

Community Emergency Response: Have You Met Your Neighbors Yet?

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Introduction

General industry is required to plan for emergencies under several different local, state, and federal regulations. What happens when an emergency leaves the property line and travels into the surrounding neighborhood or an offsite emergency impacts a facility? The Erie County (Pennsylvania) Local Emergency Planning Committee decided to explore the importance of coordinating emergency planning with various different factions of the community, ranging from emergency services to schools and eldercare facilities through a series of community educational exercises.

Background

Fixed facilities, either private or public, have policies and procedures that must be followed to prevent or respond to emergencies. Examples of these policies and procedures include:

- 29 CFR 1910.38 “Emergency Action Plans”- Emergency reporting, evacuation plans, headcounts, critical plan shutdown, rescue and medical duties, and plan contacts.
- 29 CFR 1910.39 “Fire Prevention Plans”- A list of all major fire hazards (fuel loads and ignition sources), procedures to control fire hazards, assignment of responsibility for controlling fire hazards.
- 1910 Subpart H “Hazardous Materials”
 - 29 CFR 1910.119- Process Safety Management-Employee participation, hazard data, process hazard analysis, operating procedures (including emergencies), training, contractor responsibilities, pre-startup safety review, and mechanical integrity.
 - 29 CFR 1910.120- Hazardous Waste Operations and Emergency Response- 1910.120 (I)- Emergency Response by Employees at Uncontrolled Hazardous Waste Sites: pre-emergency planning, chain of command, emergency recognition and prevention,

- evacuation, security, decontamination, medical treatment, emergency alerting and response procedures, critique, and PPE.
- 29 CFR 1910.151 “Medical Services and First Aid”- Ready availability of medical personnel.
 - 29 CFR 1910.165 “Employee Alarm Systems”- Provide warning for necessary emergency action.

On the environmental side of EHS, the United States Environmental Protection Agency requires some fixed facilities to report chemical hazards and develop similar emergency response policies and procedures. Examples include:

- SARA Title III/Emergency Planning and Community Right to Know Act- State Emergency Response Commission, Local Emergency Planning Committee, Tier II forms for reporting of listed chemicals above a threshold planning quantity, development of emergency response plans for extremely hazardous substances above the threshold planning quantity, and immediate reporting of releases of extremely hazardous substances above a reportable quantity to the National Response Center, SERC, and LEPC.
- Clean Air Act Section 112(r) Risk Management Program- Hazard assessment of release scenarios and offsite impacts and prevention and emergency response plans.

Facilities required to comply with these environmental regulations must share information with state and local emergency response agencies; however, the flow may be mono-directional from the facility to the agency. This would be the first outreach to neighbors in the community from some facilities.

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Fact: There are regulations that require some facilities to have internal emergency response plans and to provide information about some of their activities to external agencies.

Questions:

- What happens when you have an emergency and your onsite activities affect your neighbors?
- When do you want to meet your neighbors- before or during an emergency?

These questions were asked by two members of the Erie County (Pennsylvania) Local Emergency Planning committee (both Northwestern Pennsylvania Chapter ASSE members) and the following is a summary of the actions taken to provide the answers.

September 2004

- The Erie County LEPC forms a committee to explore outreach possibilities with local facilities, both private and municipal entities.
- Agreement is made that some type of educational exercise is need to begin the process of communication and cooperation in the community.

Erie County (Pennsylvania) has a total area of 1,558 square miles and a population of 280,000 people. In order to focus the educational exercise, it was decided to focus on facilities that used anhydrous ammonia or chlorine in their operations. This focus was decided upon based on information summarized from Tier II reporting indicating that the county has a large number of ammonia and chlorine users, mostly food processors, water treatment plants, and metal finishing businesses.

