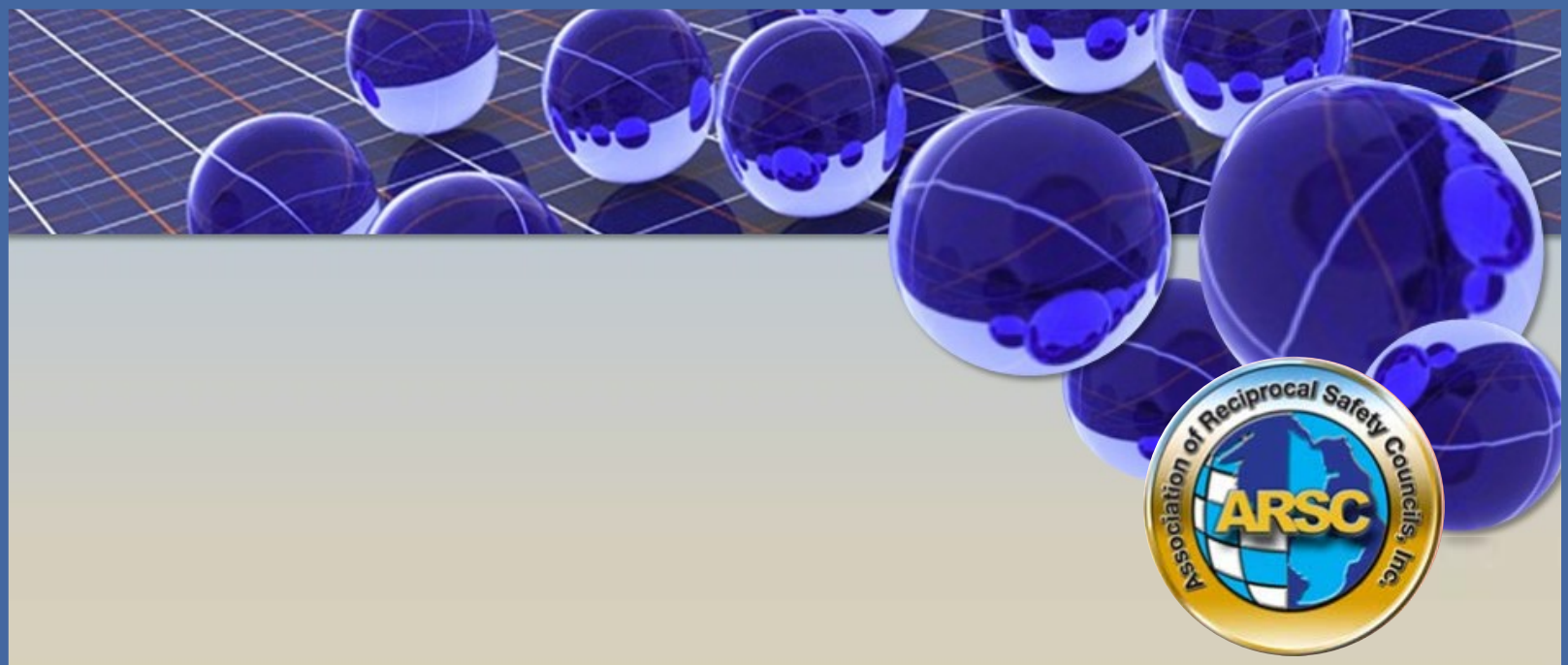

Basic Orientation Plus®

Study Guide

Introduction

The Association of Reciprocal Safety Councils, Inc. (ARSC), maintains this Study Guide to assist you in the instruction of the Basic Orientation Plus® - BOP program. This Study Guide will not be permitted in any classroom where testing materials are present. The materials in this course have been designed to build specific knowledge, skills and attitudes. Considerable time has been committed to the development of these materials in order to ensure their effectiveness.

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The rules and regulations referenced in this manual are from the Code of Federal Regulations, 29 CFR 1910 and 29 CFR 1926 (OSHA). Copies of Federal and State Regulations are available from the appropriate agencies. Also included are general safe work rules in effect at many industrial locations, which may vary in content and practice from one location to another.

The user of this Study Guide is cautioned that the regulations regarding safety and health are constantly changing at the Local, State, and Federal level. Portions of this manual relating to specific regulations may become outdated at any time.

This program contains information on State and Federal Regulations intended to comply with both the spirit and letter of the law. For more detailed information, the user is urged to review the actual text of the regulations that affect the specific areas presented in the program.

This manual may not cover all regulations that govern the safety and health of a worker in an industrial location, nor is it a substitute for legal counsel.

Disclaimer

The information contained in this Study Guide is presented as a GUIDE ONLY for the promotion of illness/injury prevention and to assist companies in complying with rules and regulations relating to General Safety. It is not a comprehensive review of all actions, which may be taken to minimize damage, loss or to successfully comply with Federal regulations.

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Everyone must help keep each other safe. Employers have the job of identifying and describing the hazards at your worksite…You have the responsibility to learn and follow the 'safe work practices' that you will be taught.

About the BOP® Study Guide

Goal

This BOP Study Guide was developed to provide help to trainees taking the BOP course. This study guide provides written introduction of many of the safety principles that will be presented in that course. This study guide also introduces numerous safety terms used in the BOP course. Becoming familiar with these safety terms will promote better understanding of the course material and the course exam.

Introduction

This study guide introduces the key points that the ARSC BASIC ORIENTATION PLUS® training program covers. This guide cannot cover all of the many safety details that the BOP course provides. To ensure your safety on-the-job as well as properly prepare you for the course exam, you will need to focus on the safety principles and practices that are communicated in the BOP classroom course.

How to Use This Guide

Read the information contained in this study guide. If there are terms you are not able to pronounce, ask an instructor for assistance. It is likely that you will see these words again in the course material and the exam.

- If you find it difficult reading and understanding the information in this study guide, you will probably have difficulty reading and understanding your written exam as well.
- If you have never learned to read, we urge you to attend an adult learning program. (Your local safety council may be able to provide you with a local area learning program to assist you with language and/or reading skills upon request.)
- You will be required to read in order to pass your written exam.
- If you are assisted in any fashion during the exam your badge reflecting your safety training will be valid on a local level only. It will not be considered reciprocal training unless you are able to pass the exam unassisted in the English language.

Icon Map

The following icons may be used in this Study Guide to designate a specific action:

Definition: Key term that is often field-specific and may be unfamiliar

Example: Descriptive illustration to show or explain a course concept

Participant Note: Additional information to elaborate on a point made in the course content

Module 1: Introduction

Recent available information from the Bureau of Labor Statistics (BLS) has reported there were millions of workers in the United States. Many of these workers had work-related injuries and experienced work-related illnesses.

To encourage employers to do more to protect their employees, OSHA issued voluntary safety and health program management guidelines way back in 1989. These guidelines zeroed in on four key elements of effective safety and health management. These four elements are essential to recognizing hazards and reducing and/or eliminating the workplace hazards we just discussed. The four elements include:

- Management Commitment and Employee Involvement
- Worksite Analysis
- Hazard Prevention and Control
- Safety and Health Training

Owners have specific responsibilities related to workplace safety. OSHA requires the owner/plant to inform you of any known safety and health hazards on the actual job site, which include such things as hazardous materials, special processes, system designs, and the like.

As an employee, you are also responsible for following all safety regulations; informing your employer of any unsafe condition; reporting all injuries (no matter how minor they seem); and wearing the proper personal protective equipment.

