

Fire Safety – Spanish

Key Takeaways:

- Learning about dangers associated with fire
- Understanding the requirements for emergency action and fire prevention plans
- Observing housekeeping guidelines for fire prevention
- Comprehending the importance of emergency exits and identify their components
- Learning the actions to take in response to emergency alarms

Course Description

Employers are required to provide a safe working environment for employees and that responsibility means having an emergency plan for responding positively to natural disasters. Readiness, through understanding of evacuation plans or drilling for regionally specific scenarios, is the key to keeping your workforce out of harm's way.

Working safely and following proper procedures for emergency preparedness can prevent many emergency situations. However, some emergencies are out of your control.

Fire Safety

The most common workplace emergency is fire. The best way to prevent injuries and deaths from fires is to prevent fires in the first place.

According to the Occupational Safety and Health Administration (OSHA), more than 75,000 workplace fires and related explosions occur each year.

All companies should create a basic fire prevention plan for fire safety, which includes a list of the major workplace fire hazards and proper handling and storage procedures for those materials. The plan should also cover potential ignition sources, such as welding and smoking and related control procedures, as well as discuss the type of fire protection equipment or systems which can control a fire. The fire prevention plan must include the names

and/or regular job titles of those personnel responsible for maintenance of fire systems and those personnel responsible for control of fuel source hazards.

Dangers of fire include heat, smoke, and toxic gases which all present some very nasty consequences for the personal welfare and life safety of individuals exposed to fire.

Fire safety can include engineered controls, like fire sprinklers, fire alarms, and smoke detectors are mandatory for many modern structures and likely exist where you work.

Fire Prevention Plan

This fire safety tip is directed toward employers. Not all businesses are required to have a fire safety plan in place, but OSHA advises employers to be proactive by teaching workers about fire hazards and showing them what to do in a fire emergency.

OSHA states that if your business is required to have a fire emergency action plan in place, you must develop a plan that:

- Describes the routes for workers to use and procedures to follow

- Accounts for all evacuated employees

- Remains available for employee review

- Includes procedures for evacuating disabled employees

- Addresses evacuation of employees who stay behind to shut down critical plant equipment

- Includes preferred means of alerting employees to a fire emergency

- Provides for an employee alarm system throughout the workplace

- Requires an alarm system that includes voice communication or sound signals such as bells, whistles, or horns.

- Makes the evacuation signal known to employees

- Ensures emergency training (Which is what this course is about)

- Requires employer review of the plan with new employees and with all employees whenever the plan is changed

Emergency Exits and Routes

In the case of a fire emergency, you want to get everyone out of the facility as quickly as possible. Emergency exits and routes are crucial because they provide a clear path to safety. Here are the qualities of effective emergency exits and routes, as

specified by OSHA:

Emergency Exits

Must be a permanent part of the building

Must be provided with a protected way of travel out of the building or out of the area

May contain way of access of passageways, stairs, aisles and stairwells, ramps, or a series exit doors

May have ways of access that lead from one area or floor to another or from one building to another

Exit Routes

Must be clear of obstructions

Must be kept free of explosive or highly flammable furnishings and other decorations

Must be wide enough to accommodate the number of people trying to get out

Must be strong enough to support their weight

Must be properly lighted and marked with EXIT signs

Alarm Systems

Alarm systems are significant because they alert all employees of a fire emergency, which is the first step in getting to safety. An alarm system may come in the form of a smoke detector, a manual pull box or even a vocal system in which employees alert others by yelling "fire" or some other specified word. If your business is using a smoke detector system the batteries should be changed once a year. When it comes to alarm systems, OSHA recommends knowing:

The locations of the manual pull boxes or other alarm systems

How to operate the alarm system

When the alarm system is to be used

What the alarm sounds like

What action to take when the alarm is sounded

Prevention

It's great to know what to do in a fire emergency, but it's even better to prevent the fire from happening in the first place. Electrical fires claim the lives of 280 Americans each year and injure 1,000 more. The U.S. Fire Administration (USFA) provides the following precautions to help minimize the risk of a fire:

Routinely check your electrical appliances and wiring. Replace all worn, old or damaged appliance cords immediately.

If an appliance has a three-prong plug, use it only in a three-slot outlet. Never force it to fit into a two-slot outlet or extension cord.

Keep clothes, curtains, and other items that can catch fire at least three feet from all portable electric space heaters.

Avoid putting cords where they can be damaged or pinched by furniture, under rugs and carpets, or across doorways.