To plan for the exercise, a matrix was developed to identify key subject points centered around a generic incident involving the unexpected release of ammonia or chlorine:

Discussion Item	Report Through 911	Report Through National Response Center
1. 911 Center	<p>A facility notifies 911 of a hazardous materials release because of:</p> <ol style="list-style-type: none"> 1. Injury 2. Release Moves Offsite 3. Help Required <p><i>Question:</i> What information will 911 be looking, i.e. the facility should have available and be ready to provide?</p> <p><i>Question:</i> What protocol will be followed to dispatch fire, EMS, HAZMAT, police? Are “courtesy calls” placed to key individuals or organizations informing them of situation?</p> <p><i>Question:</i> What follow-up written reports are required from the facility? What is the timeframe for the reports?</p> <p>Discussion: What are area coordinators and their role in this situation?</p>	<p>The reportable quantity is exceeded or believed to be exceeded and a facility notifies the following regulatory entities:</p> <ol style="list-style-type: none"> 1. National Response Center 2. SERC 3. LEPC <p>The release is classified as continuing (<i>not contained, in this instance</i>).</p> <p><i>Question:</i> What information should be provided by the facility to the regulatory entity?</p> <p><i>Question:</i> What “courtesy calls” are placed to key individuals or organizations informing them of the situation?</p> <p><i>Question:</i> What follow-up written reports are required from the facility? What is the timeframe for the reports?</p>
Discussion Item	Dispatched Through 911 Center	
2. EMS and Hospitals	<p>Emergency Medical Services are dispatched to the facility for:</p> <ul style="list-style-type: none"> • Treatment of injured persons. • Medical monitoring of potential HAZMAT responders. 	

	<p><i>Question:</i> What information will EMS need while in route to the facility? What information will EMS need from other parties once on site and throughout the situation?</p> <p><i>Question:</i> How will EMS get to the injured party?</p> <p><i>Question:</i> Regarding decontamination and treatment, what actions will an EMS provider do, don't do, refuse to do?</p> <p>Hospitals-</p> <p>Discussion: What is a pre-hospital report, what information will be needed to complete the report, and how is the report used?</p>
3. Fire Service	<p><i>Question:</i> What information will Fire need while in route to the facility? What information will Fire need from other parties once on site and throughout the situation?</p> <p><i>Question:</i> What actions will Fire perform, not perform, or refuse to perform?</p> <p><i>Question:</i> How will operations be terminated at the facility?</p> <p>Discussion: How will an integrated incident command system be established with the facility personnel? How will roles, responsibility, and authority be established?</p>
4. HAZMAT	<p><i>Question:</i> What information will HAZMAT need while in route to the facility? What information will HAZMAT need from other parties once on site and throughout the situation?</p> <p><i>Question:</i> What actions will HAZMAT perform, not perform, or refuse to perform? What are the associated fees?</p> <p><i>Question:</i> How will operations be terminated at the facility?</p> <p>Discussion: How will an integrated incident command system be established with the facility personnel? How will roles, responsibility, and authority be established?</p> <p>Discussion: Who has clean-up responsibility?</p>
Special Topic: PA Department of Environmental	<ul style="list-style-type: none"> • Discussion on general reporting requirements under SARA Title III (Tier II and Form R) and EPCRA ("Reportable Quantities") • Review of EPA "List of Lists".

Protection	<ul style="list-style-type: none"> • Review of EPCRA “Reportable Quantity” reporting procedure, including time frames and follow-up paperwork. • Discussion of PADEP role in hazardous chemical releases.
Special Topic: The LEPC	<ul style="list-style-type: none"> • Introduction and discussion on role and responsibility under state and federal law. • Discussion of offsite plan requirements as mandated by federal and state law (what they must include, when they must be filed, when they must be updates, etc.) • Discussion on who has access to the plans and how they are used for pre-incident planning. • Discussion on good plans versus bad plans.

The goals of this exercise were:

1. Outline the steps each discipline of the emergency management system will take during a hazardous materials release so that facilities will understand what to expect should an incident occur.
2. Promote discussion between disciplines of the emergency management system and facilities to practice sharing of information, implementation of an integrated incident command system, and understanding of each other’s authority and responsibility.
3. Increase the level of cooperation between the disciplines of the emergency management system and facilities (including resource sharing).

Representatives from the county emergency management agency, county fire and paramedics associations, local hospitals, state department of environmental protection, and LEPC members representing ammonia facilities were engaged to develop short presentations following the matrix.

A guest list for the educational exercise was developed by the LEPC using information that identified each anhydrous ammonia and chlorine facility in the county (both private and public) and the emergency response agencies that serviced these facilities. Invitations were sent approximately 90 days before the exercise with follow-up phone calls made to ensure attendance and support of the event.

