HAZWOPER VIDEO SERIES:
UNDERSTANDING HAZWOPER

Leader’s Guide

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THE "HAZWOPER" VIDEO SERIES

This videotape education program is part of a comprehensive series of programs on working safely with hazardous materials and hazardous waste, as well as how to deal with emergencies involving hazardous substances. These programs have also been designed to meet employee training requirements of OSHA's Hazardous Waste Operations and Emergency Response (HAZWOPER) Regulations. The series includes programs on the following topics:

- Understanding HAZWOPER
- Introduction to HAZWOPER Retraining
- Understanding Chemical Hazards
- Personal Protective Equipment and Decontamination Procedures
- Exposure Monitoring and Medical Surveillance
- Decontamination Procedures
- Personal Protective Equipment
- The Emergency Response Plan
- Medical Surveillance Programs
- Accidental Release Measures and Spill Cleanup Procedures
- The Site Safety and Health Plan

- Monitoring Procedures and Equipment
- HAZMAT Labeling
- Respiratory Protection
- The ANSI MSDS
- Confined Space Entry
- Work Practices and Engineering Controls
- Handling Hazardous Materials
- Safety Orientation
- Electrical Safety in HAZMAT Environments
- Fire Prevention and Safety
- Heat Stress
- Dealing with the Media in Emergency Situations
INTRODUCTION TO THE PROGRAM

Structure and Organization

Information in this program is presented in a definite order so that employees will see the relationships between the various groups of information and can retain them more easily. The sections included in the program are:

- History of the HAZWOPER Regulations.
- Definitions of Hazardous Chemicals and Hazardous Waste.
- Container Labels and Material Safety Data Sheets (MSDSs).
- The Site Safety and Health Plan.
- HAZWOPER Training Requirements.
- Evaluation of a Hazardous Waste Site.
- The Site Control Program.
- Monitoring of Hazardous Substances.
- The Medical Surveillance Program.
- Engineering Controls.
- Safe Work Practices.
- Personal Protective Equipment (PPE).
- Standard Operating Procedures.
- Decontamination.
- The Emergency Response Plan.
These sections include examples and other references that will help employees to relate the information to their work environments.

**Background**

Hazardous materials and waste are a part of many work situations, and can be found in many types of facilities and job sites. It is very important for employees to know how to recognize these potentially dangerous substances, and how to handle and dispose of them properly.

In 1976, The U.S. Environmental Protection Agency (EPA) issued the Resource Conservation and Recovery Act (RCRA) to regulate the handling of hazardous waste "from cradle to grave". Since then, other regulations have followed... including the Occupational Safety and Health Administration's (OSHA) Interim Final Rule for Hazardous Waste Operations and Emergency Response ("HAZWOPER")... which in 1986 gave OSHA the task of protecting HAZMAT workers.

As part of these HAZWOPER regulations, there are varying requirements for employee training, depending on the employee's specific level of involvement with hazardous materials. This program will help employees to understand various aspects of the HAZWOPER regulations, as well as their rights and responsibilities as someone who works with hazardous materials or waste. But more importantly, the information provided in this training program will help employees to work safely around hazardous materials.

(For more detailed information about the HAZWOPER regulations, see the section titled "Major Program Points" located in this Presenter's Guide).

**Objectives**

This training program is designed to present information on the nature of hazardous materials and help employees reduce or eliminate potential exposure to hazardous materials in their work environments. Upon completion of the program, employees should:

- Have an overall understanding of the HAZWOPER regulations.
• Understand the various definitions of hazardous chemicals and hazardous waste.

• Recognize the importance of container labels and MSDS’s, and the information that they contain.

• Know the specific training requirements for various types of employees who work with hazardous chemicals or hazardous waste.

• Know when and how to use various methods to monitor for the presence of hazardous substances.

• Learn how the Site Control Program, the Medical Surveillance Program and the Emergency Response Plan all help to provide a safer workplace.

• Understand decontamination procedures, and how they can help prevent a minor mishap from becoming a major health problem.