As an employee, OSHA gives you the right to report identified workplace hazards which have not been addressed. To report any and all workplace hazards to OSHA, you may call toll free 1-800-321-OSHA or log in to the OSHA website at www.osha.gov.

Module 2: Process Safety Management (PSM)

The primary goal of the Process Safety Management of highly hazardous chemicals is to prevent unwanted releases of hazardous chemicals. Extra attention must be given to chemicals in locations that would cause the greatest danger to employees or the environment. This is done by evaluating the major process hazards (MPH).

Introduction

Process Safety Management requires thinking ahead to determine what could go wrong and then doing something to control those problems that could happen as a result of failures in process, procedures or equipment. In this way, potential hazards are identified and prevented before the work begins. Process Safety Management pays special attention to highly hazardous chemicals that could cause serious injury to people or our environment.

All plant sites must develop an effective process safety management program. The information below describes the things that make up a PSM program.

14 Basic Elements of Process Safety Management

- **Employee Involvement in Process Safety Management** – Employees must be trained and informed so they know how to prevent exposure to, or protect themselves from, the hazards of chemicals.
- **Process Safety Information** – The employer must compile complete and accurate written information concerning process chemicals, process technology, and process equipment. This is essential to an effective process safety management program and to process hazard analysis (PHA).
- **Process Hazard Analysis (PHA)** – This is an evaluation of the potential hazards of a process or job and is one of the most important elements of a successful process safety management program. A designated team works together to perform a PHA.
- **Operating Procedures and Practices** – Operating procedures tell you how to safely perform a job. It tells the data to be recorded, operating conditions to be maintained, samples to be collected and evaluated, and the safety and health precautions that must be taken all the time.
- **Employee Training** – All employees, including maintenance and contractor employees who could be impacted by the hazards of chemicals must be trained so that they know the hazards and how to protect themselves, their fellow employees and the citizens of nearby communities.

- **Contractors** – Employees must be hired who can accomplish their job tasks without compromising the safety and health of that employee or others.

- **Pre-Startup Safety** – All important elements such as start-up, shut-down and operating procedures, including emergency procedures must be in place and the operating staff trained before a startup. The development of P&IDs (Piping & Instrument Diagrams) must be available prior to startup for training assistance.
- **Mechanical Integrity** – An employer must operate and maintain the process in a safe manner and process equipment as designed in order to ensure safety. Equipment needs to be replaced when it is worn out.
- **Work Permits** – It is also important that non-routine work be well communicated, not only to those who will do the work, but to any persons that could be affected by the work. Work Permits give authorization to workers to do special tasks only after many things are in place that can ensure the safety of that work.

- **Non-routine work** cannot be done without a signed, written permit that has all the special precautions addressed within it.

Examples: Examples of some of the different types of work permits or procedures you may need for your job are:

1. **Line Breaking Procedures** – These procedures will identify what steps must have occurred before the line is opened that will assure that the line does not have pressure on it and that the contents in the line cannot start to come out while the work is being done.
2. **Lockout/Tagout Procedures** – This refers to the basic steps of a typical Lockout/Tagout procedure as discussed earlier in this study guide.
3. **Cold Work Permits** – This type of permit is used for work which typically does not create any serious safety concerns associated with the job: it will not produce heat or a spark and the work is to be done in normal work areas.
4. **Confined Space Entry Permits** – This permit has special requirements that must be in place before anyone can enter a confined space. This includes air quality testing and emergency rescue needs.
5. **Hot Work Permits** – This permit is used when the work that will be done or the tools and equipment used to do the work could produce enough heat or a spark to ignite the materials around it. This permit requires the results of the gas test that proves that this work can be safely done as well as what fire extinguishing equipment must be on hand during the work. Some other requirements are time and date the work can be done, description of the object to be worked on, and what emergency equipment should be on hand.

- **Managing Change** – The management of change covers such areas as changes in process technology, changes in instrumentation, or changes in the equipment itself. Not properly managing change has been a primary cause of many accidents. Special attention must always be made to be sure that pump types and sizes, and other equipment that is being replaced are identical to what is being removed.
- **Investigation of Incidents** – The investigation of an incident is the only way to determine the underlying causes of incidents and then determine any steps that could prevent the same or similar events from reoccurring in the future. The focus of all investigations should be to obtain facts – and not to place blame. For this purpose, ALL accidents, injuries, and incidents (even "near-miss" incidents) must be reported to the proper personnel.
- **Emergency Preparedness** – Each employer must have an Emergency Action Plan that lays out what action employees are to take should there be a release of hazardous chemicals. This plan tells how personnel will evacuate if there is a release of hazardous chemicals. Employees must be trained so they will know what to do if such a situation occurs.
- **Compliance Audits** – The employer must have trained personnel to audit the site's process safety management program. This audit is to ensure that the site is doing what they say they will do, and also to help determine if what they are doing meets the requirements of what it was designed to do.
- **Trade Secrets** – The employer must make all information necessary to comply with the standard available to those persons responsible for compiling the process safety information. However, confidentiality agreements may be used to safeguard certain aspects of the process.

Module 3: General Safety

Introduction

You must know and follow all the site rules of the facilities you will be working in. Each plant or facility will have its own rules for security and safety and you will receive training to learn what those rules are before you will be allowed to work at that site. Although this course cannot tell you the specific rules for the site where you will be working, it can tell you some of the basic rules that apply to every site.

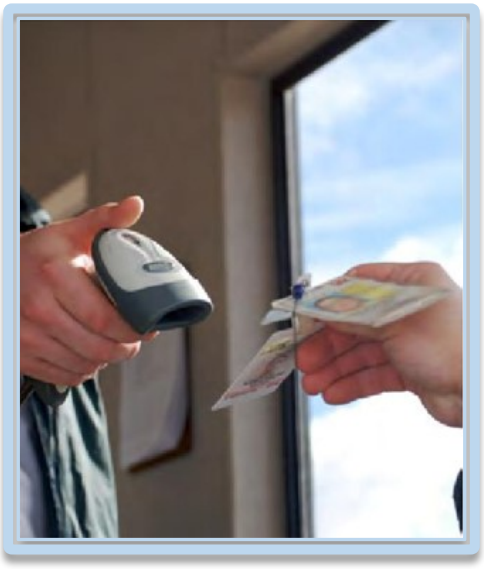
This section will include information on:

- Safety Basics
- Operating Motorized Equipment
- Work Permits
- Ergonomic Work Practices
- Bloodborne Pathogens (BBP)

Safety Basics

Only employees with proper identification (and clothing) will be allowed into a facility.

NEVER allow anyone to use your ID badge.



You must learn the plant site policies where you will work. You will be given that information before you enter the plant to start your work. When you enter the plant's property, you are required to follow its policies and rules.

This will include the parking area where you park your vehicle while you are working. There may be restricted areas within a site where carrying cellular phones and pagers are prohibited. Remember that cameras are allowed only with special permission by the site "owner."

Remember, everyone at the worksite has the responsibility and authority to stop any unsafe act or condition in the workplace. The Stop Work Authority gives you the right and obligation to stop a work activity if you have reason to believe your own safety or a co-worker's safety is in jeopardy or if the work plan is not clearly established or understood. This is also true if you believe the situation could have a negative impact on the environment.

Stop Work Authority involves stopping the work, notifying supervision, and correcting any unsafe condition or act that could result in an incident before resuming the work.

