

Section 2

Emergency Response Roles

Purpose

To become familiar with the different roles and training required for emergency responders.



Section 2

**What you will find
in this section...**



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Task 1

- **Read the scenario**
- **Who acted within their job description?**
- **Use at least one Fact Sheet**

In your group, please read the scenario below and answer the questions that follow.

Last month, one worker was killed, and one seriously injured at a small facility called Great Lakes Chrome Plating, Inc. Your group is the Health and Safety Committee. You are doing an investigation of the emergency. You have found that the company trained contract workers and plating line operators as “First Responders, Awareness Level” and maintenance workers and supervisors as “First Responders, Operations Level.”

What Bob did:

Bob, a contract worker, was cleaning out some of the storage tanks. He mistakenly broke open a live line connected to the chromic acid tank. He tried to close the valve but his hands were burned by the chromic acid. Some splashed in his eyes, too.

What Fred did:

Fred, a maintenance worker, ran over and helped Bob to the emergency shower. Then he grabbed some gloves and a respirator with cartridges. He ran back to turn off a valve at the chromic acid tank. By this time, some of the chromic acid had spilled into the pit around the cyanide plating lines. Several of the plating tanks leaked, so there was some cyanide waste in the pit. The waste reacted with the acid and formed deadly cyanide gas (what they use in the gas chamber). Two steps into the area and Fred started to gasp, then was overcome. One dead.

Task 1

continued

- **Read the scenario**
- **Who acted within their job description?**
- **Use at least one Fact Sheet**

What Jenny did:

Jenny, a plating line operator saw the chromic acid tank spilling towards the line. She yelled to the three others in the area “Get out of here, there’s a big spill. I’ll call 99 (the plant’s emergency number).” They all ran out of the area. Jenny found a phone at the other end of the aisle and called in the emergency. The operators went to the lunch room, the area set aside as the "safe haven" in an emergency.

What Sol did:

Sol, the Incident Commander, evacuated the entire plant, including the people in the lunch room. He set up the Command Post at the other end of the plant in an office area with separate ventilation from the plant floor. He could see the plating lines through the inside windows in the office. He sent two maintenance workers to close the back-up valve for the acid tank, well away from the spill. He directed overall response operations and called in the County Haz Mat Team.

Now answer the five questions on the next pages. Please pick a new person to write down your answers and report them to the larger group. Refer to at least one of the fact sheets in this section in developing your answers.

Task 1

continued

- **Read the scenario**
- **Who acted within their job description?**
- **Use at least one Fact Sheet**

1. Who do you think acted in the emergency role the way they were trained to and why do you think this?

2. Who do you think acted beyond the role they were trained to, and why?

3. Where is the hot zone? What level of training is required for going into the hot zone and trying to stop a chemical spill?

Task 1

continued

- **Read the scenario**
- **Who acted within their job description?**
- **Use at least one Fact Sheet**

4. After you finish this operations-level training, what actions do you think you will be qualified to take in an emergency?
5. When this class is over, will you need further training to help control spills at your plant? If yes, on what topics?
6. In addition to training, is there anything else you need before you can be part of a chemical emergency response team?

Fact Sheet #1

Emergency Response: Know Your Role

Most UAW members are “first responders” because we work in situations where we are likely to be the first on the spot in an emergency.

But, often workers are ordered (or simply jump in) to take actions that they haven’t been properly trained or equipped to do. OSHA now requires all employers to divide their workforces into five levels of emergency response, if the company wants to respond to hazardous materials spills on-site.

OSHA’s Standard on Hazardous Waste Operations and Emergency Response (HAZWOPER) sets up five levels of emergency responders. Each level requires more training than the last. These five levels are listed in order of increasing responsibility:

1. First Responder, Awareness level
 2. First Responder, Operations level
 3. Hazardous Materials (Haz Mat) Technician
 4. Hazardous Materials Specialist
 5. Incident Commander (IC)
- Your employer must train you in your role before you are assigned to respond to a spill.
 - Your employer’s Emergency Response Plan should clearly describe everyone's role in an emergency.

Going beyond your level of training in an emergency is dangerous, even deadly.

Source: OSHA 29 CFR 1910.120 (q). See appendix in this manual for full text of the HAZWOPER standard.