Reviewing the Program

As with any educational program, the "presenter" should go through the entire program at least once to become familiar with the content and make sure the program is consistent with facility policy and directives.

As part of this review process, you should determine how you will conduct your session. The use of materials, such as handouts, charts, etc., that may be available to you needs to be well thought out and integrated into the overall program presentation.
PREPARING FOR THE PRESENTATION

Structuring the Presentation

In conducting this education session, you should proceed with a friendly and helpful attitude. Remember that the "trainees" are looking to your experience and knowledge to help them relate to the situations shown in the videotape program. It is important to let the trainees interact with you and each other during the training session. Stimulating conversation within the group is one of the best things you, as the presenter of the program, can do to help everyone get as much as possible from the session. Be alert for comments that could help in this area in future sessions and make note of them.

As the presenter, you also should:

- Keep the session related to the topic of Understanding HAZWOPER.
- Relate discussions to facility/site operations, procedures and responsibilities.
- Prevent any one person or small group of employees in the session from doing all the talking.
- Get everyone involved. Ask questions of those who don't participate.
- Clarify comments by relating them to the key points in the videotape.

Use the outline of the major points included in the program, as well as the information included in the quiz, as the basis for answering any questions. If you don't know the answer, say so. Tragic results may occur should you provide incorrect or inaccurate information. Remember, this is a positive program on Understanding HAZWOPER. Make sure your attitude and words reflect this, and that the emphasis is always on providing the information needed by the attendees to understand the HAZWOPER regulations and how to work safely with hazardous materials and waste.
Setting Up the Class and Classroom

Remember, there are a number of things that must be done to "set up" the class as well as the classroom. These fall into several groups of activities, and include:

- **Scheduling and Notification**
  - Use the enclosed form to schedule employees into the session.
  - Make sure that the session is scheduled so that it fits into your attendees' work day.
  - Send out notification of the session well in advance, to give people enough time to incorporate it into their schedule for that day.
  - If possible, post a notification on bulletin boards in the affected employees' areas.

- **The Classroom**
  - Schedule the room well in advance.
  - Make sure the room can accommodate the expected number of attendees.
  - Check it again on the day of the program to make sure there is no conflict.
  - Make sure the room can be darkened, and won't create a glare on the television screen.
  - Locate the light controls and test them.
  - Make sure the power for the videotape player operates separately from the room light.
  - See if you can control the room temperature.
  - Know where the closest restrooms are located.
  - Assure that the room is free from distracting noises.
  - Make sure emergency exits are marked and known to the attendees.

- **Seating**
  - Make sure everyone can see the screen from their seat.
  - Make sure everyone can hear both the videotape and yourself when you speak.
- Check to see that seating is such that writing can be done easily.
- Make sure the seating arrangement allows eye contact between attendees, and between yourself and attendees.

**Equipment and Materials**
- Make sure a videotape player (check for correct "format"), monitor, and all appropriate cables and extension cords are available.
- Make sure a stand or table is available and is of appropriate height for all attendees to easily see the monitor.
- If you plan on using a chartpad, blackboard, or other writing board, make sure it is available, easy to see, and you have the proper writing instruments.
- Make sure you have 6" x 8" index cards or other materials to be used as "name tents" for attendees.
- Make sure you have made up a sufficient number of copies of the Quiz, as well as any other handouts you are using.

**"Final Check"**
- Make sure equipment is in the room prior to the scheduled session.
- Make sure you have the right videotape, look inside the three-ring binder!
- Check to see that the room is set up properly.
- Check equipment prior to the presentation to assure that it works.
- Make sure extension cords, etc. are "taped down", if need be, to avoid tripping.
- Run the "leader" on the videotape up to the point where the program begins.
CONDUCTING THE SESSION

The Initial Steps

In conducting the session remember the positive nature of this presentation. Everyone is attending in order to learn more about how to do things safely. Initially, you need to:

- Introduce yourself as the session leader.
- State the title of the program, "Understanding HAZWOPER" and the purpose of the session (to learn more about the HAZWOPER regulation and how to work safely with hazardous materials and waste).
- Inform the attendees when there will be breaks (if you plan them) the location of exits and restrooms and if water, coffee, or other refreshments will be available.
- Make sure all of the attendees have "signed in" on your Scheduling and Attendance Form. Remember, it is very important to document peoples' attendance at the session.