Let's not forget fire extinguishers as a key component for fire safety. Fire extinguishers put out fire by taking away one or more elements of fire.

Process Safety Management

Key Takeaways:

- Learning about the dangers associated with a catastrophic release of highly hazardous chemicals
- Understanding the purpose of Process Safety Management
- Recognizing the possible causes of hazardous chemical releases
- Learning good Process Safety Management Program components
- Realizing how a culture of safety contributes to the effectiveness of Process Safety Management
- Comprehending elements of Process Safety Information (PSI) and Process Hazard Analysis (PHA) that keep employees safe
- Identifying basic criteria for Emergency Planning and Response, Training, Pre-startup Safety Review, Management of Change, and Operating Procedures

Course Description

The U.S. Chemical Safety Board states that over 10,000 American workers are harmed by incidents involving chemicals annually.

A comprehensive approach to prevent chemical releases is process safety management. Effective process safety management programs

will include an evaluation of the whole process including design and technology, and other elements that might impact the process. Proper chemical safety always starts with a thorough examination of work operations to identify and control risk and potential hazards related to handling of chemicals.

Workforce safety can be increased through process safety management. Presently, small businesses with limited resources might use other ways to decrease the risks associated with hazardous chemicals in the workplace, but development of a process safety management program is the operating standard. Employers must compile a written process information resource to create an effective process safety management program. Supplied information allows workers to identify and understand the hazards posed by processes that involve highly hazardous chemicals.

Included in the process safety information package, you'll discover technology and equipment information. Technology information should contain higher level information like block or process flow diagrams. Diagrams like such are used as visual tools to help users understand the process. Equipment information should contain more detailed information such as materials of construction, and piping and instrument diagrams.

Safety professionals are required by the Clean Air Act to talk with workers about efforts to develop and implement process safety management program elements and hazard assessments. As well, a written plan must be developed on how to engage workers for participation, how to train and inform them of any findings from an incident investigation if they were directly affected.

The process hazard analysis (PHA) (or, the process hazard evaluation) is critical for determining potential failure points in a process. Every process covered by the Process Safety Management of Highly Hazardous Chemicals standard must be analyzed.

The PHA discusses:

- Process hazards
- Every previous incident that had the potential for catastrophic

consequences in the workplace

- Engineering and administrative controls and how to apply detection methodologies to provide early warning of releases
- Consequences of engineering or administrative control failure
- Facility siting
- Human factors
- Potential safety and health effects of control failure on employees

After completion of the PHA, your employer must establish a system to:

- Promptly address and resolve the team's findings and recommendations
- Record future actions and resolutions
- Complete actions swiftly
- Create a schedule to complete actions
- Communicate actions to employees whose work may be affected

Operating protocols describe tasks, data, and safety and health precautions, and need to be accessible to employees whose work is part of a process. At the very least, the protocols should include the steps for each operating phase, emergency shutdown operations, safety and health considerations, properties and hazards of chemicals used in the process, and controls in case exposure does occur.

Methods to preventing exposure include engineering controls, administrative controls, and personal protective equipment.

Engineering controls typically involve:

- Enclosures
- Physical containment of the hazards
- Mechanical methods to separate personnel from contact (for example: exhaust ventilation)

Administrative controls are meant to protect personnel against exposure and duration of exposure to hazards.

Personal protective equipment (PPE) needed for chemical exposures include:

- Multiple types of respirators to eliminate or reduce the inhalation exposure
- Protective clothing for the hands, face, and body

A great method for increasing chemical safety is to reduce the inventory of chemicals on site to below threshold quantities, which decreases the chances of a catastrophic incident. In the case that reducing inventory isn't possible, then spreading the inventory to several locations on site is a good option. This way, if a chemical release happens, the smaller amount that's released won't constitute a catastrophic condition. Simply put, you want to lower the concentration of hazardous chemicals stored together to minimize the risk of a major accident.

FUNDAMENTAL 55: Spill Prevention, Control, and Countermeasure Plan

Key Takeaways:

- Learning about the harmful effects of spilled oil and the applicable laws and regulations for oil pollution prevention.
- Understanding the purpose and general requirements of a facility SPCC Plan.
- Learning general operating procedures designed to prevent spills.
- Observing general control measures to prevent an oil spill from reaching navigable waters and adjoining shorelines.
- Learning basic countermeasures for stopping a spill from reaching the environment and how to respond to facility shutdown and evacuation.