Operating Motorized Equipment

You must have permission to operate any motorized equipment (even your own vehicle). Remember, pedestrians (people on foot), bicycles, and emergency equipment have the right of way. Also remember: vehicles must stop not only for pedestrians, but they must also stop for trains or when they are directed by a flag person.

Cranes

Cranes can never be operated in a position where their boom or line can come within 10 feet of any overhead power line without special approval. Crane operators must never allow their load to swing over people. The load being handled by a crane must be controlled by the use of a tag-line. Crane operators can only take directions from a designated spotter. The spotter can verbally communicate or use hand signals to direct the crane operations.

Forklifts

Approximately 100 workers are killed each year in a forklift accident. Many of these deaths are caused when the forklift overturns. Another major cause of death is when pedestrians are struck and killed by forklifts.

Work Permits

Plant facilities utilize permit programs to assure that all the preliminary requirements are met and permits are issued before a job can begin.

Examples of some of the types of permits that are used at worksites are:

- Hot Work
- Confined Space Entry
- Safe Work
- Line Entry/Breaking
- Lockout/Tagout permits

Ergonomic Work Practices

The science of finding the best fit between you and your job conditions is known as **ergonomics**. Some examples of good ergonomic practices include:

- Good posture
- Proper body mechanics
- Good placement of computer equipment
- Comfortable handles and grips

Research has shown that early reporting of pain or discomfort helps minimize the injuries associated with work tasks. If you experience pain or discomfort as a result of your work activities, you should report this information to your supervisor as soon as possible.

Bloodborne Pathogens (BBP)

Definition: *Bloodborne pathogens (BBP)* are disease-causing microorganisms that are present in human blood and certain bodily fluids. These microorganisms can infect and can cause disease when they enter your body.

Universal Precautions means that you treat all blood and body fluids as if they are infectious for BBP. Only trained, qualified, and authorized workers should attempt to clean up blood or body fluids on any surface. Examples of Universal Precautions include, but are not limited to:

- Practicing personal hygiene (hand-washing)
- Wearing gloves or eye protection to prevent exposure
- Using engineering and work practice controls to limit exposure

Module 4: Hazard Communications

Everyone must help keep each other safe. Employers have the job of identifying and describing the hazards at your worksite. You have the responsibility to learn and follow the 'safe work practices' that you will be taught.

Introduction

All employees have the right to know the safety and health hazards of chemicals they may be exposed to on the job. This is important to reduce illness and injury.

The information within this section will summarize:

- Some general requirements of OSHA's Standard 29 CFR 1910.1200
- What makes a chemical "hazardous"
- General requirements of a Hazard Communication Program
- How information of hazardous chemicals is communicated to employees
- Examples of some hazardous chemicals
- This information will help you understand that there may be safety and health hazards at work. It is your responsibility to protect yourself from these hazards.

Safety Standard 29 CFR 1910.1200 - OSHA is a part of the United States Federal Government that was created to help reduce the injury and health problems that can occur in industry. OSHA's Safety Standard 29 CFR 1910.1200 is sometimes called the "Right-to-Know" law. This standard was given this nickname because this law says that

employees have the “right to know” the hazards in their workplace and have the “right to know” how to protect themselves.

WHAT MAKES A CHEMICAL “HAZARDOUS”?

A Hazardous Substance is any substance which can cause injury (a physical hazard) or cause illness (a health hazard) in a person.

A hazardous substance can hurt you in one of two ways:

- If the substance can cause an explosion, fire, or cause a violent reaction, it is called a physical hazard. Gasoline is an example of a substance that can create a physical hazard.
- If a substance causes you to get sick or become ill, then it creates a health hazard.

Participant Note: In chemicals that produce a health hazard, the substance will cause either chronic health conditions (conditions or symptoms that do not go away) in the body, acute health conditions (conditions or symptoms that cause sudden and often intense reactions, that will go away after a time), or both.

General Requirements of a Hazard Communication Program

The employer must inspect the worksite to find out if there are hazardous substances. If there are, OSHA requires them to have a written Hazard Communication Program.

This program will explain how your employer will make sure you understand about the hazards at the worksite. Some of the things that are included in this program are:

- Lists of Chemicals
- Labels and Warning Signs
- Safety Data Sheets (SDS)

Chemical Lists

Employers must have a complete list of all hazardous substances at their worksites.

Labels and Warning Signs

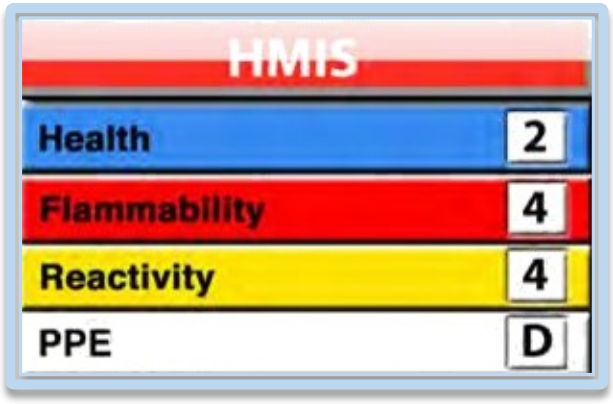
All containers (from small bottles to big vessels) must be labeled, tagged, or marked to identify what is in them. The purpose of warning signs in the workplace is to tell you information about the hazards. Be sure that you read and understand the warnings the signs communicate.

There are two different types of labeling systems that are used on the big vessels and drums where you work.

- The National Fire Protection Association (NFPA) labeling system
- The Hazardous Materials Identification System (HMIS).

Although these are different systems, they have much in common. The purpose for warning signs, the NFPA, and the HMIS labels is to give you hazard information.

Look at the pictures of these labels.



The HMIS and the NFPA labels are alike in many ways: They use the same color codes: blue=health, red=flammability, yellow=reactivity.

Another thing they have in common is the “number” warnings that both systems use. The numbering system ranges from 0 to 4.

Example: On the blue health area, 0 = no health hazard, 1= slight health hazard, 2= moderate health hazard, 3= Extreme Danger 4= very severe or deadly health hazard

If a substance is not marked and you are not sure what a substance is, ask your supervisor. Sometimes you will need more information than can be put on a label or a warning sign. If you need more information, the best place to look is to the chemical's SDS (Safety Data Sheet).

Information Found in a SDS

A Safety Data Sheet (SDS) is written or printed material about a hazardous chemical. Chemical manufacturers and importers of hazardous chemicals are required to develop SDS for hazardous chemicals. Employers, in turn, must have a current SDS for each chemical on the list of chemicals used by their company.

What kind of information can be found in an SDS?

Each SDS must contain:

- The identity used on the label
- The physical and chemical characteristics of the hazardous chemical (such as the vapor pressure and flash point)
- The physical hazards of the hazardous chemical (such as any fire, explosion, and reactivity hazards)
- The health hazards of the chemical, including the signs and symptoms of exposure and any medical conditions resulting from exposure to the chemical
- The primary routes of entry
- The relevant exposure limits
- Whether the chemical is a cancer-causing agent

Participant Note: PEL (Permissible Exposure Limit) is the measurement OSHA uses to identify the maximum amount of substance that a person can safely be exposed to at any one moment in time. Another measure for exposure limits determines how much of an exposure is allowable within a normal 8-hour workday. This measurement of exposure is called a "TWA" meaning Time-Weighted-Average (of 8 hours).