Once this "housekeeping" is done, it is time to move to the "meat" of the session. First, the attendees need to be informed about the objectives of the session (this is where you can use a flip chart or board to list the objectives, which should be done prior to the class starting). This listing should be preceded with some "introductory remarks". Your own words are always best, but the remarks should follow along the lines of the following:

"Today we are going to talk about the HAZWOPER (Hazardous Waste Operations and Emergency Response) regulations, and how we can work as safely as possible in an environment that can bring us into contact with hazardous materials."
"We have a pretty good safety program here. However, as we all know, from time to time accidents can still occur. Drums or other containers can be damaged and begin to leak, or we may even experience a chemical spill. Some of us may belong to our in-house Emergency Response Team. All of these situations have the potential to cause us to be exposed to hazardous substances."

"As you probably know, the government has created a set of regulations to make sure that wherever these types of situations take place employees are protected as much as possible from hazardous exposures."

"We realize that the first step in protecting ourselves is to be able to recognize where potential exposure can occur. We have tried whenever possible to limit these exposures through Engineering Controls and Safe Work Practices. We also know that it is important to use appropriate Personal Protective Equipment in many of our tasks."

"These are the type of things the regulations address. And learning more about these topics is the focus of our session. To make this the most productive session possible we need to look at what we want to accomplish here today (provide the 'Objectives' list, provided in the preceding section of this manual verbally, or indicate to the board or chart where they have been written down)."

Once the objectives have been provided, you are ready to show the videotape program. However, you need to let the attendees know that they will be taking a quiz at the end of the session (if you are using it). It needs to be emphasized that they are not being "graded", but that the quiz is being used to see if the session is effectively transmitting information to them in a way they will remember.
Showing the Videotape

At this point, you need to introduce the title of the videotape program once again, "Understanding HAZWOPER", darken the lights if necessary, and begin the showing of the videotape.

Conducting the Discussion

After the videotape program has been shown, it is time for the group discussion on the information contained in the session. Care must be taken to make sure that the discussion is kept to the general topic of Understanding HAZWOPER and working safely with hazardous materials. There are several ways to conduct these discussions. These include:

- Calling for questions from the attendees and using these questions as the basis for the discussion.

- "Leading" the discussion through the points covered in the program using statements such as:
  - "One of the sections that we saw in the videotape was about selection and use of PPE. What are the different levels of protection that PPE provides, and what types of PPE do we use in our operations?"
  - "We saw some interesting things about MSDS's. Who can tell us where we can find MSDS's for the chemicals that we use?"

You should use the discussion format that you are most comfortable with. The outline of the major points addressed in the videotape and the questions and answers in the master copy of the quiz should be used as a basis for this discussion, as well as the supplemental information that you have presented in this session.

Remember, you have allocated a limited amount of time in which this discussion can take place. It is important to blend the attendees questions and areas of obvious interest with the objective of trying to touch on each major area within the session in the discussion. By touching on each area,
the attendees are much more likely to retain the information presented in the session.

Concluding the Presentation

Once discussion has concluded (whether naturally or you have had to bring the discussion to a close in order to complete the session within the time allowed), it is time to give the quiz (if you are using it). Again,

remind the attendees that the quiz are only meant to help determine how effective the presentation of the information is, and that they will not be graded. Let them know that they have approximately five minutes to complete the quiz.

At the end of the five minute period, remind the attendees to date and sign their quizzes and then collect them. The attendees should be thanked for attending the session and reminded of any other sessions in the educational program that they may be attending. They can then be dismissed to return to their normal activities.

*(An alternative to this approach is to give the quiz immediately after showing the videotape, then use a review of the quiz as a basis for your group discussion).