May 2005

The exercise was scheduled for a full day on a Friday. Facilities were provided by a local business with lunch and refreshments provided by the LEPC. No cost was incurred by the participants.

Fifty-seven people attended the exercise, including representatives from local businesses, municipal water treatment facilities, paid and volunteer fire departments, police departments, educational institutions (high school and college), ambulance service providers, municipal government, and hospitals.

Participants had the following suggestions:

Suggestions	Description
1.	Site Specific Presentations- Chlorine
2.	Keep presenting throughout county to promote involvement.
3.	Hold regular meetings to keep facilities informed of recent developments.
4.	Distribute a copy of the HAZMAT presentation.
5.	Discussion on how to plan and organize a training drill.
6.	Keep similar format, including targeting similar types of facilities. Include retail facilities.
7.	Development of Quick Reference Guide (Cheat Sheet)
8.	Tours of different facilities and participation in mock drills.
9.	Have sessions more often (X2).
10.	Mock drills to illustrate how agencies work together.
11.	More community/industry outreach and training.

The educational exercise planning committee begins almost immediately to plan the next educational exercise.

May 2006: Community Exercise #1

Based on the comments received, the planning committee decided to focus the next educational exercise at the community level. The borough and township of North East, PA was chosen due to the large number of food processing facilities in the area (sharing a common hazard of anhydrous ammonia, pesticides, and fertilizers) and the well organized emergency response base that was present.

A guest list was developed based on Tier II reporting information for fixed facilities and several volunteers with knowledge of the local area were tasked with identifying educational, personal, and child care facilities, emergency response groups, and government agencies. Invitations were sent 90 days in advance with phone follow-up to ensure participation. The local college provided a large conference room with the LEPC providing refreshments keeping the educational exercise free to participants.

To help develop the educational exercise, a task sheet was developed with the assistance of a project manager on loan from a local company. The basis for this educational exercise revolved around a plot by environmental terrorists to disrupt the operations of the food and agricultural plants in the North East area. Each major facility in the North East area was faced with either a security breach or an attack on their infrastructure that caused a major chemical release. As each event unfolded, participants were asked to describe their response with each event escalating the situation to the point of overwhelming available resources.

Several key developed issues and were discussed in detail during the exercise:

- Information Dissemination from Threat to Incident (Real vs. Grapevine)- How is a threat or event reported to the public so a response can be implemented?
- Fire/Police Jurisdictions and Mutual Aid- What happens when you cross the township line, especially when local jurisdiction becomes state jurisdiction?
- The Evacuation Process- Implementation of an American Red Cross evacuation and shelter plan.
- Hospital Response- What information needs to be transmitted to the hospital to ensure best care and prevent loss of use of the emergency room due to contamination?
- Crime Scenes- How do you respond to a respond while preserving a crime scene?
- Special Needs of Schools/Personal Care Facilities- Who gets to use the school's buses?

The after action report determined that while the exercise was successful in fostering group discussion, the group was overwhelmed and could not focus on an issue to the point of developing or improving a response plan.

May 2007: Community Exercise #2

North East was again chosen to be the site of the next educational exercise to guarantee good response and participation. To focus the exercise, a transportation incident involving a tanker of anhydrous ammonia being involved in a motor vehicle accident in the middle of town, was chosen, based on an actual response that had occurred earlier in the year. Instead of responding to multiple incidents, the community would be tasked to respond to make a single, organized response.

To begin the exercise, a brief review of emergency action plans and communication systems was conducted with the intent of prompting the participants to think about their own policies and procedures:

Emergency Action Plans: A Plan to Respond to an "Emergency"

What is your emergency (disruptions to normal routine)?

- Natural Disasters: Flooding, Tornado, Etc.
- Utility Interruption: Power Outage, Non-Potable Water
- Catastrophe: Fire, Chemical Spill
- Medical Emergency
- Civil Disturbance: Bomb Threat, Worksite Violence

What is your plan (how do you return to your normal routine)?

- What steps do you need to take to correct the effects of the emergence?
- What equipment, materials, and labor will you need? *Think Special Needs*
- How can provide the equipment, materials, and labor?
- How do you contact these resources?
- Who can contact these resources?