Fact Sheet #2

Five Levels of Responders — What They Do

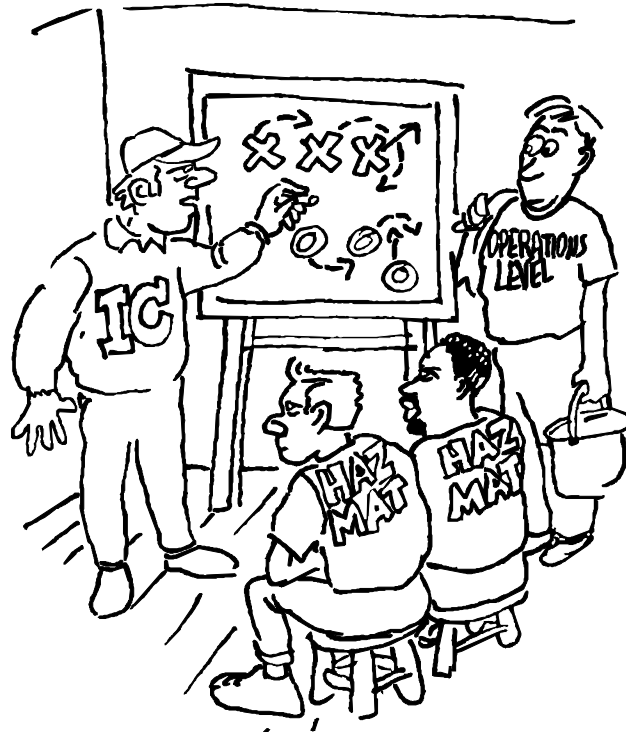
- 1. First Responder, Awareness Level: Sound Alarm, Run**
Workers in this role need to know who to notify, how to reach them, and where to run. This applies to most employees at UAW-represented facilities.
- 2. First Responder, Operations Level: The Defense Team (This is YOU)**
They act defensively to keep a spill or release from spreading. Their place is to work from a safe distance. Typically maintenance workers, some operators, and some first line supervisors are “operations” level.
- 3. Hazardous Materials Technicians: The Offense Team (Haz Mat Team)**
They take offensive action to stop the release. They often work near or in the hazardous materials being released. They must wear specialized protective equipment. They need much more extensive training.
- 4. Hazardous Materials Specialists: The Experts (Haz Mat Team)**
They are special assistants to the Haz Mat Team. They have special expertise in working with certain chemicals or specific control procedures.
- 5. Incident Commander: The Emergency Boss**
The one person authorized to control all emergency response activities. If personnel in your plant respond to emergencies, an Incident Command System (ICS) must be used. Using this system helps to keep the response from turning into chaos.

Fact Sheet #2 (continued)

Another Important Role: Safety Officer

The safety officer's job is to keep an eye on the health and safety of the emergency responders. He/she is the one person who can override the Incident Commander, if he/she thinks the safety of the responders is at stake.

This course combines First Responder Awareness and Operations levels. At the Operations level, your job is to help control spills in a safe area. Operations-level responders can also work on the decon line.



Fact Sheet #2 (continued)

Here's what OSHA says about each level in the HAZWOPER standard:

First Responders at the Awareness level — “individuals who are likely to witness or discover a hazardous substance release and who have been trained to initiate an emergency response sequence notifying the proper authorities of the release. They would take no further action beyond notifying ...”

First Responders at the Operations level — “individuals who respond to releases or potential releases of hazardous substances as part of the initial response to the site for the purpose of protecting nearby persons, property, or the environment from the effects of the release. They are trained to respond in a defensive fashion without actually trying to stop the release. Their function is to contain the release from a safe distance, keep it from spreading, and prevent exposures.”

Hazardous Materials Technicians — “individuals who respond to releases or potential releases for the purpose of stopping the release. They assume a more aggressive role than a first responder, operations level, in that they will approach the point of release in order to plug, patch or otherwise stop the release of a hazardous substance.”

Hazardous Materials Specialists — “individuals who respond with and provide support to hazardous materials technicians. Their duties parallel those of the hazardous materials technician, however, those duties require a more directed or specific knowledge of various substances they may be called upon to contain.”

Incident Commander — individuals who “assume control of the incident scene beyond the first responder awareness level.”

Source: OSHA, 29 CFR 1910.120 (q). See appendix for full text of this standard.