"Wrapping Up" the Paperwork

Before much time has passed, and the subject matter is fresh in your mind, several areas of "paperwork" must be completed. First, check to make sure that all attendees signed the Scheduling and Attendance Form. Next, make sure that you have a quiz from every attendee, dated and signed.

Also, depending upon what your facility has decided to do, a copy of the attendance sheet, along with the quiz for each attendee should be either filed in your files, or turned over to the attendee’s department manager or the Personnel Office so that this paperwork can be included in their Personnel File. Their Training Logs should also be updated, and each
attendee should be given a filled out and signed Training Certificate, signifying that they have successfully completed the course.

Remember, it is always a good idea to document information about an employee's attendance at these sessions, as well as the fact that the employee has come away from the session with some knowledge of the HAZWOPER regulations and how to work with hazardous materials safely.
OUTLINE OF MAJOR PROGRAM POINTS

The following outline summarizes the major points of information presented in the videotape program. The outline can be used to review the program before conducting a classroom session, as well as in preparing to lead a class discussion about the program.

THE HAZWOPER REGULATION

• The date was March 6th, 1990. On that day, the Occupational Safety and Health Administration (OSHA) put a new regulation into effect.
  - They wanted to prevent accidents involving hazardous materials from injuring even one more worker.
• The Regulation applied to:
  - Hazardous waste sites.
  - Treatment, storage and disposal facilities.
  - Emergency response operations.
• The range of topics covered by the regulation includes:
  - Accidental release measures.
  - Monitoring equipment.
  - Exposure controls.
  - Respiratory protection.
  - Decontamination procedures.
  - Medical surveillance.
• It was the most comprehensive standard of its kind ever written.
• OSHA named the regulation “Hazardous Waste Operations and Emergency Response.”
  - Most of us simply call it HAZWOPER.
• No matter how comprehensive the HAZWOPER standard is, however, nothing in it will help you one bit if you don’t understand it.
• In 1986, when the EPA charged OSHA with the task of protecting HAZMAT workers, OSHA issued the Interim Final Rule for Hazardous Waste Operations and Emergency Response.
• HAZWOPER affects workers involved in:
  - Hazardous waste treatment, storage and disposal.
  - Hazardous waste cleanup operations.
  - Emergency response operations where hazardous materials are present.
• The purpose of this videotape program is to help you understand:
  - The HAZWOPER regulation.
  - Your rights and responsibilities as someone who works with hazardous materials.
  - How to work safely around hazardous substances.

HAZARDOUS MATERIALS

• What makes a substance "hazardous"?
  - There is no simple answer.
  - You need to look at several sources of information to get a complete definition.
• In OSHA’s Hazard Communication Standard, a “Hazardous Chemical” is defined as any chemical which poses either a physical hazard or a health hazard. According to OSHA, chemicals that present "Physical Hazards" include:
  - Combustibles.
  - Flammables.
  - Explosives.
  - Oxidizers.
  - Organic Peroxides.
  - Reactive chemicals.
  - Compressed gases.
• OSHA’s list of chemicals that are "Health Hazards" includes:
  - Sensitizers.
  - Irritants.
  - Corrosives.
  - Toxic and highly toxic agents.
  - Carcinogens.
  - The U.S. Department of Transportation (DOT) lists the materials it considers hazardous in its Hazardous Material Table in 49 CFR 172.101.
  - According to DOT, a "Hazardous Material" is any substance which could present an "unreasonable risk to health, safety or property when transported."
Since the EPA initiated HAZWOPER, we should look to some of their standards as well.

- To define "Hazardous Substances" in CERCLA, the EPA refers us to lists of specific materials in the Clean Water Act and in RCRA (the Resource Conservation and Recovery Act).

- Finally, also in RCRA, the EPA defines "Hazardous Waste" as any discarded material which is:
  - Ignitable.
  - Corrosive.
  - Reactive.
  - Toxic.

- Often, the easiest way to tell if a particular substance is hazardous is to look right on the container label.

