Section 10

Emergency Response Actions

Purpose

To understand the order of emergency response actions and apply them to specific chemical release incidents.

NOTE:
Remove Pages 10-3 through 10-6

Section 10

What you will find in this section...

Task 1

- **Read Scenario.**
- **Arrange action cards in order of steps you'd take.**

Any one of us could very well be the first one to spot a potential emergency at our facility. Clearly, we all must know what to do to protect ourselves and our co-workers in times of emergency.

ACTIONS:

On the next page is a list of eight procedures (listed alphabetically) that are typical actions or procedures to take when there is an emergency.

CARDS:

These eight procedures are summarized on a set of eight cards that your trainer will pass out to your small group. The cards list the actions that you would take as the first person who identifies that an emergency situation exists.

SCENARIOS:

On the following page is an emergency scenario. Please read over the scenario. Then arrange the cards in the order of the steps you would take to respond to the emergency: What would you do first, second, third, etc.

TIME:

To copy some of the confusion of a real emergency, your group will only have five minutes to arrange the cards.

Task 1
continued

- **Read Scenario.**
- **Arrange action cards in order of steps you'd take.**

Eight Emergency Response Actions (listed alphabetically)

1. **ALERT** others nearby: Tell a nearby co-worker or anyone else nearby that there's a problem; get help.

2. **CONTROL** the hazard: Control or contain any spill or leak of hazardous material that is part of the incident.

3. **CRITIQUE:** Review what happened and the response to the incident to decide how to improve procedures for the next time.

4. **DECONTAMINATE** the injured: Wash or rinse the contamination off the injured person.

5. **EVACUATE:** Make sure all unnecessary and uninvolved personnel are cleared from the problem area.

6. **REPORT** to government agencies (Environmental Protection Agency, Occupational Safety and Health Administration, DOT, state offices of emergency services, etc.). Make a phone call to the appropriate government agency to let them know an incident has occurred.

7. **RESCUE** the injured: Get in there and get the downed person out (so they can be medically attended to).

8. **SIZE UP** the situation: Take time to think through the situation as you see it and decide on what you will do.

Task 1
continued

- **Read Scenario.**
- **Arrange action cards in order of steps you'd take.**

Scenario: Forklift Impales Drum

Jim Smith was hired last week at Megacorp Metalworks. He has had no training as a forklift operator but operates one today because one of the regular operators is out sick.

While working overtime, Jim misjudges the clearance while making a turn at the end of a stack of drums. The edge of one of the forks punctures a drum and liquid starts pouring out. Jim gets out of the forklift to investigate.

You are working in an area two rows away from where Jim is driving the forklift and you hear what you think is a crash. You approach the area. From about 30 feet away, you see Jim lying on the floor near a leaking drum. The liquid from the drum is heading towards a floor drain. You smell a strong odor like solvents. What should you do?

As a group, please arrange the action cards in order of the first step you should take, the second step, and so on. Do this quickly (in 5 minutes or so) as you would have to in a real emergency. You don't need to use the fact sheets for this exercise.

Remember to pick a spokesperson for your group.

Task 2

- **Review fact sheets.**
- **Rearrange cards, if needed.**

1. Now review the fact sheets on the next few pages and see if you change your mind. Rearrange the order of your cards if so.

2. As an Operations-level responder, which of these actions will you be trained to take?

Fact Sheet #1

Alert, Think, Then Act

All of the eight steps listed in the Task do not apply in every emergency situation. However, when the situation involves an injured person, the following procedures usually apply and should be done in the following order:

1. Alert others nearby.

This is always the first action to take. Notify others that an emergency is taking place so someone else knows there is a problem (in case you are injured) and can call for help immediately.

2. Size up the situation.

Before you make any move, think first — do not become a casualty yourself. You will need to decide which action (rescue, evacuation, or control) can best protect the safety and lives of co-workers. This will depend on the particular situation and your level of training.

3. Evacuate the immediate area and keep people away.

Clear the area close to the incident. The Incident Commander makes decisions about large-scale evacuation. But as an operations responder, you can help to keep people out of the area where the spill is. Those evacuated should go to a designated area where a head count should be done.

4. Rescue the injured, if safe to do so.

Not Your Job

While rescuing the injured will almost always be one of the first recommended actions in an incident, in most situations you will need the help of trained rescuers with specialized equipment before any rescue can be attempted. **As an operations-level responder, you cannot rescue a victim in the hot zone.**

Fact Sheet #1, continued

Decontamination of a person depends on how toxic the chemical is and how life threatening the situation is.

When handling an injured and contaminated person, be sure that emergency medical, ambulance and hospital personnel are kept informed. Some states and communities have laws or policies prohibiting transportation of a contaminated person who has not been decontaminated.

5. Control the hazard.

Often, the next priority is to attempt to contain or control the hazard. This should be done by the emergency response team because they have the training, experience, and equipment to do the job safely. Prompt equipment shutdown or isolation are steps trained personnel may take to minimize the hazards.

