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 16\textsuperscript{th}, 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 24\textsuperscript{th}, 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