- There are several different labeling systems, and OSHA, DOT and EPA guidelines all require that hazardous materials bear warnings of the hazards they present.

- More detailed hazard information and handling instructions can be found on a hazardous material's Shipping Papers and other written documentation.

- You can also look at a chemical's Material Safety Data Sheet (MSDS) for information on hazards and safety precautions.

- Sometimes, however, an MSDS is not available. Other times we can encounter materials without container labels... or even without containers.
  - In these situations, we need to use air monitoring to detect what HAZWOPER calls "IDLH Conditions" (conditions which are "Immediately Dangerous to Life and Health")
  - Laboratory analysis of contaminated air or samples of the material itself can confirm any IDLH conditions.
  - Analysis can also provide detailed information about other safety and health hazards the substance may present.

WRITTEN HAZWOPER PLANS

- Once we have this information, we can determine which controls and practices we need to use to minimize these hazards.
  - This is the goal of the HAZWOPER regulation.

- In accordance with HAZWOPER, your operation has a "Site Safety and Health Plan" that specifies how hazards should be:
  - Identified.
  - Evaluated.
  - Controlled.

- This written plan includes descriptions of the specific tasks being performed on-site, as well as information about your operation's:
  - Organizational structure.
  - Safety and health training program.
  - Medical Surveillance Program.
  - Standard Operating Procedures.

- Your company also has a written "Emergency Response Plan", which includes instructions on how to report and handle emergencies at your site.

HAZWOPER TRAINING

- The HAZWOPER Standard has specific training requirements for employees who could be exposed to hazardous materials on the job, which include:
  - The identification of the specific safety, health and other hazards on the site.
  - The use of Engineering Controls.
  - Appropriate Work Practices.
  - Selection and use of Personal Protective Equipment (PPE).

- The amount of training you need depends on the type of work you will be doing. If you are involved in the removal of hazardous substances, or other activities that could expose you to these substances for prolonged periods, you need:
  - A minimum of 40 hours of classroom instruction.
  - No less than three days of field training.

- You need a minimum of 24 hours of classroom instruction and no less than one day of field experience if you:
  - Will only be on site occasionally to perform specific, limited tasks... such as surveying or taking air samples.
  - Are unlikely to be exposed to hazardous materials above their published exposure limits.

- The same 24-hour training requirement holds true if you work in areas where:
  - Exposures are lower than published exposure limits
  - Respirators are not necessary.
  - No health hazards are present.
  - Emergencies involving hazardous materials cannot occur.

- While these guidelines represent the minimum amount of training which is required, you may actually receive more. On the other hand, you may undergo less training if you already have experience which is equivalent to some of the training required by HAZWOPER, such as:
  - Work experience.
  - Academic course work.
  - Other hazardous materials training.

- Either way, you will still receive site-specific training about the hazards of your operation before beginning work.
• At least once a year, you will also receive eight hours of "Refresher Training".
  - This will be a basic review of your initial HAZWOPER training.
  - It may also include a critique of any recent emergency incidents that illustrate the types of situations you could face.

PRELIMINARY EVALUATION
• HAZWOPER also requires that all hazardous waste sites be evaluated to:
  - Identify specific hazards.
  - Determine what safety and health control procedures should be used at the site.
• This begins with a "Preliminary Evaluation" to determine what precautions need to be taken in order to do a more thorough "Site Characterization".
  - IDLH conditions are the focus of the Preliminary Evaluation, along with any other conditions which could cause death, serious illness or injury. These include:
    - Confined spaces.
    - Visible vapor clouds.
    - Potentially flammable or explosive situations.
• Once these immediate hazards have been dealt with, Site Characterization can continue.
  - At this stage, all of the potential safety and health hazards will be thoroughly explored and analyzed.
  - The end result of Site Characterization is the development of a "Site Control Program".