Your Job	Your job as an operations responder should keep you out of the hot zone. The steps you take to control the spill should be from a safe distance.

Protecting life and the environment is a higher priority than saving the facility.

6. Notify government agencies

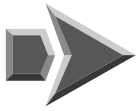
Companies are required to notify government agencies immediately following a significant chemical release. This may mean contacting your local fire department, the EPA, or the state Emergency Management Department. Which agency to contact depends on your state and local laws.

Fact Sheet #1, continued

7. As a follow-up, critique your response.

After an incident, always critique the responses to identify ways to improve response procedures for the next time. This should include the need for more training, drills, equipment or modification of the emergency response plan.

8. Prevention – the most important action



Taking steps to keep a similar emergency from ever happening again is the most important part of the follow-up investigation.

Fact Sheet #2

Setting Priorities: Life Comes First

Getting Our Priorities Straight

Emergency responders should act to protect:

1. Human Life and Safety;
2. Environment;
3. Equipment; and
4. Property.

The first priority is to protect human life and rescue the injured where possible. Sounds easy, right? Unfortunately, it's **not easy to live by this simple rule** during an emergency because of the following:

1. Companies train workers incorrectly.

Often in the past, workers were trained that their first priority during an emergency is to protect the plant equipment, resulting in workers being injured or killed.

- At the Union Oil refinery in Lemont, Illinois, where a 1984 fire killed 17 workers, all operators were instructed to remain at their posts in case of a fire until a fire crew arrived.
- Thirteen firefighters from Kingman, Arizona were killed when a railcar in a remote rural area exploded; they needlessly risked their lives—to save a railcar!

Fact Sheet #2, continued

2. We try a rescue when we shouldn't.

Our human nature is such that we can't stand to watch a fellow worker go down and not jump in and try a rescue. Unfortunately, in our dangerous chemical facilities this instinct will almost always kill us.

According to a NIOSH study of confined space fatalities, over 60 percent of all deaths were would-be rescuers who became casualties because they jumped in to save a co-worker.

It's hard, but we need to learn to think before we jump in. Sometimes "protecting life first" means your own. This is done by isolating the area and **keeping everyone out until people with proper training and protective equipment arrive**.

Protecting the Environment - 2nd priority

Sometimes emergency response actions taken to contain a spill or fire can result in widespread environmental contamination.

In November 1987, firefighters sprayed water on a pesticide warehouse fire in Basel, Switzerland. The contaminated water ran into the nearby Rhine River, contaminating a major drinking water source to four countries.

When dealing with hazardous substances, minimizing the contamination and effects to the environment is a higher priority than putting out a fire to save a facility. These actions include minimizing air emissions, leaks to bodies of water or sewer lines, and controlling water used for fire protection or decon.

Protecting Equipment and Property

Only when life and the environment are protected, should we move to protect equipment, buildings and structures.

Fact Sheet #3

Risk Assessment: Size it Up First

Training, and pre-planning will prepare emergency team members to quickly size up the scene of an emergency. Every emergency is different; you need to look for the specific details about each one. Information gained during size-up will be used to plan response actions such as evacuation, site control, confinement of the spill, and clean-up.

Don't approach the scene to size it up — **do it from a safe distance**. Your most valuable tools in risk assessment are a pair of binoculars and your senses.

During risk assessment, the emergency response team will try to answer the following questions:

- Source and size of the spill or release.
- Immediate effects of spill or release — Any victims? Fire? Any damage?
- Lay-out of the area — what else is near-by?
- Identify the material, if possible, by looking for placards, labels or shipping papers or through air monitoring.
- Potential hazards.

This information is used by the Incident Commander to plan the response.

Fact Sheet #3, continued

Lay-out of area

The lay-out of the area may affect how much damage the spill will cause and how to respond. Some important questions include:

- ☐ What is near-by?
- ☐ Are there low lying spots?
- ☐ Any drains, ditches, pits, or the like that the spill can flow into?
- ☐ Which way is the spill flowing?
- ☐ Ignition sources?
- ☐ Other chemicals?
- ☐ Other operations?
- ☐ If outside: What is the weather? Which way is the wind blowing and how hard? Are there any waterways nearby?
- ☐ If inside: How will the plant ventilation system affect the movement of vapors or fumes?

All members of the emergency response team should understand the hazards of the situation before the response proceeds.

Summary

Emergency Response Actions

☆ The priorities to follow during an emergency should always be in the following order:

- ② Save your life and save the lives of others;
- ② Save the environment; and
- ② Only then should we worry about equipment or property.

Don't risk your life or the lives of others (who may then have to attempt to rescue you) to save equipment and property.

☆ The first few steps to take in any emergency are to:

- ② Alert others nearby of the potential danger.
- ② Size up the situation.
- ② Clear the area around the emergency and keep people out.

☆ We need to know the limits of our role as first responders. Our first priority is to protect ourselves and others from being injured. If we don't have thorough training and the right equipment, we should get to a safe area! We should never try to be heroes or heroines. Instead, we need to initiate the emergency response plan.