Think About Critical Products, Services, and Operations.

Emergency Action Plans

Communication: Internal

- Who needs to know about the emergency?
- How do you get in touch with them?
- Who can make decisions?
- Who can talk to police, fire, the media?
- How deep is your communication pool?

Communication: External

- Who do you need to call?
Police-Fire-EMS-Vendors/Suppliers-Utilities-Insurance Company
- When do you need to call?
Regulatory Requirements-Internal Procedures
- Do you have phone numbers?
Account Numbers
- Who calls?

The exercise was structured to introduce each element of the emergency response with a discussion of the actions that would be taken by each responder.

Accident	Anhydrous ammonia tanker involved in a motor vehicle accident in the center of town. Educational (pre K through college), personal care, and businesses threatened.
Initial Emergency Services Response	<ul style="list-style-type: none">• 911 Dispatch Process• Immediate police response, including traffic control.• Immediate fire response, including establishment of initial exclusion zones.• Notification of County Emergency Management, HAZMAT, Hospitals, Etc.
Initial Community Response	<ul style="list-style-type: none">• Notification of local government, schools, personal care homes, etc.• Initial response actions.• Process for obtaining updated emergency information.
Evacuation Process	<ul style="list-style-type: none">• Reluctant evacuees (pet scenario).• Traffic congestion.• Multiple large occupant evacuation (medical and transportation assistance).• Reluctant evacuees (homestead scenario).

	<ul style="list-style-type: none"> • Notification of parents, guardians, and caregivers on status and location of children, parents, wards, etc.
Incident Command Process	<ul style="list-style-type: none"> • Establishment of the Incident Command Post for local government. • Good Samaritan assistance (volunteers, donations, etc.- including security concerns). • Dealing with the media. • Lawyers • Sympathy Victims and Copy Cats. • Nuisance Reports • Communication to the business community (shift cancellations, utility interruptions, etc.)

Exercise critiques indicated that the community specific exercise format allowed attendees to focus on and develop a better understanding of the response process. One suggestion received was to develop a glossary of emergency response acronyms to improve participant understanding of the emergency response process. As a successfully format had been developed, the planning committee decided to take the exercise on the road to a similar community in Erie County.

November 2007: Community Exercise #3

After the success of the community specific exercise in North East, the next exercise was scheduled in the city of Corry, PA due to similarities in the communities. Representation from the economic development authority and local government was incorporated into the planning committee to ensure exercise authenticity, secure exercise resources (refreshments and presentation space), and maximize participation of community members.

The transportation incident model was adapted to involve a chlorine cylinder delivery truck being involved in a motor vehicle accident at an intersection that was notorious for such accidents. Several key issues were explored during this exercise:

- Involvement of the state department of transportation due to the accident occurring on a state roadway.
- Inclusion of emergency management officials and responders from the two counties adjacent the City of Corry.
- The need for emergency response procedures to include alternate command sites.
- The need to check back-up communication plans.
- The use of local subject matter experts, in this case, local wastewater treatment operators with experience in working with chlorine.

Exercise critiques were again positive; however, several suggestions were made that participants be made aware of the scenario in advance in order to review their plans and prepare to present their response during the exercise.

The Future: 2008

Two education exercises are planned for 2008. The first educational exercise will involve the community of Edinboro, PA that incorporates a large state university campus. The second

exercise will involve the City of Erie, the largest metropolitan entity in the county. Due to the size of the participant pool for the city response, the planning committee is considering the use of group discussion to facilitate the exercise.

Example

North East Emergency Response Exercise 2006 Task List

Date: Tuesday, May 30th 2006

Time: 4 Hour Limit, Evening Meeting

Location: Mercyhurst-North East Campus

Needs:

- Pizza/Wings/Drinks
- A/V Equipment
- Notebooks with presentation materials
- Secretary

Agenda:

5:00-5:15	LEPC Introduction
5:15-6:00	Review of Offsite Plans & ICS
6:00-6:30	Break (Pizza & Wings)
6:30-9:00	Tabletop
9:00	Critique and Open Discussion

EHS Facilities: Requesting 2 representatives from each.

Facility	Chemical	Contact Person
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Community Representation: Requesting 2 representatives from each.