Fact Sheet #3

The 3 Zone Plan

During a chemical emergency, the Incident Commander must outline three zones. This helps to isolate the emergency, protect personnel, and keep people and equipment from tracking the spilled chemicals all over. The three zones are:

**Danger!
Stay
Away!**

Hot Zone (sometimes called the exclusion zone)
The entire area surrounding the haz mat incident. The hot zone should extend far enough to keep people outside the zone from being exposed to hazardous materials or dangerous surprises (fire, explosion, change in wind).

**For
Decon
Only**

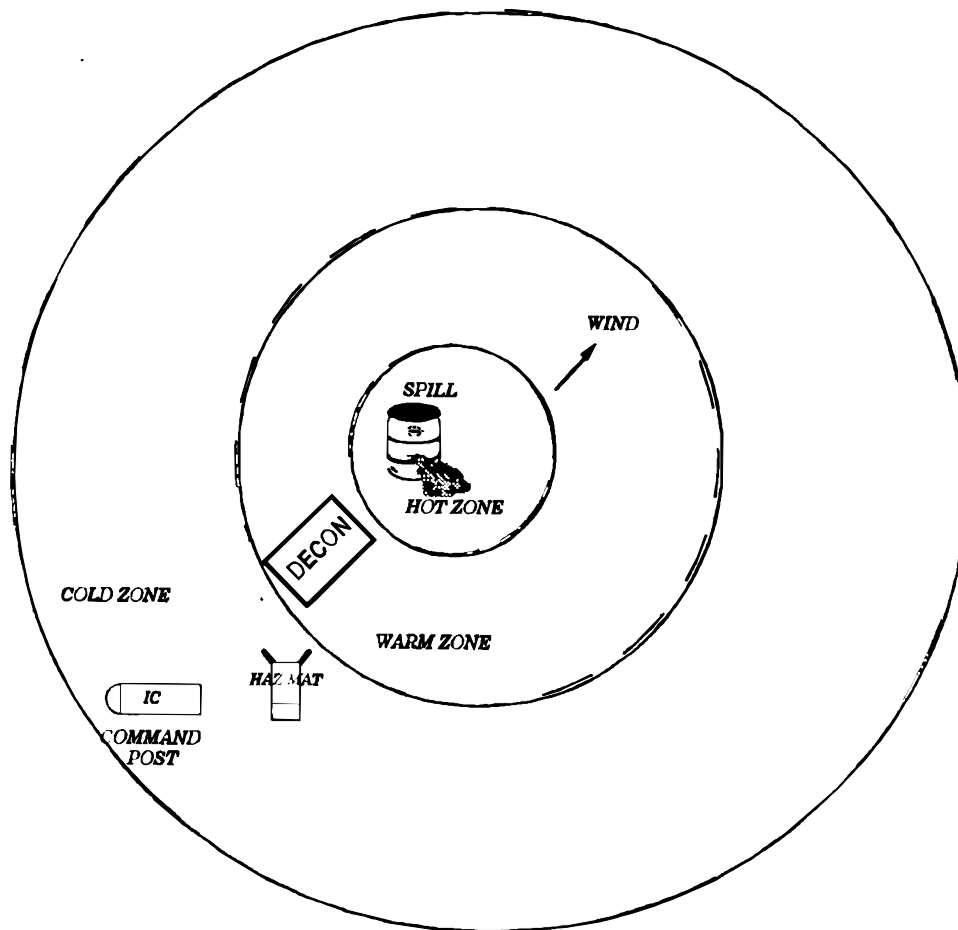
Warm Zone (or decontamination zone)
The area where the decontamination line is set up. Emergency responders and equipment used to handle the spill are cleaned off or disposed of in this area. It starts out clean, but will become contaminated as the entry team leaves the hot zone. All people and equipment entering and leaving the hot zone must pass through this zone.

**Operations
Spill
Control**

Cold Zone (sometimes called the clean zone or support zone). The area where the command post, extra supplies, and other support functions are set up. The Incident Commander stays here.

Fact Sheet #3 (continued)

3 zone set-up for a spill outside:



Work zones help keep people out of harm's way. Work zones also help to keep the released materials from spreading.

Fact Sheet #4**Defense! Defense!**

The OSHA HAZWOPER Standard (1910.120) says that first responders, operations level are qualified to carry out defensive actions from a safe distance. But just what are the differences between defensive and offensive activities?