Course Description

OSHA reported that, from 2003 to 2010, 823 oil and gas extraction

workers were killed on the job – a fatality rate seven times greater than the rate for all U.S. industries

The Environmental Protection Agency (EPA) found that many of the 14,000 oil spills reported annually are caused by industry activities resulting from storage tank rupturing, pipeline leaks, and oil transport accidents.

Oil spills are a significant threat to the environment and often require specially trained emergency response personnel to contain and clean them up. In fact, some spills are so significant that they require help from local and state agencies, in addition to federal governments.

Here are several important laws that industry employers should understand to prevent oil spills and orchestrate appropriate responses:

Clean Water Act

- Prohibits the release of oil and petroleum products into waters of the United States and adjoining shorelines.

Oil Pollution Prevention and Response Regulation, 40 CFR, Part 112

- Forces certain facilities to implement Spill Prevention, Control, and Countermeasure (SPCC) Plans and train employees in oil spill prevention.
- Created to help facilities prepare for and respond to any oil spill affecting the waters of the United States.

Environmental Protection Agency (EPA)

- Enforces regulations.
- Performs on-site inspections to guarantee facilities take adequate measures to prevent an accidental discharge of oil.

The Oil Pollution Prevention and Response regulation affects the owners or operators of “regulated” facilities. Any facility is a regulated facility if it meets these three criteria:

1. The facility needs to be a non-transport-related facility operating onshore or offshore.
2. The facility must have a total aboveground oil storage capacity of over 1,320 gallons or have a completely buried storage capacity

over 42,000 gallons.

3. There has to be a reasonable expectation of a discharge based on the facility's location near water or adjoining shorelines. For illustration, a reasonable expectation would be a situation where a spill could flow into storm drains and the toxic runoff could then flow to a lake, stream, river, wetland, or coastal water.

The EPA requires regulated facilities to have a fully prepared and implemented Spill Prevention, Control, and Countermeasure Plan, or SPCC Plan, to prevent the discharge of oil into inland and marine waters and to control spills that do happen.

Workers are responsible for:

- Knowing the location of your facility's SPCC Plan
- Enacting the procedures specified in the plan
- Identifying your facility's emergency response coordinator
- Knowing the locations of emergency shut-offs to oil tanks

General Spill Prevention Practices

- Know where spill prevention devices are and how to use them.
- Only use receptacles designated for oil waste.
- Understand how to properly operate oil-handling equipment.
- Learn how to read or operate liquid level alarms, cutoff devices, and vacuum protection.
- Always stay with the vehicle if you are the driver during oil loading and unloading operations.
- Frequently inspect hoses and connections, in addition to checking tank levels.
- Notify your supervisor of all leaks and unusual observations.

Procedures for Loading and Unloading Oil

- Utilize the containment equipment provided to prevent the spread of spilled oil.
- Guarantee that the wheels of the delivery trucks are chocked the entire time.
- If you are a driver, be within 25 feet and in full view of the truck during the entire loading and unloading process.
- Regularly check the leak detection gauges on fuel and oil tanks.
- Guarantee that all tank flow valves are locked-out when they are

in a non-operating or non-standby mode.

Example of spill control measures include:

- Mechanical Containment Equipment
- Blocking the spread of oil
- Focussing it into one area
- Containing the oil until it can be removed and disposed of properly

For all onshore facilities that have a significant potential for oil spills and leaks:

- Plug floor drains
- Seal storm drains
- Divert discharge from a primary containment system, such as a tank or pipe, into secondary containment areas until cleanup can be completed

Secondary containment method examples:

- Curbs
 - Diversion ponds
 - Dikes
 - Berms
 - Retaining walls
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FUNDAMENTAL 55: Safety Audits

Key Takeaways:

- Learning about the safety audit and its purpose.
- Understanding the importance of safety audits and the objectives of a safety audit program.
- Learning how to plan and conduct a safety audit.
- Comprehending how to inspect the work area and work practices.

- Learning how to formulate recommendations for corrective action recommendations, make audit reports, and conduct follow-ups.

Course Description

While not all industries require safety audits to be conducted in the workplace, having regular safety audits performed can help you determine how effective your safety programs are. This course will cover the basics of a safety audit.

FUNDAMENTAL 55: Computer Security

Course Description

The technology you use at work is subject to threats and cyberattacks. This course covers methods to protect software and data, approaches to ensuring security when online and best practices for password protocol.