How Information of Hazards Is Communicated

Another part of the written Hazard Communication Program will tell how your employer plans to warn you about the hazards that may exist. Your employer will warn you about the hazards and how to protect yourself. In fact, one of the main goals of the BOP course is to provide training which covers the general information you need.

After this training, the worksite you go to will train you on the site-specific hazard information that you need to know.

Additionally, the labels and warning signs will serve as another form of hazard communication. Using the site's MSDS book will also be a way the employer expects you to learn about the hazards of a specific chemical. All of these methods of communication work together to make sure you have the information you need to be safe.

Examples of Some Hazardous Chemicals

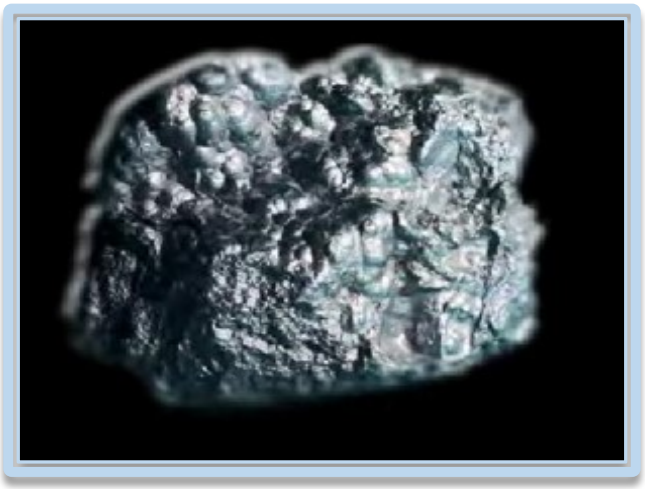
Each work area has different types of hazardous chemicals. It is important to realize that chemical hazards do not only exist inside containers, but sometimes chemical hazards exist outside the container as well.

Examples of such chemical hazards would be:

- Asbestos
- Lead
- Radiation

Asbestos: Asbestos contains fibers that are very strong and resistant to heat and chemicals. Asbestos is often used to insulate vessels and piping. Asbestos is used in siding, shingles and floor tiles. Under normal conditions, these fibers do not pose a health hazard but they do become hazardous if something happens to cause these fibers to be released into the air. When released in the air these fibers can cause lung cancer, gastrointestinal cancer, or a lung condition called asbestosis. You must be properly trained and wear the proper PPE if you work where there are dangerous concentrations of asbestos.

Lead: Lead is commonly added to industrial paints because of its corrosive resistance. Just like asbestos, lead does not pose a health hazard under normal conditions. If a painted surface is burned during welding or the paint becomes airborne through sandblasting, grinding or sanding, then the lead can become a health hazard. If lead is ingested (oral) or inhaled (breathing) the exposure can cause health problems in your blood, urinary system and reproductive system. You must be properly trained and wear the proper PPE when lead exposure may occur.



Radiation: The X-raying of equipment, microwaves, and lasers are all forms of radiation. When equipment is being used that emit radiation, it is important that you obey all warning signs and never go through radiation barricades.

If you are doing work that may require you to work near such chemicals where exposure could present physical harm, then you will receive special training on how to take proper precautions against exposure.

Module 5: Personal Protective Equipment

"PPE" means Personal Protective Equipment. Before you do any work, you must know what could hurt you. Then you can choose the right PPE for the job. You must understand how the PPE will protect you, and you must know how to inspect it, wear it, and store it.

Introduction

Personal Protective Equipment (PPE) is specially designed to protect you…from head-to-toe. Each type of PPE is made to protect you from certain hazards or dangers… so you must know what danger or hazard is present before you can choose the proper PPE.

The information within this section will describe:

- Types of the PPE that you may need to use
- When PPE must be used
- What you must know about the PPE you use

Many Types of PPE are used for Protection from Hazards

You must wear some PPE to enter a plant…no matter what job you will be doing there. More than likely, you may need to wear safety glasses, hard hat, long pants, long-sleeve shirt, steel-toe shoes, and leather work gloves. Different companies will require different PPE.

You may need special PPE for a certain job or work in a certain area in the plant. Some examples of types of special PPE that you may be required to wear are face-shield, ear plugs, respirators, or personal fall protection device.

Your employer will make sure you are given this PPE and that you are properly trained to use it. Before you begin any job, your employer will determine what hazards could harm you while you do work. The employer can then decide what PPE should be used to prevent injury.

If you are ever unsure of what PPE you need, check your work permit. If you are still unsure…ask your supervisor!

Head Protection – All "hardhats" provide protection from injury caused by falling objects. Sometimes different classes of hardhats are needed. (Electricians would use a class of hardhat that also would help to protect them from electrical shock, for example.)

Eye Protection – Safety glasses must be approved by the American National Standards Institute (ANSI) and will have a Z87.1 number stamped on the glasses. Remember, your prescription glasses are NOT safety glasses, unless designed for this purpose and classified as Z87.1.

Face Protection – A face shield must be used if there is a chance that a hazardous chemical could splash onto your face.

Hearing Protection – Hearing protection must be worn when the noise is so loud that it could damage your hearing. If you work in noisy areas, you must wear hearing protection. You may need to use earplugs, earmuffs or the combination of both in extremely noisy environments.

Body Protection – Long-sleeve shirts and full-length pants may help to protect you from burns and spills. Sometimes chemical resistant suits or flame retardant clothing may be required.

Foot Protection – Safety shoes and boots may protect your foot from injuries that would be caused by items dropping on or cutting the foot. A chemical resistant boot may be needed for some jobs.

Respiratory Protection – You must wear respiratory protection if the air in your work area may become hazardous to breathe.

Fall Protection – You must use personal fall protection when you work six feet or more above the ground.

Hand Protection – Rubber gloves protect you from electrical shock. Neoprene or latex gloves protect the hands from certain chemicals. There are many other kinds of gloves. You must know exactly what the dangers are before you can choose the correct hand protection.

When is Personal Protective Equipment Required?

OSHA's Preferred order for Hazard Control Methods:

- Engineering Controls
- Administrative Controls
- Personal Protective Equipment (PPE)

PPE is used when the hazard can't be controlled by engineering or administrative controls.

PPE should not be used to protect against hazards if the hazard can be controlled using some other method.

If your PPE does not fit properly or breaks, it will not protect you. You may be exposed to the hazard.

This is why employers must try to eliminate the hazards in the workplace. They do this with “Engineering Controls.” Using engineering controls is the best way to control hazards in the workplace.

Examples of Engineering Controls

- Using mufflers or buying quieter tools so that you don’t have to wear earplugs.
- Installing “guards” on equipment that will prevent you from touching a moving part by mistake.

Examples of Administrative Controls

- Rotating individuals out of hazardous areas for part of shift.
- Reducing the number of individuals allowed into hazardous areas.

What You Must Know About Your PPE

- If you are required to use any PPE, you will be trained in how it will protect you, how to wear it, store it, clean it, and inspect it.
- You must understand all of the manufacturers' warnings and limitations of your PPE before you use it.
- You must inspect your equipment and ensure it is clean and not damaged - Every Time You Use It.
- PPE has adjustable parts and comes in a variety of sizes so that it will be "reasonably" comfortable. You must know how to adjust it so that it fits properly. PPE that does not fit cannot protect you the way it should.

Participant Note: Do not share your PPE with anyone else.

SCBA (Self-Contained Breathing Apparatus) respirators however will be "shared". If you must use it, be certain that it has been properly cleaned and disinfected before you use it.

