



Engineering • Construction • EH&S • Energy • Waste

Emergency Planning 101

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Why are we here?



My facility won't effect anyone else.



Is this a local concern?



We only use small amounts.....



Ready for media coverage?



Reality Check.....

- ◆ The storage and use of hazardous materials is a basic component of our economy.
- ◆ Hundreds of spills and accidents occur every day.
- ◆ We only learn about the events where things went wrong.

Common Causes of Chemical Accidents

- ◆ Transportation
- ◆ Human error
- ◆ Structural/equipment failure
- ◆ Process upset
- ◆ Intentional act



The Keys to Success

- ◆ Data collection
- ◆ Site inspection/assessment
- ◆ Pre-planning
- ◆ Coordination
- ◆ Prepare for the worst



Data Collection

- ◆ Prepare a comprehensive chemical inventory.
- ◆ Screen inventory for unique hazards.
 - Are there special fire, safety or medical concerns?
- ◆ Identify storage & use areas.
 - Indicate on site sketch.
- ◆ Utilities & key controls.



HAZARDOUS MATERIALS PHYSICAL AND CHEMICAL PROPERTIES WORKSHEET



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Key Physical and Chemical Properties

Chemical name: _____

Common name/Brand Name: _____



Vapor Pressure: _____

Vapor Density: _____

LEL: _____

UEL: _____

Flash Point: _____

Specific Gravity: _____

Solubility: _____

pH: _____

Boiling Point: _____

Melting Point: _____

Reactivity: _____

Incompatible: _____



SOLID LIQUID GAS

Shipped As: (Circle) _____

Typical Container: _____

Size/Quantity: _____

PAGE: _____

 **ERG:** _____

 **NPG:** _____

Toxicological Properties

EXPOSURE ROUTES (ER):

Inhalation? _____

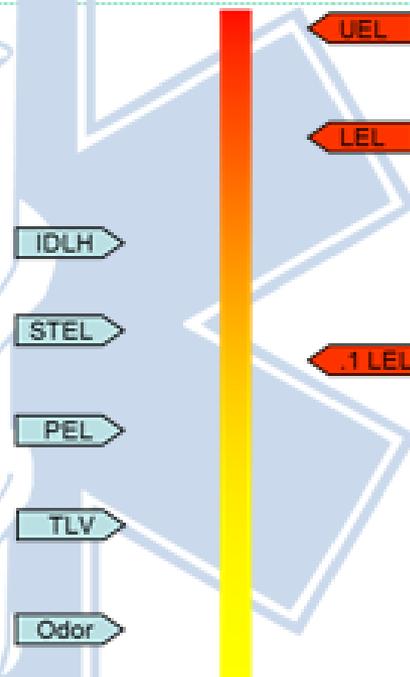
Contact? _____

Absorption? _____

Ingestion? _____

SYMPTOMS:

TARGET ORGANS:



Concentration Chart (ppm)

Glove Type : _____

Suit Type : _____

 **FIRE:**

 **MEDICAL:**

Respiratory Requirements: _____

Storage Location : _____

SPECIAL CONCERNS/HAZARDS:

Site Inspection/Assessment

- ◆ Chemical storage
- ◆ Tank/container condition
- ◆ Tank/container labeling
- ◆ Status of secondary containment
- ◆ Internal inspection procedures
- ◆ Utility/process controls/shut offs
- ◆ Potential release points to the environment
- ◆ Significant fire or health risks
- ◆ Monitoring/control systems



Be Honest!!!!



Look Familiar?



Containment or Storage???



Goals for Pre-planning

- ◆ Identify & address historic or potential problem areas.
- ◆ Identify & plan for likely scenarios.
- ◆ Collect & organize the info you would need if these occur.



Things to Consider

- ◆ Process or system upset
- ◆ Structural failure
- ◆ Transportation release
- ◆ Problems caused by loss of power or water
- ◆ Internal/external impacts
- ◆ Potential for run away reactions
- ◆ Weather induced problems
- ◆ Issues causing greater concern during a fire
- ◆ Intentional acts

Use the 80/20 Scale

- ◆ Focus on what you can manage.
- ◆ Work through scenarios for 5 most likely problems.
- ◆ Inspect, maintain, repair or upgrade what you need to.
- ◆ Develop procedures and train staff to support effort.
- ◆ Review, practice and update procedures.
 - Drills help alleviate the mental fog that can occur in a crisis.

Coordinating with Emergency Responders

- ◆ Invite the fire dept. to tour your facility.
- ◆ Share your Contingency Plan.
 - Make the most of your Knox box.
- ◆ Review high hazard/critical processes or storage areas.
 - Label and photograph these areas.
- ◆ Consider a drill.



Spills Happen – Plan for the Worst

- ◆ Organize & manage your inventory to promote safety & to avoid incompatible combinations.
- ◆ Develop a spill response plan & train staff to use it.
 - Don't forget HAZWOPER training.
- ◆ Chose spill supplies wisely.
- ◆ Negotiate & hire a response contractor before you need one.



Food for Thought

- ◆ Understand the level of support the Fire Dept can/will provide.
- ◆ Data collection, pre-planning & coordination can reduce severity of event.
- ◆ Executive Order 13650 – EPA, OSHA, ATF, USCG and Homeland are working together on emergency planning.
- ◆ Other standards may apply: CFATS, RMP or PSM.

Insert Your Logo Here????





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Questions???

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