information on incident medical aid stations, transportation services, hospitals, and medical emergency procedures.</td>
</tr>
<tr>
<td>Incident Status Summary ICS 209</td>
<td>Summarizes incident information for staff members and external parties, and provides information to the Public Information Officer for preparation of media releases.</td>
</tr>
<tr>
<td>Check-In/Out List ICS 211</td>
<td>Used to check in personnel and equipment arriving at or departing from the incident. Check-in/out consists of reporting specific information that is recorded on the form.</td>
</tr>
</tbody>
</table>
| General Message ICS 213 | Used by:  
  - Incident dispatchers to record incoming messages that cannot be orally transmitted to the intended recipient,  
  - EOC and other incident personnel to transmit messages via radio or telephone to the addressee,  
  - Incident personnel to send any message or notification that requires hard-copy delivery to other incident personnel. |
REFERENCE BOOKS
MSD
COMPANY PROCEDURES
ICP
Computer Technology

- WISER
- CAMEO
- EPA Chemical Fact Sheets
- Internet
- Smart Phone APPS
- OSHA, EPA, DOT websites
- Association Websites - Responsible Care, API, ACC, TRANSCAER®, CHEMTREC®
Chlorine
CAS RN: 7782-50-5
Equipment (PPE)

Handlers must wear long-sleeved shirts, long pants, shoes, and socks. In case of a spill or leak, handlers must wear chemical-resistant gloves (such as nitrile or butyl) and a full-face canister-style (gas mask) respirator with a canister approved for chlorine (MSHA/NIOSH approval number prefix TC-14G) or a self-contained breathing apparatus (SCBA) (MSHA/NIOSH approval number prefix TC-13F). Since there is always the possibility of a spill or leak, gloves and a respirator of a type specified above must be available and are required for anyone entering into an affected area in the event of a leak or spill.

Saranex, Butyl Rubber/Neoprene, Viton, Neoprene, Butyl Rubber, and Viton/Neoprene are among the recommended protective materials.

Employees should be provided with & required to
Hazmat Release Zones

- **Hot or Red (Contamination) Zone**
  - Contamination is actually present.
  - Personnel must wear appropriate protective gear.
  - Number of rescuers limited to those absolutely necessary.
  - Bystanders never allowed.

- **Warm or Yellow (Control) Zone**
  - Area surrounding the contamination zone.
  - Vital to preventing spread of contamination.
  - Personnel must wear appropriate protective gear.
  - Life-saving emergency care and decontamination are performed.

- **Cold or Green (Safe) Zone**
  - Normal triage, stabilization, and treatment are performed.
  - Rescuers must shed contaminated gear before entering the cold zone.
Weather
Establish an Incident Command Post (ICP)
- Designate the location and make it known to all incident resources
- Account for expansion if situation requires
- Can be a mobile or fixed facility
- Once established, try not to move it
- Manage the activity in the ICP!
Leadership Roles in Incident Management
Emergency Responders Train With Mock Disaster

By Carissa Lawson/WLKY

POSTED: 5:19 pm EDT March 31, 2010
UPDATED: 6:17 pm EDT March 31, 2010

LOUISVILLE, Ky. -- A train derailment caused a hazardous material spill and injured dozens of people in a simulated manmade disaster Wednesday afternoon.

It was called a tabletop exercise and gave emergency responders an opportunity to practice handling a hazmat disaster without putting any lives at risk.

Representatives from 31 different Metro agencies participated in the disaster.

Hazmat leader Gary Yurt created Yurtville, a place where responders can put their skills to the test.

Yurt said the exercise was staged “so we are better at it when a real one occurs.”

In this simulated disaster, a train derailed sending a chemical spill into the river.

Director of Emergency Services of Sts. Mary and Elizabeth Hospital Dr. Lisa Benner said drills like Wednesday’s can help her when the real situation strikes.
History of Yurtville™

- Created in 1998 by Gary Yurt
- Started training Emergency Responders across the US on behalf of Borden Chemical, Inc.
- Have trained over 100 agencies and 5000 students
- Longest event lasted 6 hours
- Shortest event lasted 45 minutes
The key to using Yurtville™ is to provide a positive learning environment with reality-based scenarios that the student can mentally accept and then link to new challenges and complex incident management decision-making.

Yurtville™ will allow the participants a positive learning experience even though they maybe stressed and frustrated by the role-playing during the process.
The large tabletop 9’X20’ depicts an urban downtown roadway, railroad, river, industrial park, schools, hospital and several types of businesses.
• Mill worker and a truck driver are offloading an 8000 gallon tanker of Methanol into a stationary vessel on Georgia Pacific Mill property.

• Construction workers are working on an underground water main NE of the incident.

• Construction equipment is being moved into position throughout the Mill in preparation for construction work.
At 1145hrs the truck driver and the mill worker notice a strong alcohol odor at the unloading station. They investigate and locate a large methanol leak on a 4” hose off of the tanker. The hose has busted and unknown how long the leak had been progressing.
At this time what notifications should occur
ERT arrives and begins assessment.

Discover the leak is still active and a large spill has resulted.
Discover the truck driver and the Mill employee are down and unconscious.
11:49

Reports to the guard shack of a strong alcohol odor is being discovered throughout the Mill
12:05 PM

A FIRE develops around the tanker truck
The tractor trailer begins to catch on fire
12:15 PM

News media arrives at the front gate asking questions!
12:30 PM

Storm approaches with heavy rainfall
12:32 PM

News helicopter is seen flying over the incident
12:35 PM

Fire has been extinguished but there is still large quantity of product on the ground
Rain water is spreading product
12:40 PM

End of Scenario
EXERCISE 2
The Mill is operating at normal capacity
There are several construction projects through out the Mill
The contractors have full crews working
At 12:46 p.m. the operators notice a significant pressure drop in the storage tank pressure. A 2” hole has developed in the tank. There is 50,000 gallons of Clo2 in the tank.
At this time what notifications should occur
At 12:48 p.m. the Clo2 sensors detect levels that activate the alarm system.
Steps should be taken for a conference style Command Post in an appropriate location.
At 12:55 p.m. it is reported that there are two people located in the area that are not accounted for.
At 1:00 additional Clo2 alarms are activated down wind.

50 employees are having problems breathing at several muster points.
At 1:15 p.m. the news media arrives in the area. Their helicopter also arrives and is flying over the plant.
At 1:20 Zachary Fire Department arrive on the scene.

Also Louisiana Department of Environmental Quality arrive on the scene
At 1:25 The Louisiana State Police received reports from local news media of the incident and called the Mill to advise they have a response group en-route to the area.
At 1:30 Baton Rouge Mutual Aid Association (Bramas) arrives on the scene.
1:45

Scenario Ends