Here are some basic descriptions:

Defensive Actions

Y
E
S Operations-level responders take only defensive actions at a safe distance from the spill, outside the hot zone. Defensive actions keep the spill from spreading or help to control it. You should not be exposed to the released material while doing defensive actions. Chemical protective clothing should not be needed, unless you are working on the decontamination line.

Defensive actions include:

- ② Controlling the scene and isolating the area.
- ② Eliminating ignition sources, such as engines, cigarettes, and flares.
- ② Building a dike with absorbent materials (like sand) to keep a spill from getting into a sewer or drainage ditch.
- ② Closing valves or shutting down a process from a safe distance.
- ② Shutting down pumps and compressors from the control room or another safe location.
- ② Notifying the proper response personnel in your facility and helping to evacuate.

Fact Sheet #4 (continued)

If you are not sure that you are safe from exposure to the released material, you should not be working in that area. Testing the air with specialized monitors must be done to assure that you stay out of danger in the cold zone.

Offensive Actions

N Offensive actions are taken to **stop** a spill or release. They are done in the hot zone. Responders taking offensive actions **are exposed** to hazardous materials during the emergency.

O They must wear special chemical protective clothing, even “moon suits.”

Offensive actions include:

- ② Plugging or patching a leaking pipe or container.
- ② Putting leaking drums into overpack containers.
- ② Building a dike or blocking a drain in the hot zone.
- ② Entering the hot zone to turn off a pump or valve.



Only HazMat Technicians and Specialists have the training to take offensive actions in an emergency. Emergency actions in the hot zone must be performed using the buddy system in groups of two or more.

Fact Sheet #5

How Far Away Is Safe?

Knowing what your role is in an emergency is just the first step. You also need to make sure that:

You're in the right place -- a safe distance from the release so you will not be exposed to the chemicals or be hurt by a fire or explosion.

You're doing the right thing -- taking defensive actions.

Operations level responders should be in the **cold zone** when doing things to control the spill. The only time you would be in the **warm zone** is if you are **assigned to work on the decontamination (decon) line** to clean off the workers who enter the **hot zone**.

A Safe Distance From the Release

First responders are not supposed to use specialized chemical protective clothing except on the decon line. First responders should never be sent to do spill control in an area where they could be contaminated. Your spill control tasks must be done a safe distance from the release.

For some chemicals, a safe distance is a **long** way from the spill. Other chemicals don't get into the air easily, or are much less dangerous. A safe distance for these spills simply means not coming in contact with the material. It all depends on what the chemicals are and where the spill happens.

Your employer must figure out what is "safe" for different chemicals in your workplace. This information should be written into the Emergency Response Plan for your facility.

Fact Sheet #5, continued

The Cold Zone of Protection

It is the job of the Incident Commander (IC) to establish three zones to separate the work of the Haz Mat Team, the decontamination team, and first responders and others who do not have specialized protective equipment. First responders have a big stake in the decisions an IC makes.

Working on the Decontamination (Decon) Line

The warm zone is where the people and equipment who enter the hot zone get cleaned off. The warm zone starts out as clean. It should be a safe distance from the release, too. For example, if a fire or explosion should happen, or a vapor cloud is suddenly released, the decon workers should be located out of harm's way. Decon workers do need special equipment to protect them from the chemicals that the Haz Mat Team brings from the hot zone. **Operations responders can work on the decon line in some emergency situations.** (For more information, see the section in this manual on Decontamination.)

Fact Sheet #6

The Incident Command System

OSHA requires that employers use an Incident Command System (ICS) and an Incident Commander (IC) for every hazardous material emergency.

The following are some of the items an Incident Command System should include:

- Assignment of a command structure and overall authority to one individual.
- Coordination of all incident scene operations.
- Prevention of free-lancing during emergency operations.
- Structured system for communications. (You only report to one or two people.)
- Structured system for response and assignment of resources.
- Provision for expansion, escalation, and transfer and transition of roles and responsibilities.

The system is simple and should be used routinely at all incidents.