THE SITE CONTROL PROGRAM
• The Site Control Program is a part of your operation’s written Site Safety and Health Plan.
  - It includes a site map displaying work zones, as well as guidelines for using the “buddy system” to help prevent exposures.
  - The program also outlines communication procedures, including how to report emergencies.
• The Site Control Program also identifies your operation’s:
  - Standard Operating Procedures.
  - Safe Work Practices
  - Sources of medical assistance.

MONITORING
• "Monitoring" plays a major role in:
  - Preliminary Evaluations.
  - Site Characterizations.
  - On-going activities at your site.
• It is the primary means of identifying and measuring levels of hazardous substances.
  - This is vital in determining the controls and practices that should be used at the site.
• During the preliminary evaluation, the goal of monitoring is to identify:
  - Conditions which are "Immediately Dangerous to Life or Health" (IDLH).
  - Airborne contaminant levels over a substance’s published exposure limit.
  - Radiation levels over a radioactive material's "Dose Limit".
• Monitoring is also used to identify other dangerous conditions, such as:
  - Flammable atmospheres.
  - Oxygen-rich or oxygen-deficient environments.
• Depending on the conditions at your work site, monitoring could be ongoing, or just done periodically.
  - Monitoring will continue as long as exposure levels have the potential to rise above published exposure limits.
  - It must also continue if flammable atmospheres or other dangerous conditions could possibly develop.
• Monitoring will also be done whenever:
  - A new type of activity starts.
  - New or unidentified substances are involved.
  - Work begins on another part of the site.
• Individual situations which present a high risk of exposure to hazardous substances also require monitoring. This includes:
  - Handling leaking drums or containers.
  - Working in areas with obvious liquid contamination, such as a spill or contaminated water.

THE MEDICAL SURVEILLANCE PROGRAM
• Since many HAZMAT jobs present serious health hazards, HAZWOPER may also require that you participate in your operation’s "Medical Surveillance Program":
  - This helps to protect you from the effects of exposure to hazardous substances.
• You will participate in this program if over a one year period, you spend 30 days or more:
  - Wearing a respirator.
  - Working in an environment where there is the potential for exposure above published limits (whether or not a respirator is worn).
• Medical surveillance is also required if:
  - You are a member of a HAZMAT Emergency Response Team.
- If you ever develop symptoms which could be caused by exposure to hazardous substances.

• **Medical surveillance includes an initial examination prior to starting work.**
  - The exam will be used to determine if you have any conditions which might affect your ability to work safely around hazardous substances.
  - It will also provide a baseline for comparison with additional examinations that you will have at least once every two years (OSHA recommends that these periodic exams be given every year).

• **You will also need to have an examination if you are:**
  - Accidentally exposed to a hazardous substance above its published exposure limits.
  - Displaying symptoms of overexposure.
  - Injured on the job (even if the injury doesn’t involve a hazardous material).

• **Medical examinations will be conducted by, or under the supervision of, a licensed physician.**
  - Medical tests, such as X-rays or blood screening, may also be a part of the Medical Surveillance Program if the doctor feels they are necessary.
  - Exams and tests will be scheduled at a reasonable time and location.
  - They will be provided at no cost to you.

• **Based on the results of the medical exams and tests, the doctor will determine if you have any conditions which would:**
  - Put you at increased risk from work involving hazardous waste.
  - Cause problems if you had to wear a respirator.

• **The doctor will then provide your employer with a "Written Opinion", which will:**
  - Include any limitations on your work activity that the doctor recommends.
  - Not discuss any medical findings unrelated to your job (these are strictly confidential).

• **Your employer will provide you with a copy of the doctor’s Written Opinion for your own records.**

**SYSTEM OF CONTROLS**

• **The regulation also calls for a "System of Controls" to be put in place to prevent overexposure to hazardous substances. This includes the use of:**
  - Engineering Controls.
  - Safe Work Practices.
  - Personal Protective Equipment.

• "**Engineering Controls**" are devices designed to prevent or reduce your exposure to hazards. They can include:
  - Pressurized cabs on material handling equipment.
  - Ventilation systems used to remove contaminated air from work areas.

• "**Safe Work Practices**" are policies, procedures and actions which can reduce or prevent your exposure to hazardous materials.

