

US EPA ARCHIVE DOCUMENT

Emergency Response To Chlorine Incidents:

January 9th, 16th, 17th, 24th and February 10th

Course Overview

Course Location:



- Douglas Fire Department, Cochise County, Arizona.
- Attendants- First Responders from the US and Mexico.

Course Information:

- Funded through the EPA, Border 2012 Program
- Grant proposal, Cochise County Health Department
- Grant management, Douglas Fire Department
- Hosted by the Douglas Fire Department
- Course design and instruction provided by Mike McKearney

Course Information:

- The course consisted of classroom instruction, group activities, practical “hands on” activities and drills.
- The emphasis was on chlorine emergencies, however, some of the training was geared towards broader Haz-Mat response strategies and tactics.

January 9th, 2005

Day One- Morning Session:

- Welcome, introductions and class overview.
- Classroom instruction on hazardous materials identification and recognition.
- The class was then spilt into four groups and given part one of a three part scenario.



January 9th, 2005

Day One- Afternoon Session:

- Presentation on “site operations,” basically, how to operate as a Haz-Mat Team.
- Instruction on operating in Level-A PPE and the safety hazards.



January 9th, 2005

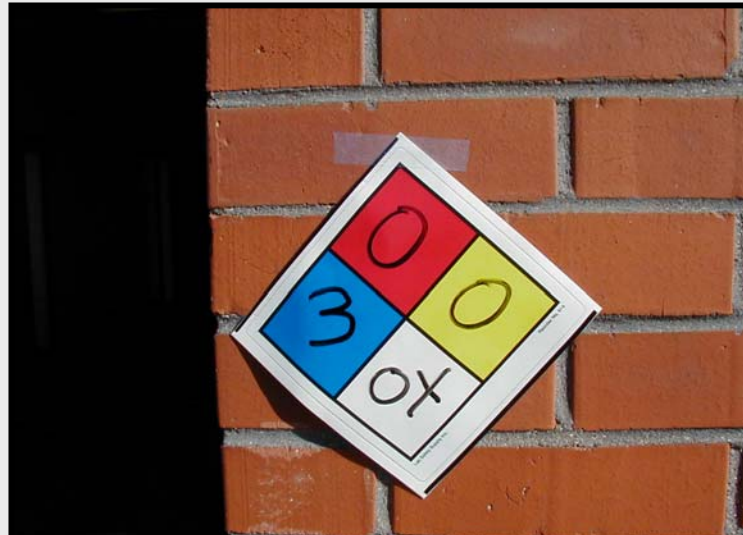
Day One- Afternoon Session:

- The class was split into two separate “Haz-Mat Teams,” each team consisted of first responders from the US and Mexico.
- Two separate drills were set up and ran simultaneously. When each team had completed there first drill, they switched and completed the second one.

January 9th, 2005

Day One- Afternoon Session

- **Drill One-** Reconnaissance Mission
- Scenario was a leaking chemical from a commercial building. No employees present and no further information given.



An NFPA 704 was placed outside the structure as the initial “Identification Item” found.

January 9th, 2005 Day One- Afternoon Session

- Dress out and medical surveillance in the cold zone.



January 9th, 2005

Day One- Afternoon Session

- The Entry Team entered the structure and found a leaking cylinder.



January 9th, 2005

Day One- Afternoon Session



January 9th, 2005

Day One- Afternoon Session

- Recon Information
 - ✓ Structure layout
 - ✓ Location of cylinder
 - ✓ Label
 - ✓ A “Liquid Leak”
 - ✓ Valve assembly leak
 - ✓ No victims found



January 9th, 2005

Day One- Afternoon Session

- Drill Two
- Level-A donning and application of a pipe clamp.



January 9th, 2005

Day One- Afternoon Session

- Drill Two



January 16th, 2005

Day Two- Morning Session:

- Classroom instruction on “estimating course harm.”
- The class was again split into four groups and were given part two of a three part scenario.
- Classroom instruction on choosing objectives, identifying options, and evaluation.

January 16th, 2005

Day Two- Morning Session:

- **Group Scenario Part Two-** Estimating Course and Harm.
- A chlorine leak in the city of Douglas.
- Incident elements were given to include location, leak and weather.
- After the groups finished the scenarios, an ALHO vapor footprint was created using the same incidents elements and placed at the same location on Marplot.
- The “CAMEO” information was then projected onto the screen and open classroom discussion facilitated.

January 16th, 2005

Day Two- Morning Session:

- Group Scenario Part Two- Estimating Course and Harm.



January 16th, 2005

Day Two- Afternoon Session:

- The class was again split into two “Haz-Mat Teams.”
- **Team One** completed practical activities on proper “plug and patch” tactics.
- **Team Two** completed a quiz on Identification and chemical research using reference materials.
- The teams then switched.

January 16th, 2005

Day Two- Afternoon Session:

- “Plug and Patch” practical activities:



January 16th, 2005- Day Two, Afternoon Session:

- “Plug and Patch” practical activities:



January 16th, 2005

Day Two- Afternoon Session:

- Team Two- ID and research quiz:



January 17th, 2005

Day Three- Morning Session:

- Classroom instruction on decontamination.
- Classroom instruction- An overview of Chlorine.

January 17th, 2005

Day Three- Afternoon Session:

- Team One-
 - ✓ Using colormetric tubes
 - ✓ Using the Drager “chip measurement system”
 - ✓ Using pH paper for corrosive vapor and liquid monitoring
 - ✓ Discussion on other product monitoring instrumentation and tactics.
- Team Two- Completed part three of the group scenario

January 17th, 2005

Day Three- Afternoon Session:

- Team One- Product monitoring



January 17th, 2005

Day Three- Afternoon Session:

- **Team Two-** Group scenario part three, choosing objectives, identifying options and evaluating.



January 24th, 2005

Day Four- Morning Session:

- Presentation on Chlorine 100 and 150 lb. cylinders.
- Presentation on application of the A-Kit.
- Group activity on application of the A-Kit.



January 24th, 2005

Day Four- Morning Session:

- Group Activity- Application of an A-Kit.



January 24th, 2005

Day Four- Morning Session:

- Presentation on chlorine one ton containers
- Presentation on application of a B-Kit.
- Practical activity on application of a B-Kit.



January 24th, 2005

Day Four- Morning Session:

- Group Activity- Application of a B-Kit.



January 24th, 2005

Day Four- Afternoon Session:

- Drills:
 - ✓ Team One- Leaking cylinder
 - ✓ Team Two- Leaking one ton container



January 24th, 2005, Day Four- Afternoon Session:

- Team One:



January 24th, 2005, Day Four- Afternoon Session:

- Team Two:



February 10th, 2005

Day Five- Morning Session:

- Presentation on chlorine rail, truck and intermodal manway covers, valves and pressure relief devices.
- Presentation on application of a C-Kit
- Review on containing leaks in chlorine cylinders.



February 10th, 2005

Day Five- Morning Session:

- Class trip to Ari-Mex shipping.



February 10th, 2005

Day Five- Morning Session:

- Class trip to Douglas City well #14.



February 10th, 2005, Day Five- Afternoon Session:

- Final Drill



February 10th, 2005, Day Five- Afternoon Session:

- Final Drill



February 10th, 2005

Day Five- Morning Session:

- Closing remarks



Thank you:

- Environmental Protection Agency
- Douglas Fire Department
- Cochise County Health Department
- First Responders