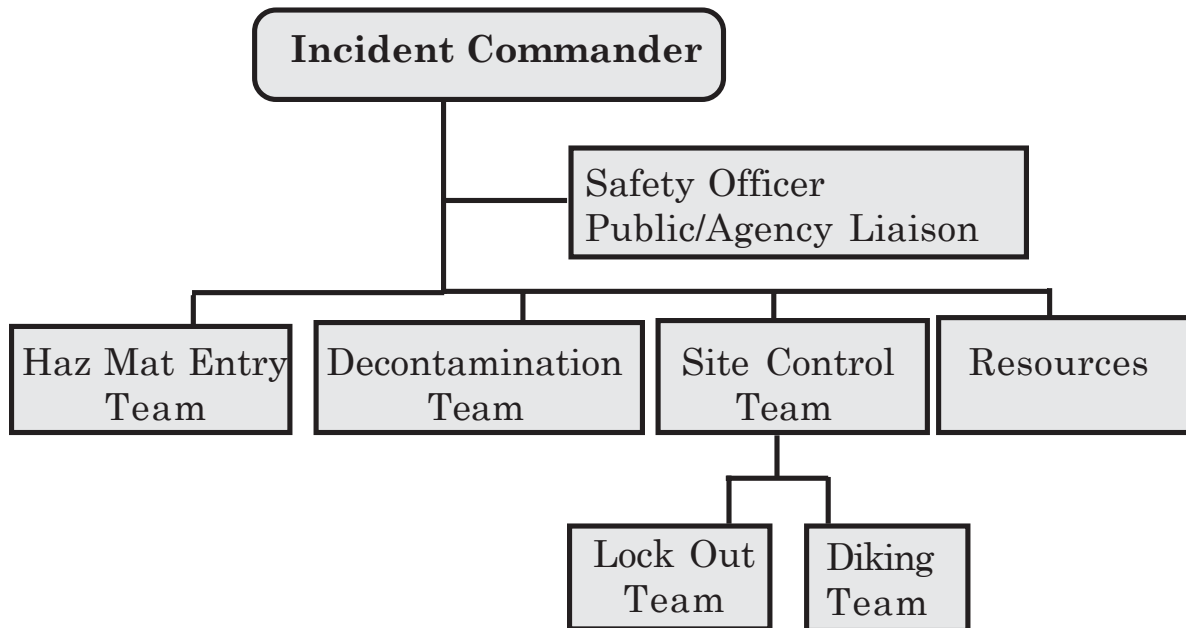
Without the Incident Command System, an emergency can quickly turn into a free-for-all. That's when people get hurt.

According to OSHA 1910.120 (q):

“The individual in charge of the ICS shall designate a safety official, who is knowledgeable in the operations being implemented at the emergency response site, with specific responsibility to identify and evaluate hazards and to provide direction with respect to the safety of operations for the emergency at hand.”

Fact Sheet #6 (continued)

Example of Incident Command System:



Span of Control

No more than 5-6 people should report directly to the Incident Commander. For instance, each team in the ICS pictured above would have a leader. Only the team leader communicates with the Incident Commander. The same limit applies to all levels of the ICS. It is too hard to keep the response coordinated and running smoothly if you have to communicate with more than 5-6 people.

Fact Sheet #7

How Much Training Is Required by OSHA?

All five levels of emergency responders need training before they can get involved in haz mat incidents. The amount of training required depends on your assigned role. Most UAW members are probably “First Responders, Awareness Level” or “First Responders, Operations Level.” The chart shows OSHA’s minimum training for each level. The training adds up, too. To be a Haz Mat Technician, you have to be trained as a Technician on top of Awareness and Operations-level training.

Level	Emergency Role	Initial Training	Refresher
1	First Responder, Awareness Level	Training or experience listed on Pages 2-21	Annual
2	First Responder Operations Level	8 hours or experience in topics listed on Pages 2-22.	Annual
3	Haz Mat Technician	24-hours in many technical areas, such as patching and plugging containers.	Annual
4	Haz Mat Specialist	24-hours Haz Mat Technician training plus extra technical topics.	Annual
5	On-scene Incident Commander	24-hours Operations Level training, plus extra topics related to Incident Command	Annual

Source: OSHA’s standard on Hazardous Waste Operations and Emergency Response (HAZWOPER), 29 CFR 1910.120 (q). See appendix in this manual for full text of HAZWOPER Standard.

Fact Sheet #8

Eight Hours is Not Enough

Experts agree that emergency responders need several days of classroom and hands-on training, plus frequent drills. This is the only way you will be prepared to respond in a real emergency.