Organizations (Government, Schools, Day Care, Personal Care, Other Business)	Contact Person
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Emergency Responders

Organizations (Fire Departments, Police Agencies, Ambulance, Hospitals, County Agencies, Federal Agencies-FBI/USDA)	Contact Person
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Specifics

Objective:

- Increase awareness of all stakeholders to procedures that are in place to deal with chemical emergencies.
- Ensure offsite plans work during an emergency response with actors and receptors.

Invitations: Has to be worked out but need to make preliminary calls to determine interest, get dates reserved, etc. Follow-up at a later date with formal invitation.

Agenda:

- Introductions by each element of the response community and its role/responsibility (EMA, Local Coordinator, LEPC).
- Emergency Management Agency- Review of off-site plans, what is required by the state (including proper format for submission), and good plans vs. bad plans.
- Brief presentations to describe roles of police, fire/ambulance, LEPC, Hospitals, etc. Use information from first exercise.
- Review of an off-site response plan
- Tabletop exercise based on the plan.
- Critique

Food/Refreshments: Pizza, Wings, Chips, Soda Pop

Handouts: Would like Communications Committee to prepare. Presenters will have to give input to Communications Committee.

Dry Run before Table Top: Determined to be not necessary.

Project Coordinators:

Screens, Projectors, Room Set-Up, etc.:

Media Coverage/Publicity: None desired @ time of event.

Other Funds: School Rent?

After Action Report: Generate and distribute to attendees. Include executive summary, attendance, action log, and highlights. Set a completion date for within 1 month.

Future Plans: If the program is successful in North East, we would hope to have similar programs in other locations.

**2007 LEPC Community Emergency Response Exercises
Evaluation Form**

Date:

Location:

Name/Organization:

Facilities:

Facility conducive to learning:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair
Room temperature comfortable:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair
AV support adequate:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair
Seating and facility set-up satisfactory:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair
Food:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair

Emergency Action Plan Review:

Content clear and organized:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair
Content applicable to my organization:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Handouts appropriate to the exercise:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

Exercise:

Content organized, and understandable:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair
Expertise of presenter matched content:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair
Instructional aids supported presentation:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair

Comments:

Things I would change:

Things I keep the same:

Would you be interested in joining the LEPC?: ☐ Yes ☐ No

Would you be interested in receiving e-mails about upcoming events (if YES, please provide e-mail address):

ACRONYM	MEANING
ARCHIE	Automated Resource for Chemical Hazard Incident Evaluation
CAMEO	Computer-Aided Management of Emergency Operations
CAS	Chemical Abstracts Service
CEPP	Chemical Emergency Preparedness Program
CERCLA	Comprehensive Environmental Recovery, Compensation, and Liability Act
CERT	Community Emergency Response Team
EHS	Environmental health & safety OR extremely hazardous substance
EMS	Emergency medical services
EOC	Emergency operations center
EPCRA	Emergency Planning & Community Right to Know Act of 1986
ERT	Emergency response team
FEMA	Federal Emergency Management Agency
GIS	Geographic information systems
HAZMAT	Hazardous Materials
ICS	Incident command system
IDLH	Immediately Dangerous to Life or Health
JIC	Joint information center
LEPC	Local Emergency Planning Committee
LOC	level of concern
MARPLOT	Mapping Application for Response and Planning of Local Operational Tasks
MSDS	Material safety data sheet
NFPA	National Fire Protection Association
NIMS	National Incident Management System
NRC	National Response Center
NRT	National Response Team
OSHA	Occupational Safety & Health Administration
PEMA	Pennsylvania Emergency Management Agency
PPB	Parts per billion
PPC	Preparedness, preparation & contingency plan
PPM	Parts per million
RCRA	Resource Conservation & Recovery Act of 1976
RQ	Reportable quantity
SAR	Search and rescue
SARA	Superfund Amendments and Reauthorization Act of 1986
SERC	State Emergency Response Commission
SIC	Standard industrial classification
SPCC	Spill prevention control & countermeasure
STEL	Short-term Exposure Limit
TLV	Threshold limit value
TPQ	Threshold planning quantity
TWA	Time-weighted average
USGS	United States Geological Service