Module 6: Respiratory Protection

You need respiratory protection if the air you breathe could hurt you. It is important to remember that before you can choose a respirator, you must understand the danger that is present…because each respirator was made to protect you from different hazards.

Introduction

This section will help you learn what is needed to protect your respiratory system.

You will learn:

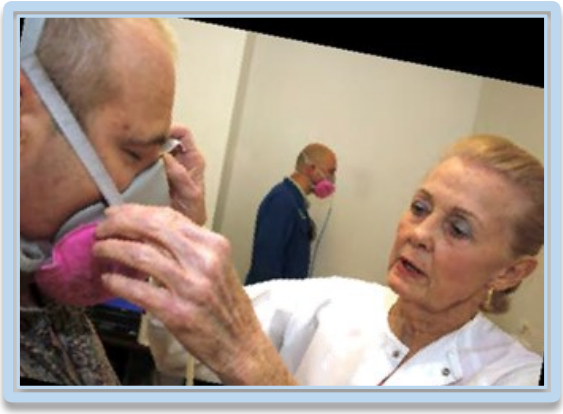
- What you must know and do before you wear a respirator.
- The basic differences in respirators and how they protect you.
- What Must Occur Before You Use a Respirator?

You must wear a respirator when hazardous air conditions may exist. Three things must take place, however, before an employee can wear a respirator:

- **Medical Evaluation** – You must have a medical evaluation to determine if you have a physical condition that would prevent you from safely wearing a type of respirator. You first will answer some questions. Next you may receive a physical examination. Last, you may be given a breathing test.

- **Training** – You must receive training before you wear a respirator. The training will describe when you will need to use them, how it will protect you, and what it will protect you from when worn properly. You will learn how to put it on and take it off, check the seals, inspect it, clean it and store it. You should be tested to make sure you understood the training information.

- **Fit Test** - A fit test will be performed on each kind of respirator you will need to use. This will tell you what model or size of respirator should be worn and prove that you can get a good seal. This is done with special testing methods. If you are not able to get a proper fit, the respirator might allow contaminants to slip in through the cracks when you are wearing your respirator. Remember, beards, facial hair and glasses can interfere with a good face piece seal. Beards are not allowed in most industrial sites.



All three of these steps must be done BEFORE you use a respirator.

Different Types of Respirators

Hazards in the air can take different forms. The air may be contaminated with:

- Particulates or dusts
- Organic mists or vapors
- It could be that the air is oxygen deficient

You must know which of these dangers is present before you can choose the right respirator. Each hazard may require a different type of respirator.

There are two basic classes of breathing protection:

1. Air Supplied Respirators:

HOSE LINE AIR-SUPPLIED RESPIRATOR – This type of respirator uses supplied air that may come from an air compressor that is located where the air is known to be safe or from a bank of compressed air bottles. The air is sent to the respirator face piece through a hose.

Self-Contained Breathing Apparatus (SCBA) - This is another type of Air-Supplied Respirator. This type of respirator uses a tank of air that you carry with you. A self-contained breathing unit (SCBA) MUST be used if the conditions of the air are not known

OR where the air is Immediately Dangerous to Life and Health (IDLH). Different SCBA's may last between 5 minutes to 45 minutes. 5 minute units are only to be used for escape or emergencies.

2. Air Purifying Respirators:

This type of respirator uses filters, canisters or cartridges that can remove specific contaminants from the air before it reaches your lungs. This type of respirator is only to be used if the air contaminants have been properly identified and the filter, canister or cartridge is designed to absorb the amount of contaminant in the air. They must never be used when the air quality is not known and it could be Immediately Dangerous to Life and Health. The actual type of cartridge, canister or filter that you will use is determined by the type of air hazard that exists.

Participant Note: WARNING: This type of unit must not be used if the air is Immediately Dangerous to Life and Health (IDLH).

It is important to know and follow the manufacturers' warnings and limitations for each respirator you use.

Module 7: Hearing Conservation

Introduction

We often take our 'hearing' for granted…but if you continue to expose yourself to loud noises, time after time, day after day, eventually, you could lose some of your ability to hear.

This will affect the "quality" of your life.

You will strain to hear what your loved ones are trying to tell you. You will not be able to tell what people are saying in noisy rooms. You won't be able to stop the constant buzzing or ringing in your ears. Your life will be forever changed…and it could have been prevented if you had protected your hearing!

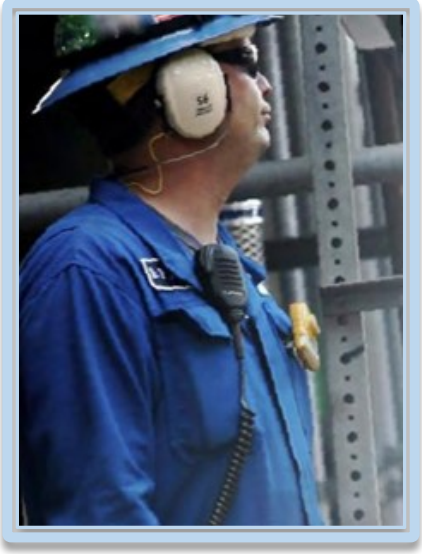
This section will describe:

- What is involved in a Hearing Conservation Program
- How sound effects your hearing
- Hearing Protection Devices
- Hearing Conservation Program

OSHA has identified how much noise you can safely be exposed to. If the noise you will be exposed to exceeds these safe limits, then your employer must put you in a "hearing conservation program."

A hearing conservation program must include:

- Checking The Noise In Your Work Area – Periodically, your employer must check work areas for noise levels that may harm you.
- Hearing Tests – This is called an audiogram. It is a simple, painless test that will determine how well you hear.
- Hearing Protection/ Ear Plugs & Ear Muffs - You must wear some type of hearing protection, either ear plugs, ear muffs, (or a combination of both) if your job exposes you to 85 decibels in an 8-hour TWA or when you must go into any area that is determined to be a high noise area.
- Training – You must be trained every year on the proper use and care of each type of hearing protection you will use. You will also learn how too much noise can cause hearing loss and how hearing PPE can protect you.



How Sound Affects Hearing

The effect noise has on you depends on how long you are exposed – and how loud the sound is. Noise is measured in decibels. For example, at 20 decibels, a ticking watch is hard to hear. The 130 to 160 decibels a jet engine produces is painful and can cause immediate and permanent damage to your ear.

Noise comes from sound waves and is measured in decibels. Several things happen in your ear to change these waves into what we hear as sound. These sound waves move down the ear canal, change into vibrations and finally reach a part of the inner ear called the cochlea (coke-lee-uh). Tiny hair cells in the cochlea change the vibrations to nerve signals that are sent to the brain. It is these hair cells in the cochlea that are damaged by excessive noise.

When the hair cells are damaged or die, a condition called tinnitus may occur. Persons suffering from tinnitus have ringing or buzzing in their ears that never stops. Hearing loss due to excessive noise cannot be cured!

Exposure to noise can produce other symptoms besides ringing and buzzing sounds. Another sign or symptom that indicates you are suffering from hearing loss would be "you just can't hear." Even signs or symptoms such as fatigue, elevated blood pressure, stress, tension, and nervousness can be signs of hearing problems.

Examples of Engineering Controls for Noise

- Enclosing noisy processes in sound-absorbing rooms.
- Using carpet, resilient flooring and sound-dampening walls.
- Using rubber cushions or cardboard at the end of line chutes.
- Replacing noisy metal parts with quieter plastic or rubber components.
- Eliminating vibration noise by placing heavy equipment on resilient pads.
- Ensuring equipment is properly maintained.