When is 8 hours of training enough?

In a perfect world, OSHA's 8-hour training requirement for Operations level responders might work. But who lives in a "perfect world?" In such a "perfect" world, a company would have already provided:

- ② Thorough training on the chemicals in your work areas, including specific spill procedures and drills (required by OSHA's Hazard Communication Standard 29 CFR 1910.1200) and drills.
- ② Thorough respirator training (required by OSHA's Respiratory Protection Standard 29 CFR 1910.134).
- ② Emergency plans, fire protection plans, spill prevention plans and employee training (OSHA standard 1910.138 and EPA standards).
- ② **Emergency response drills**, using the Incident Command System all five levels of emergency responders and the off-site emergency responders needed (OSHA 1910.120 and the EPA's Emergency Planning and Community Right to Know Act).
- ② Accident prevention and investigation training.
- ② Chemical and fire protective clothing and training on how to use them.

Fact Sheet #9

What a First Responder Needs to Know?

First Responder, Awareness Level

Workers that are assigned at the First Responder Awareness level are those likely to witness or discover a haz mat emergency. All they are expected to do is notify the person in charge, and then leave the area. OSHA says they must be trained in the following topics. Or these workers have to be able to show they can do each of these things:

1. Understand which hazardous materials are at the facility and what dangers there would be in an emergency.
2. Understand what kinds of emergencies could happen involving any of these chemicals.
3. Recognize when hazardous materials are present in an emergency.
4. Identify hazardous materials, when possible, and know how to use the Department of Transportation's Emergency Response Guidebook.
5. Know the role of a first responder, as written in your facility's Emergency Response Plan.
6. Know when and how to notify the person in charge of dealing with emergencies at your facility.

A real weakness of the OSHA standard is that it doesn't say how many hours are needed for training at this level. OSHA does say that refresher training has to happen every year.

Fact Sheet #9 (continued)

First Responder, Operations Level

Workers that will be Operations level responders have to show they can do all of the things required of an Awareness level responder. In addition, OSHA says that Operations level workers need training or experience to show skill in the following areas:

7. Know basic hazard assessment and risk assessment techniques.
8. Know how to select and use the proper personal protective equipment available for your use during emergencies.
9. Understand basic hazardous materials terms.
10. Know how to perform basic control, containment, and/or confinement operations given the limits of the resources and personal protective equipment available.
11. Know how to go through basic decontamination procedures.
12. Understand your facility's relevant standard operating procedures (SOPs) and termination procedures (how and when to end and emergency response).

OSHA says that all this can be done in no less than eight hours of training. Annual refresher training is required for operations responders, too.

Medical Surveillance: What OSHA Says

OSHA's HAZWOPER Standard requires employers to provide medical surveillance for members of Haz Mat Teams. Employees who are exposed to chemicals in an emergency response and develop symptoms also have the right to be included in a Medical Surveillance Program.

All tests and doctor's visits that are part of the Medical Surveillance Programs should be **provided without cost to the employee, without loss of pay, and at a reasonable time and place.**

Picking a Qualified Doctor

If you needed major heart surgery, would you trust your family doctor or pediatrician to perform the surgery? Probably not! You would want a certified surgeon with training and experience in heart surgery. The same is true for picking a doctor to diagnose work-related illnesses, or to design a medical surveillance program.



You want a doctor that is certified in Occupational Medicine by the American Board of Preventive Medicine. If a doctor who is board certified in Occupational Medicine is not available, then you at least want someone with specific training and experience in Occupational Medicine **AND** a certified doctor should review employee medical records.

Fact Sheet #10, continued

What should a medical evaluation include?

First, the doctor must be informed by the employer about the specific duties of the employee going through the medical evaluation. The employer must tell the doctor what chemicals and conditions that employee might be exposed to on the job, and what protective equipment he/she will be using. During the medical visit, the doctor will collect the following:

- A work history — what jobs you have worked on and what chemicals were involved
- A history of your health with special focus on symptoms related to the handling of hazardous substances
- Information to assess the worker's "fitness for duty," especially the ability to wear personal protective equipment such as an SCBA or respirator.

The rest is up to the physician. The need for specific medical tests such as: chest x-ray, pulmonary function test, or blood test depend on which chemicals you work with. For instance, a person who works with asbestos should have lung function tests done.