Examples include:
  - Having non-essential personnel leave areas of potential exposure.
  - Staying upwind of possible airborne hazards.
  - Wetting down dusty operations.

- Using Safe Work Practices includes following "Standard Operating Procedures". These are the methods for performing specific tasks at your site or in your facility which have been approved by your:
  - Supervisor.
  - Manager.
  - Safety Director.

• **The HAZWOPER regulation provides its own Standard Operating Procedures for working with drums and other containers.**

  - Safe handling is vital to minimizing exposure to contaminants.

**HANDLING CONTAINERS OF HAZARDOUS SUBSTANCES**

• Government agencies, such as the DOT, OSHA and the EPA, have specific physical requirements for containers used to store or transport hazardous substances.
  - You need to make sure that drums and other containers meet these guidelines.
  - Remember to inspect containers for integrity before, during and after use.

• **Containers used for hazardous substances must be properly labeled as well.**
  - You should treat unlabeled drums and containers as if they contain hazardous materials, until it has been determined otherwise.

• **If sealed containers need to be opened for any reason, special precautions must be taken. These can include:**
  - Having unnecessary personnel leave the area.
  - Using explosion-proof barriers and non-sparking equipment.
  - Bleeding off excess pressure within the container before opening it.
  - Moving drums and other containers of hazardous waste as little as possible.

• **Special safety measures, such as the use of handling equipment with protective shielding, are required when it is necessary to transport containers of materials that are:**
  - Radioactive.
  - Flammable.
  - Shock-sensitive.

• **Do not move containers that seem to be bulging or swelling from excess pressure until:**
  - The cause of the pressure can be determined.
- Appropriate precautions can be taken.
- Ask your supervisor about the specific procedures that are used at your location.
- Prior to shipping, hazardous waste containers must be identified and classified in a staging area.
  - This is the best way to make sure that everyone knows what they are dealing with and how to handle it safely.

**PERSONAL PROTECTIVE EQUIPMENT**
- If the combination of engineering controls and work practices cannot reduce your exposure to acceptable levels, then "Personal Protective Equipment" must also be used.
  - Remember, PPE is not meant to be a standalone solution.
  - It should be used together with other controls to provide adequate protection.
- The Personal Protective Equipment that you wear must always "match" the potential hazards of the work environment.
  - There are four basic "levels" of PPE, each providing a different degree of protection.
- "Level D" provides only basic protection, in the form of either:
  - A standard work uniform.
  - Generic work clothing.
- "Level C" protection is used when:
  - The concentrations and types of airborne contaminants are known.
  - Contaminants are within acceptable limits for using full-face or half-mask air-purifying respirators.
  - Hooded chemical-resistant clothing is also used at this level, to provide protection against skin-contact hazards and to simplify decontamination.
- "Level B" PPE provides the same amount of skin protection as Level C, but requires a much higher degree of respiratory protection.
  - A full facepiece Self-Contained Breathing Apparatus (SCBA).
  - A Supplied-Air Respirator (SAR).
- "Level A" provides the greatest degree of skin, respiratory and eye protection. This includes:
  - An SCBA or an SAR.
  - A totally-encapsulating Chemical Protective Suit.
  - Other appropriate gear and clothing.
- While Chemical Protective Clothing and PPE protects you from exposure to hazardous substances, it usually becomes "contaminated" in the process.
  - Your clothing, PPE, tools and equipment... even you... must be "decontaminated" whenever you leave a contaminated area.
  - Decontamination is important to protect both you and everyone else you come into contact with, including your family and friends.

**DECONTAMINATION**
- The facilities and supplies you need for decontamination will be provided by your company.
  - PPE and tools must be treated appropriately.
  - Clothing must be laundered or properly disposed.
- You must shower to remove any hazardous material which may have come into contact with your body if:
  - A hazardous material can pass through your work clothing.
  - You are exposed during decontamination.
- Equipment and solvents used during decontamination will also become contaminated in the process.
  - They must be decontaminated or disposed of as well.