Examples of Administrative Controls for Noise

- Operating noisy machinery on a shift when fewer employees are present
- Rotating employees out of noisy areas for part of a shift
- Hearing Personal Protective Equipment

Hearing PPE reduces your exposure to harmful noise. While wearing it, you will still be able to hear machine warnings and conversation. If hearing protection is needed, your employer will have the hearing protection devices you will need and will train you on its correct use.

Never remove hearing protection while you are still in a high noise area. Always move to a quiet place before removing or adjusting your hearing protection.

Here are the two basic types of hearing protection devices you may use:

- **Earplugs**: Most earplugs are made of soft fiber or foam that conforms to fit the ear canal. They come as pre-molded or can be custom-molded to fit your ears. All types must be placed in the ear canal to seal it off, while leaving enough of the earplug exposed so that can be easily removed.

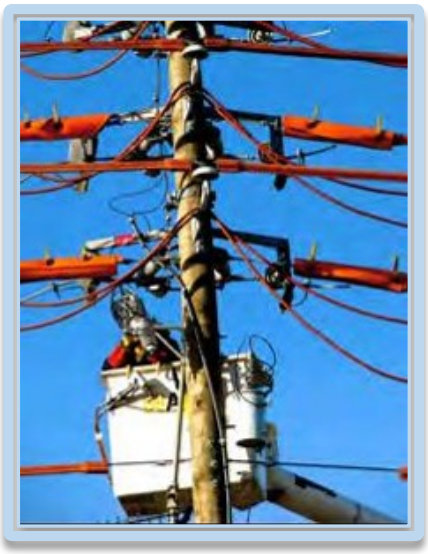
- **Earmuffs**: Earmuffs are ear cushions and cups attached to a headband or attached to a hardhat. In order to get a good seal, your entire ear must fit within the cups. Push aside or remove anything that may keep you from getting a good seal: hair, beard, hair clips, and earrings, for example. Glasses or goggles may affect the seal as well.

If the noise hazard is very loud, you may need to use both earplugs and earmuffs together. Don't forget that you may be exposed to excessive noise exposure when you are "off the job." You must protect your hearing wherever you are – whether you are at work or at home!

Module 8: Electrical Safety

Related Work Practices for Non-Qualified Workers

Each year hundreds of workers suffer pain, injury or death from electrical shock and burns. Never work on electrical circuitry if you are not “qualified”. Stay a safe distance from overhead power lines and the dangers of electricity.



Introduction

A “qualified” worker is someone who has had training on how to avoid the electrical hazards of working on or near exposed energized circuitry. “Unqualified” workers, such as yourself, have not been trained.

Before you can work on any exposed electrical circuit or part, you must be “qualified.” The purpose of this part of the training is to help you, the “unqualified” worker, understand the safe work practices of using portable electrical equipment. It will also help you understand the safe work practices for working near energized electrical equipment.

In this section you will learn:

- General Electrical Safety Guidelines
- Causes of Electrical Accidents
- Portable Electrical Equipment Safety Guidelines

General Electrical Safety

Practicing unsafe work practices near electricity can kill you! It may cause a mild shock, a severe shock, or even a deadly shock. It is important to understand the “safe work practices” that must be used when working near electricity or using portable electrical equipment. Here are some general safe work practices that should be followed:

- Always have good lighting whenever you are operating electrical equipment.
- Always handle material or equipment that can conduct electricity so that you (and your material or equipment) will not come in contact with exposed “energized” parts or circuits.

What is the Difference between "De-Energized" & "Energized" Equipment?

De-Energized Equipment is equipment in which the circuits have been disconnected from all their power sources.

Energized Equipment is equipment that has exposed, live parts of circuits that may be directly contacted, or contacted by tools or materials…and can cause electrical shock.

Never reach 'blindly' into areas that may contain energized parts. (You must be able to see what you are trying to touch at all times!)

Always stay at least 10 feet from electric lines with voltages of 50 kilovolts or less. (This 10 foot rule is for "unqualified" workers and includes all the material or tools the employee is holding or carrying! This 10 foot rule also includes any part of a vehicle the employee may be operating!)

Always use a ladder made of non-conductive material (material that does not conduct electricity) or have non-conductive side rails if you are working near electrical equipment.

Participant Note: Non-conductive material means that electricity cannot flow through the material. Fiberglass or wood are non-conductive materials.

It is important to inspect your ladder each time you use it, not only to see that it is in good working order, but to insure that it is CLEAN. It must be free of dirt, oil, and moisture because these materials are conductive…and using a ladder like this is an unsafe work practice that could cause you to be electrocuted.

Causes of Electrical Accidents

Most electrical accidents can be prevented. Electrical accidents are usually caused by working with faulty or unsafe equipment, working in unsafe environments, or using unsafe work practices. Unsafe work practices are responsible for over 75% of all occupational fatalities involving electricity!

Portable Electrical Equipment Safety

Using safe work practices when operating portable electrical equipment can protect you from electrical hazards. All portable electrical tools must have a grounding prong (or must be labeled as doubled insulated).

Make sure that any extension cords you need properly fit the plug for the electrical equipment you're using. Never cut off the grounding plug. Never raise or lower portable electrical equipment by its cord.

Participant Note: WARNING: All electrical equipment must be grounded. Grounded equipment is permanently and continuously connected to the earth so that uncontrolled electrical discharge is unlikely to occur.

Why is it important to inspect your portable equipment at the beginning of your work shift and each time you use the equipment? Inspecting your equipment can prevent you from being shocked.

Look for visible wear, frays, breaks, or other damage to the insulation or outer jacket of the cord. Make sure the grounding prong is there.

If you find something damaged, connect a tag to it that says, “Damaged: Do Not Use!” and notify the proper individual. Never use portable electrical equipment that is damaged.

Always use a Ground Fault Circuit Interrupter (GFCI). A GFCI will instantly disconnect a circuit when an electrical short occurs. A GFCI can protect you from serious injury from electrical shock. Some types of GFCI are designed for permanent installations while others are portable.

A hot work permit is required if the portable electrical equipment you will use is capable of sparking or could produce enough heat to ignite flammable or ignitable materials that may be present in the area.

Participant Note: A Hot Work Permit- is the type of permit that is required whenever a spark or heat could be generated during the job by welding, brazing, soldering, paint stripping or metal grinding where sparks could be generated, or unprotected electric lights in hazardous atmospheres etc.

Sometimes you may need to work in an area where combustible gases could build up. An explosion and/or fire could then occur if something created a spark or enough heat to ignite these vapors. When the work area could have such hazards, only specially-designed electrical equipment can be used. This equipment is “intrinsically safe” electrical equipment… equipment that would not spark or produce enough heat to cause a fire even in a combustible atmosphere.

When working on or near energized parts, just turning off a switch or pulling a breaker is not enough to ensure it will not be re-energized. The power to the live parts or circuits must also be “locked out and tagged out.” Using lockout/tagout (LOTO) procedures is the best way you can prevent the risk of electrical shock.

Module 9: Lockout / Tagout

Lockout/tagout procedures are not just used to protect persons from the risk of electrical shock. Lockout/tagout procedures are used to prevent injury from ALL types of energy.

Example: Examples of some other types of energy could include pneumatic, hydraulic, thermal, hidden energy, etc.