Personal Fall Arrest Systems

Key Takeaways:

- Understanding the hazards posed by falling four feet (1.2 m) or more without and with a personal fall arrest system.
- Learning about the components of a personal fall arrest system and how they work together to arrest a fall.

- Recognizing the steps for properly inspecting and donning the full-body harness.
- Learning about the key fall arrest system design requirements, including the maximum free fall distance permitted, the maximum deceleration distance allowed, and the safety factor required for lanyards and anchorage points.
- Comprehending the criteria for properly attaching the connecting device to an anchorage connector, vertical or horizontal lifeline.

Course Description

The Occupational Safety & Health Administration (OSHA) requires employers to establish a personal fall arrest program for fall protection everywhere employees are exposed to serious fall hazards, and protection by other means such as guard rails or nets are not used. Usually, these programs identify common hazards and offer solutions for mitigating them, often by instructing the use of fall protection systems, outlining situations where fall arrest devices are appropriate for use.

You must understand how personal fall arrest systems work and what behaviors are required to use them safely. Always, it is good practice to visually inspect these systems and physically test them prior to use.

Majority of personal fall protection systems involve wearable harnesses, designed to suspend a free falling worker. It is necessary for these systems to be tethered to structural points capable of withstanding a lot of force. Even when there is a harness properly in place, the force needed to arrest a free fall places considerable stress on the body. To fully illustrate the scope of this, imagine a 200-pound person free-falling 6 feet, with an additional distance of 3.5 feet for the system to completely arrest the fall, which will equal to a total force of 542 pounds of force pushed on the body. It is challenging for the human body to defy gravity; while personal fall arrest systems save lives, the body can be incredibly stressed by the act of violent restraint.

When the harness is improperly positioned or improperly attached, the stress to the groin, back, and chest drastically increases.

Pressure on the legs from the leg straps supporting the body's weight, even for properly worn harnesses, can restrict blood flowing to and from the legs. In the case that the worker cannot be rescued quickly, serious injury can result from this condition. In fact, even when all parts of the system work perfectly, a worker suspended in a body harness faces the serious hazard of restricted blood flow to and from their legs.

More than just the ground poses a hazard to employees working at heights. Any contact with lower level structure or other object beneath workers poses a serious hazard in a fall, even when wearing fall arrest equipment. To limit a worker's fall distance and the deceleration forces on the worker's body to safe levels, the components in a personal fall arrest system must be designed to work together.

One way to prevent this situation until rescue can be accomplished is through using trauma suspension straps. The purpose of these straps is to be deployed by the suspended worker and attached to the body harness, and allow the person to stand with one or both feet in a stirrup. The body's weight is lifted from the leg straps that tend to cut off circulation to the legs until the worker is rescued.

For your safety in the event of a fall, OSHA standards require specific minimum requirements. The anchorages for the personal fall arrest equipment must be capable of supporting at least 5,000 pounds per employee attached. As well, rings and snap hooks must be capable of sustaining a minimum tensile load of 5,000 pounds. In addition, self-retracting lifelines and lanyards that automatically limit free fall distance to 2 feet or less need to be capable of sustaining a minimum tensile load of 3,000 pounds applied to the device with the lifeline or lanyard in the fully extended position.

On the other hand, all self-retracting lifelines and lanyards that do not limit free fall distance to 2 feet or less, ripstitch lanyards, and tearing and deforming lanyards must be capable of sustaining a minimum tensile load of 5,000 pounds applied to the device with the lifeline or lanyard in the fully extended

position.

Advice for properly attaching your connecting device to an anchor point: – Whenever possible, work directly under the anchorage to avoid injury resulting from swinging and striking another object during a fall. – Make sure that the anchorage is at a height that will not allow a lower level to be struck should a fall occur. – Always attach to the anchorage or anchorage point specified by the qualified person. – Always tie off in a manner that limits free fall to the shortest possible distance. – Never attach your snap hook around a sharp or rough edge. Use a cross-arm strap or other compatible anchorage connector. – Never attach multiple lanyards together. What is the best protection from falling at work? Awareness. Encourage everyone to always wear personal fall arrest systems, and to remain vigilant about the presence of potential pitfalls when working at heights. Fall Protection Systems As stated by OSHA compliance standards for construction activities, wherever a fall from a height of 6 feet or more is possible, guardrail systems, personal fall arrest systems, safety net systems, or some other fall protection device must be used. Examples of fall protection systems include guardrails, temporary warning lines, warning monitors, fall restraint systems, and fall arrest systems. Guardrail Systems Often, permanent guardrails are constructed as part of stairways, landings, work platforms, or equipment access platforms. In all places that short-term fall hazards exist, temporary guardrails are used. Guardrails are required to meet certain guidelines to be compliant with regulatory standards. Guardrails need to include a top rail, mid rail and toe-board. As well, the top rail must be between 39 and 45 inches above the working surface (or ground), and capable of withstanding 200 pounds of force downward or outward. To meet this requirement, commercial grade 2 x 4 lumber or better needs to be used. Likewise, a guardrail's mid rail needs to be capable of withstanding 150 pounds of force downward or outward. Lastly, the toe-board needs to be 3.5 inches above the working surface and capable of withstanding 50 pounds of force downward or outward. Under no circumstance, should there be more than a quarter of an inch gap between the bottom of the toe-board and the working surface. In the case that tools, equipment or materials are