REMEMBER

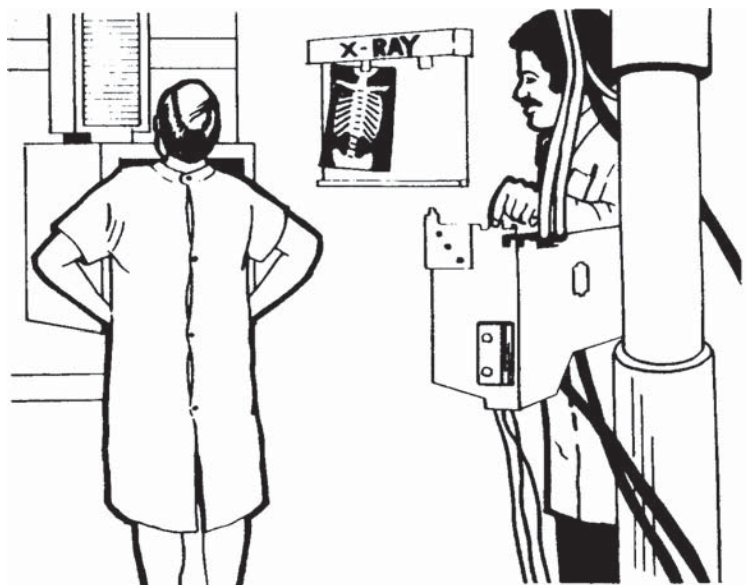
Medical surveillance is not the same as preventing problems in the first place. Keeping exposure to dangerous chemicals as low as possible is the only way to prevent problems from arising.

Fact Sheet #10, continued

When are Medical Evaluations Done?

The OSHA standard sets down the minimum number of times that medical evaluations must be offered to Haz Mat Team members.

- Prior to starting the job as a HazMat emergency responder.
- At least once a year every year while you are on the Haz Mat team.
- At the end of your job as an emergency responder.
- As soon as possible once the employee tells the employer of a symptom that indicates overexposure to a chemical(s).



Fact Sheet #10, continued

How Do You Find Out the Results?

All employees have the right to see and get copies of their medical records from their employer. The records include the doctor's written opinion, results of exams and tests, and any employee medical complaints related to exposure to hazardous chemicals.

The doctor must inform the worker directly of any results that require medical follow-up.

Are Exams Required?

OSHA requires employers to make exams “available” to employees. But the employee has a choice whether or not to take the tests. *If a qualified doctor is involved* in the program, though, it is a very good idea to participate in order to catch medical problems early.

The doctor writes a medical opinion stating whether or not an employee has any condition which would put his/her health at risk by doing the job. A copy of this “written medical opinion” goes to the employer who must provide it to the employee.

All employees have the right to see and get copies of their medical records from their employer. The records include the doctor's written opinion, results of exams and tests, and any employee medical complaints related to exposure to hazardous chemicals.

PRIVACY

The doctor's written opinion cannot discuss any medical findings that are NOT related to the work exposures.

Summary

Emergency Response Roles

- ★ **It is extremely dangerous to act beyond your level of training in an emergency.**
- ★ OSHA set up five levels of emergency responders in the standard on Hazardous Waste Operations and Emergency Response or “HAZWOPER”. Each level has a different role at an emergency. They are linked together and coordinated by the Incident Command System (ICS).
- ★ Awareness level first responders notify the designated person when they find a chemical emergency in their facility. Then they leave the area. They don’t have training to go any further.
- ★ **The most an Operations level first responder can do is try to contain a chemical spill from a safe distance, and help keep others out of the danger area. An Operations level responder might build a dike to prevent a spill from going into a creek, if you can do it in the cold zone.**
- ★ **This course is designed to train you up to the Operations level. But, you need training on the equipment and specific procedures in your facility before you can take defensive actions in a real emergency.**
- ★ At every emergency, one person must take charge and direct all response activities. This is the Incident Commander, who must have special training to do this job.

Summary

continued

Emergency Response Roles

- * Every emergency responder has to receive training in specific skill areas set by OSHA before they can be involved in any chemical incident. You also need retraining at least once each year to keep you up to date.
- * Your employer must write an Emergency Response Plan that describes the roles of responders and other employees at the facility during an emergency. The plan must be made available to workers and the union on request.