Three types of employees are covered by lockout/tagout and must be trained in the procedure: authorized employees, affected employees, and other employees. Each employee falls into one of these categories, which is based on the relationship of that employee's job to the machine or equipment being locked or tagged out and the degree of knowledge the employee has about hazardous energy.

Definition: An *authorized employee* is a person who locks or tags out machines or equipment in order to perform service or maintenance on that machine or equipment.

Definition: An *affected employee* is the worker who operates the equipment being serviced or maintained or works in an area where the servicing or maintenance takes place. In most cases, your role will be that of the affected employee.

An affected employee becomes an authorized employee when that employee performs service or maintenance work on the equipment.

Definition: *Other employees* are those whose work operations are or may be in an area where energy control procedures are being used.

"Other employees" need to understand if they see LOTO devices, they are not to touch them.

The basic steps of performing lockout/tagout procedure are as follows:

Before Work Is Done:

- Locate and identify all energy sources and their isolating devices. (Equipment will usually involve at least two types of energy.)
- Notify all authorized and affected workers. (People who work in the area should be told about the work so they will not disturb anything by mistake.)
- Barricade the work area and provide sufficient warning signs. (If signs and barricades do not provide sufficient warning and protection, an attendant must be stationed to prevent and warn others to stay away from the area.)
- Shut down the equipment. (Shut down equipment at the local start/stop switch.)
- Isolate the equipment from all energy sources. (All sources of energy must be de-energized and disconnected. Circuit control devices, such as ON-OFF buttons, selector switches, and interlocks, must never be used as the only means of de-energizing circuits or equipment.)
- Purge all hidden or trapped energy
- Apply (put on) locks and tags on each device that was used to isolate the energy from its source. Remember: locks can only be put on by persons who are authorized to do so and can only be removed by the person who put it on (or supervisor in special circumstances.)
- Verify (recheck to make sure) all energy has been isolated.

After Work is Complete:

- Visually inspect the area and ensure that all employees are clear of the area.
- Notify all authorized and affected workers that equipment is being put back into service and all energy sources will be re-established.
- Remove all locks and tags. This must be done by authorized personnel before re-energizing equipment.
- Verify that the equipment can operate properly after energy is restored if possible.

Module 10: Fall Protection

Falls are the leading cause of fatalities for the construction industry and the second leading cause for general industry. Most of these deaths could be prevented by using safe fall protection practices and by using the proper PPE.

Introduction

The information in this section covers the following topics:

- Elevated Work Hazard Awareness
- Types of Fall Protection Systems
- Personal Fall Arrest Systems
- Ladder Safety

Elevated Work Hazard Awareness

If you must work in high places, you must be trained so that you will understand the dangers of elevated work, and know how to protect yourself from falls. This will include training on the personal fall arrest systems you may be using.

Types of Primary Fall Protection Systems

Your employer is responsible for providing all of the protection systems that are needed to protect you when you are working 6 feet or more above the ground. (Some sites may have stricter requirements so be sure and ask your supervisor.)

Some fall protection systems your employer may use are:

- **Personal Fall Arrest Systems**: A personal fall arrest system provides you with the most protection from falls… because it was designed to protect YOU. (More information on personal fall arrest systems is in the section below, titled Personal Fall Arrest Systems.)

- **Scaffolds**: Scaffolds provide you a safer and more comfortable working surface than a ladder. They are built according to strict safety standards. Some of these standards will be explained in the section below, titled Scaffold Safety.
- **Guardrail Systems**: You see this system at work everywhere you see a balcony. This is the rail that must exist above the edge of platforms. This guard rail will keep you from falling off the edge of a platform. The top of this rail must be 42 inches high above the platform.
- **Safety Nets**: Safety nets are effective types of fall protection when work is being done above walking/working surfaces where something could be dropped. These nets can prevent material from falling on persons working below when the area can't be barricaded and protected.

Personal Fall Arrest Systems

Since 1998, body belts are no longer acceptable as part of a personal fall arrest system because they can hurt you (the body belt only had a belt around the waist… not the chest and shoulders, as fall protection devices do now). Today, safe fall protection systems are designed to more effectively distribute the impact of a fall. Like all other PPE, you must inspect your personal fall arrest system prior to each use.

You must look for any visual signs of any significant defect: such as tears, cuts, abrasions, undue stretching, mold, or anything that might cause the system to fail.

Personal fall protection systems consist of three main parts:

- **Body Harness**: This is the part of the personal fall protection system that goes around the torso (shoulders to hips) of your body. If you were to fall, the impact of the fall is well distributed so that you won't be injured.
- **Anchor**: This is the overhead structure that you will connect your lifeline to. This structure must be able to handle the intense force that occurs during a fall. The anchor point must be able to withstand 5000 lbs. of weight per employee that attaches to this point.
- **Life Line**: The life line is what connects the harness to the anchor point and is designed to catch you if you do fall. This life line must be attached to the anchor point so that a person cannot fall more than six feet (called the "free-fall rule"). It

is important to remember that your lifeline must never be used to lift or tie off material. It should ONLY be used to protect YOU!

Ladder Safety

The following requirements for ladder safety apply to all types of ladders, including those that are job-made ladders. There are three general types of ladders:

- Self-supporting portable ladders (normally called a “step ladder”),
- Non-self-supporting portable ladders (normally called an “extension ladder”)
- Fixed ladder (a permanent ladder).

Here are a few of the requirements for these ladders:

- Both the self-supporting and the non-self-supporting ladders must be able to handle at least 4 times their anticipated load.
- When portable ladders are used to get to an upper walking/ working surface, the ladder side rails must extend at least 3-feet above the upper surface.
- Ladders must be secured before working from them: If the ladder has adjustable feet, they must be positioned properly to ensure that they are on an even, flat, hard surface. The ladder must be tied-off securely at the top.

- You should maintain a three-point contact with the ladder at all times (that is, you should have two hands and one foot or two feet and one hand in contact with the ladder at all times). The top step of a step ladder must never be used as a "step."
- Always face the ladder when ascending or descending the ladder. Never carry tools or material up a ladder that might drop or cause you to lose your balance. Instead, use a hand-line (but not any part of your personal fall arrest system) to lift your tools to where the work is, or a tool-belt.
- Ladders shall be inspected periodically by the employer and by the user each time it will be used.
- Keep ladders free of oil, grease, and other slipping hazards.
- Look for such things as broken or missing rungs, split rails, corroded parts, etc. If any defect is identified, the ladder must be taken out of service and tagged with "DO NOT USE" or similar language until repaired.
- When putting a ladder in place, use an angle where the horizontal distance from the base of the wall to the foot of the ladder is ¼ the working height of the ladder to the support point.

In the photo above, the worker is safe because the base of that 20 foot ladder is 4 feet (or ¼ of the working height) away from the 16 foot wall.

Module 11: Scaffolding

Each year, more than 60 people die in scaffold-related incidents and 4,500 are injured. These incidents most commonly occur as a result of employee falls due to slipping or equipment collapse, and impacts of falling objects. Electrical hazards also pose a threat to those on scaffolding.

Scaffolds must be designed by a person who meets OSHA's definition of "qualified" and erected by a trained crew under the supervision of a person who meets OSHA's definition of "competent."

Definition: A *competent person,* by OSHA's scaffolding standard, is one who is capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary or hazardous to employees, and who has the authorization to take prompt corrective measures to eliminate them. (OSHA, 2002)

Definition: A *qualified person* refers to someone who has a recognized degree, certificate, or professional training or who has extensive knowledge, training, and experience and who has demonstrated his or her ability to solve problems related to the subject matter or work.