stacked higher than the top edge of a toe-board, paneling, screening or safety nets need to be used from the working surface or toe-board to the top of the mid- or top-rail.

Temporary Warning Lines

This topic consists of ropes, wires, chains and supporting props designed for short-term hazards. Temporary warning lines need to be flagged no less than every six feet with high-visibility material, and signage must be posted indicating controlled access during construction. As well, warning lines must be no lower than 34 inches and no higher than 39 inches from the walking surface.

Warning Monitors

Warning monitors are defined as competent personnel assigned to keep others away from a fall hazard, and they should only be utilized when all other means of fall protection are not possible. Warning monitor positions need to not have any other duties in addition to keeping people away from the fall hazard.

Fall Restraint Systems

A fall restraint system restrains an employee to prevent them from falling to a lower level, as you may have guessed. These systems consist of anchorages, connectors, body belts/harnesses, lanyards, lifelines and rope grabs. Every anchorage point used for fall restraint needs to be capable of supporting four times the intended load, and must be ridged so there is no vertical free fall if the employee slips.

Fall Arrest Systems

Conversely, fall arrest systems are designed to minimize injury from a fall. As much as possible, fall arrest equipment must be used correctly to prevent injury. Equipment for fall arrest symptoms include body support devices (harnesses), lanyards and anchorages.

Body Support Devices

Body support devices move the arresting force of a fall to the strongest parts of the body. Examples of body support devices include waist belts, chest harnesses and sub-pelvic full body harnesses. Waist belts are meant to be used as only restraints, with an average of two minutes of endurance. On the other hand, chest harnesses are designed for rescue and restraint and have an average of six minutes of endurance. thirdly, sub-pelvic full body harnesses average ten minutes of endurance and, of the three, are preferred. Individuals aren't out of danger even after they are caught from a fall by a fall arrest system. It takes 15 to 20 minutes for the suspension from a harness to cause blood to pool in the legs, eventually making the suspended individual pass out.

All the un-circulated blood in the legs proceeds to lose oxygen and become toxic, causing a dangerous condition known as suspension trauma. In order to reduce suspension trauma, you should utilize a body harness with suspension trauma straps that you can use to hook your feet into and push your body upward, allowing your blood to continue circulating. Lanyards are designed to hook to the body support device and stretch when loaded. Stretching decelerates impact speed and arresting force when the wearer falls. Typically, lanyard harnesses are rated for a total capacity of 310 pounds. It is the employer's responsibility to choose the proper length lanyard for the job; too long and it may not prevent the fallen individual from striking surfaces or objects below them. When considering the lanyard's snap-hook device, only self-enclosing and self-locking types should be used, and two lanyards should never be connected together. Anchorages are anchorage points, which personal fall arrest equipment is attached to, ultimately support the equipment and the individual in the event of a fall. OSHA standards require that any anchorage used for attachment of personal fall arrest equipment needs to be independent of any anchorage being used to support or suspend platforms. Examples of anchorages include cross-arm straps for wrapping around approved structural members, driven anchorage points that affix temporarily or permanently to the structure, concrete anchors that are drilled into the concrete floors or walls, and bar anchors that span an opening.

Personal Fall Arrest Systems – Spanish

Key Takeaways:

- Understanding the hazards posed by falling four feet (1.2 m) or more without and with a personal fall arrest system.
- Learning about the components of a personal fall arrest system

and how they work together to arrest a fall.