**EMERGENCY RESPONSE**
- HAZWOPER also has requirements for a emergency response to incidents involving hazardous materials.
- These requirements begin with a written "Emergency Response Plan" which provides instructions on how to report and handle emergencies at your location. The Plan includes information on:
  - The roles of personnel participating in a response.
  - Lines of authority.
  - Methods of communication.
  - Training requirements.
- Your facility's Emergency Response Plan also includes information on:
  - Recognizing and preventing emergencies.
  - Site security.
  - Evacuation procedures.
  - Decontamination procedures.
  - First aid.
- Training plays an important role in emergency response.
  - HAZWOPER specifies five levels of training, depending on the role you might be expected to play in a hazardous materials incident.
  - The "First Responder: Awareness Level" is for workers who are likely to witness a leak, spill or other accidental release of a hazardous substance.
  - If you fall into this category, you will be trained on the proper reporting procedures used to initiate an emergency response.
The "First Responder: Operations Level" is for workers who will be called upon to contain the release from a safe distance. People involved in Operations Level activities must undergo a minimum of eight hours of Emergency Response training.

The next level of training is for "Hazardous Materials Technicians".
- These are workers who will approach the point of release of a hazardous substance, and plug, patch or otherwise stop the release.
- HAZMAT Technicians must undergo a minimum of 24 hours of training.

A "Hazardous Materials Specialist" gets the same level of training as a HAZMAT Technician, but receives more detailed training about the substances on site.
- HAZMAT Specialists may also be called upon to act as site liaisons with federal, state, local or other government authorities.

The individual with the most authority in an emergency response, the "Incident Commander", goes through a great deal of additional training to be prepared to:
- Take control of an incident scene.
- Coordinate the entire emergency response.

No matter which role you play during an incident, it is important to be familiar with your operation's Emergency Response Plan.
- Remember, this written program is the key to determining how to safely handle HAZMAT incidents at your site or facility.

**QUIZ**

"UNDERSTANDING HAZWOPER"

Name:________________________  Date:________________________

1. True or False... The HAZWOPER regulations only affect workers associated with emergency response operations involving hazardous materials?
   ______ True
   ______ False

2. True or False... The only way to tell if a particular substance is hazardous is to look on the container label?
   ______ True
   ______ False

3. True or False... The amount of HAZWOPER training that you need
depends on the type of job that you will be doing?

______ True
______ False

4. True or False... Site-specific training about the hazards of your operation is not needed before you begin work?

______ True
______ False

5. Your operation's "Site Control Program" contains which of the following information?

______ Standard Operating Procedures.
______ Safe Work Practices.
______ Sources of medical assistance.
______ All of the above.

6. True or False... As part of your company's "Medical Surveillance Program", medical examinations and tests are provided at no cost?

______ True
______ False

7. Your operation's "Systems of Controls" include which of the following?

______ Engineering Controls.
______ Safe Work Practices.
______ Personal Protective Equipment.
______ All of the above.

HAZZ-HAZ

QUIZ
"UNDERSTANDING HAZWOPER"

PRESENTER'S COPY...WITH ANSWERS

1. True or False... The HAZWOPER regulations only affect workers associated with emergency response operations involving hazardous materials?

_____ True
X False

2. True or False... The only way to tell if a particular substance is hazardous is to look on the container label?

_____ True
X False
3. True or False... The amount of HAZWOPER training that you need depends on the type of job that you will be doing?
   X True
   False

4. True or False... Site-specific training about the hazards of your operation is not needed before you begin work?
   X False
   True

5. Your operation's "Site Control Program" contains which of the following information?
   X All of the above.
   Standard Operating Procedures.
   Safe Work Practices.
   Sources of medical assistance.

6. True or False... As part of your company's "Medical Surveillance Program", medical examinations and tests are provided at no cost?
   X True
   False

7. Your operation's "Systems of Controls" include which of the following?
   X All of the above.
   Engineering Controls.
   Safe Work Practices.
   Personal Protective Equipment.