Definition: A *scaffold user* is a worker who performs work from a scaffold.

Definition: A *scaffold erector* is a worker who is trained to erect, modify, and dismantle scaffolding.

The four main types of scaffolds are:

- Frame scaffolds
- Rolling tower, or mobile, scaffolds
- Tube and coupler scaffolds
- System scaffolds

Guardrails, mid-rails, and toeboards are installed on scaffolds ten feet or higher to prevent workers from falling. Always check that scaffolds and their components are able to support four-times the maximum intended load without failure.

Module 12: Excavations, Trenching, and Shoring

The potential hazards of excavating are among the most hazardous construction operations. This type of construction can be a safe operation when workers are aware of the hazards and an effective Safety and Health Program is used.

Introduction

There are special potential hazards that are associated with excavations, trenching and shoring. Special precautions must always be taken to make sure that cave-ins do not occur. Special attention to the type of soil, stability of adjacent rock, as well as other activities that might change the stability of the excavation must always be taken into account.

Excavations

Excavations are any man-made cut, cavity, trench, or depression in an earth surface, formed by earth removal. Safety procedures apply to all open excavations that are made in the ground and include trenching.

Trenching

A trench is a particular type of excavation -where the excavation is deeper than it is wide (it also must be less than 15 feet wide at the bottom).

Shoring

Shoring is a structure such as a metallic, hydraulic, mechanical or lumber system that supports the sides of an excavation. It is designed to prevent cave-ins.

Hazards

There are certain potential hazards that exist with excavations, trenching and shoring. There are atmosphere-related dangers that would include low oxygen levels or the existence of flammables or combustible gases.

Other hazards occur from instability of adjacent rock, adjacent activities, loose rock or potential water hazards. When working in any excavation you must be alert to any changing condition.

Excavation Protective Systems are required for all excavations except those that are less than 5 feet deep that do not have any cave-in hazards or unstable rock. Excavation Protective systems include shielding, shoring, sloping or any combination of these safeguards.

A “means of egress” (escape) is required for trench excavations that are four feet or more in depth. Examples of approved means of egress could include stairs, ladders or ramps. Ways to get out of an excavation must be no more than 25 feet apart.

Module 13: Job Safety Analysis (JSA)

Introduction

How familiar are you with Job Safety Analysis (JSA)? You may have heard it called “Pre-task Planning,” “Job Hazard Analysis,” or some other name.

This section is an introduction to the concept of JSA. At the end of this session you should understand what a JSA is and have an understanding of why and how it is performed.

What is JSA?

A method used by employers to review tasks used in a procedure and uncover potential hazards before work begins. Each job can be broken down into steps or tasks. The JSA identifies the hazards associated with each step of the job. You then list what controls should be in place and the specific procedures to follow to prevent an accident.

Benefits of JSA

A JHA/JSA analyzes the individual steps or activities that make up a job and pinpoints or identifies the hazards and potential hazards. A JSA can also identify less obvious hazards that may have been overlooked (i.e., in design, processes, or the result of changes in the workplace) because of its in-depth and detailed nature.

Some key benefits of JSA are:

- Improves job planning
- Helps employees to recognize potential hazards
- Involves all employees in determining the needed safety precautions
- Ensures that all employees are following the proper work practices
- Ensures good communication between all involved

Basic Steps to a JSA

A JSA breaks down the job procedures into steps or tasks. To perform a JSA:

- Break the job down into steps.
- Review each step; think of how the worker interacts with tools and the work environment as he or she is performing the step.
- Identify any and all hazards associated with each step.
- Develop a plan to eliminate, minimize, and/or control these hazards.
- Review the results of the JSA with all impacted employees.
- Document discussions.

Module 14: Emergency Action Plans (EAPs)

As you learned in the previous section, it is important that an employer pre-identify how emergencies will be handled at each site. Then they must communicate those steps and procedures that they expect all personnel to follow. When you start work at a new site, it will be important that you learn everything your employer expects you to do in every type of emergency situation.

Introduction

Your workplace will have an Emergency Action Plan in case of emergency. This plan should be available no matter at what kind of location you are working, such as a refinery, chemical plant, machine shop, office building, hotel, or remote field locations. You should read and understand this plan in case of an emergency.

You need to know:

- Emergency alarms
- Evacuation routes
- Location of assembly areas
- Who is in charge
- Primary and secondary escape routes
- Location list of disabled workers
- Workers assigned to specific duties

EMERGENCY Evacuations

Once you have evacuated the burning building, or left a designated work area always report to a predetermined area so that an accurate count of all employees can be made.

Some reasons for an emergency evacuation may be:

- Gas Leak
- Hazardous Spills
- Fire and Process Emergency

Each site has its own system of emergency signals and an emergency plan. When an emergency evacuation signal is sounded you should stop all work and proceed to your evacuation location on foot. Know your warning systems and alarms for each job site and if an alarms sounds:

- Proceed to your designated assembly area
- Be aware of wind direction -- exit crosswind and upwind
- HEADCOUNT - Make sure everyone in your group is accounted for.

To Report an Emergency:

- State your name
- The nature of the emergency
- The location of the emergency

Module 15: Fire Prevention

Fire Basics

Fire is a chemical reaction involving rapid oxidation of fuel. There are three things that are required in a fire: heat, fuel, and oxygen. If any of those three elements can be eliminated, the chemical chain reaction is stopped, and the fire will go out. Therefore, in order to put out a fire, you must cool the heat, remove the oxygen, or eliminate the fuel.

There are four classes of fire:

- **CLASS A** - This fire is made of ordinary combustibles (wood, paper, cloth, rubber, and some plastics). Generally speaking, the CLASS A fire is the only fire where water should be used to extinguish the fire.
- **CLASS B** – This fire is made of flammable or combustible liquids and gases. (Gasoline, kerosene, paint, paint thinners, propane, and butane, for example)
- **CLASS C** – This fire involves energized electrical equipment. (Electrical appliances, switches, panel boxes, electric motors and power tools, for example)
- **CLASS D** – This fire would involve certain combustible metals. These metals can burn at a high temperature and produce an extremely hot fire. (Magnesium, titanium, potassium and sodium, for example).

You should only fight a fire if you are trained and know when and how to fight the fire. If a fire breaks out, report it immediately.

Even if you are properly trained, there are still some situations where you should NOT try to fight a fire:

- Never fight a fire if it is too large.
- Never fight a fire if it is spreading too quickly.
- Never fight a fire if the fire can block your only escape route.
- Never fight a fire if you do not have adequate firefighting equipment.

If a fire does occur, always remember six important points:

- Always call for backup.
- Do not fight a fire that is spreading.
- Keep a clear path to the escape exit.
- Be prepared for re-flash, which may occur after a fire appears to be extinguished when the elements of fire come together again and the fire resumes.
- Stop, drop, and roll if clothing or body catches fire.
- Do not run.

Conclusion

We hope this study guide has helped you become more familiar with safety terms you will need to understand on the job.

This study guide has additionally provided you with important safety information and safe work practices you will be expected to follow when you are at work. If you have any questions about the information you have read, ask your BOP instructor.

While it is your employer's responsibility to teach you what you need to know to be safe on the job, it is YOUR responsibility to use this knowledge. You must take an active role in ensuring your own safety and the safety of your fellow workers…everyday…every minute of the day!