- Recognizing the steps for properly inspecting and donning the full-body harness.
- Learning about the key fall arrest system design requirements, including the maximum free fall distance permitted, the maximum deceleration distance allowed, and the safety factor required for lanyards and anchorage points.
- Comprehending the criteria for properly attaching the connecting device to an anchorage connector, vertical or horizontal lifeline.

Course Description

The Occupational Safety & Health Administration (OSHA) requires employers to establish a personal fall arrest program for fall protection everywhere employees are exposed to serious fall hazards, and protection by other means such as guard rails or nets are not used. Usually, these programs identify common hazards and offer solutions for mitigating them, often by instructing the use of fall protection systems, outlining situations where fall arrest devices are appropriate for use.

You must understand how personal fall arrest systems work and what behaviors are required to use them safely. Always, it is good practice to visually inspect these systems and physically test them prior to use.

Majority of personal fall protection systems involve wearable harnesses, designed to suspend a free falling worker. It is necessary for these systems to be tethered to structural points capable of withstanding a lot of force. Even when there is a harness properly in place, the force needed to arrest a free fall places considerable stress on the body. To fully illustrate the scope of this, imagine a 200-pound person free-falling 6 feet, with an additional distance of 3.5 feet for the system to completely arrest the fall, which will equal to a total force of 542 pounds of force pushed on the body. It is challenging for the human body to defy gravity; while personal fall arrest systems save lives, the body can be incredibly stressed by the act of violent restraint.

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the stress to the groin, back, and chest drastically increases. Pressure on the legs from the leg straps supporting the body's weight, even for properly worn harnesses, can restrict blood flowing to and from the legs. In the case that the worker cannot be rescued quickly, serious injury can result from this condition. In fact, even when all parts of the system work perfectly, a worker suspended in a body harness faces the serious hazard of restricted blood flow to and from their legs.

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Basic Respiratory Protection

Key Takeaways:

- Understanding the purpose of using a respirator.
- Observing the factors that influence respirator effectiveness, the limitations and capabilities of respirators, and an employer's responsibilities for respirator use in the workplace.

- Learning about how respirators are used in the workplace, including required medical evaluations, fit testing, inspection, seal checks, and maintenance and storage requirements.
- Recognizing when an employee should leave a respirator use area, the warning signs of an improperly functioning respirator, and the actions workers should take in an emergency situation.

Course Description

Annually, it is estimated that respiratory equipment prevents around 4,000 illnesses and 900 deaths.

Both on and off the job, the quality of the air we breathe has major implications for our respiratory health, which is why some regions in the United States alert local citizens when smog or air pollution reaches an unsafe level.

Specific industrial work environments endanger respiratory health; people who work in construction, manufacturing, agriculture, and other industries will be inevitably exposed to workplace respiratory hazards. These workers must be mindful of the air they are breathing because of tasks where irritating dust, chemical fumes, and other airborne contaminants are present in harmful concentrations, or where the percentage of oxygen is insufficient.

For this reason, OSHA requires employers to take the necessary precautions to control for respiratory hazards at worksites. The key rule is if an employer is incapable of eliminating respiratory hazards, the employer needs to provide employees with respirators to protect their health. Across jobs, there's plenty to discuss about personal protective equipment and systems for safeguarding respiratory help.

The goal of OSHA's respiratory protection standards is to prevent tragic workplace accidents and latent illnesses induced from exposure to respiratory hazards that workers may encounter on the job. There are numerous safety considerations around the vast category of airborne contaminants. In the case that you work in an environment that poses some respiratory risks, it's likely that you're aware of steps for minimizing your risk of exposure, and familiar with some respiratory devices. Although, due to

unpredictability, there is a lot to learn about protection from airborne contaminants, and it is important to know in what forms these hazards exist, where you're likely to find them, and how they physically behave. When you understand the properties of airborne contaminants, you are able to better apply appropriate measures to control them, avoid exposure, and treat symptoms.

Typically, depending on myriad factors, the effect on the body from inhaling a contaminant can be immediate or might not show up for many years, and symptoms can range from mild and temporary to severe, with permanent injury or even death.

Chronic exposure to respiratory hazards can manifest an illness which develops over many months or years. Usually, these respiratory injuries result from repeated exposure to low concentrations of a contaminant without the use of a respirator. With other illnesses, the effect of a respiratory hazard may be acute (i.e. the effect occurs immediately or very soon after exposure to a high concentration of a contaminant).

For your reference, OSHA defines an atmosphere that is an extreme threat to workers as an atmosphere "immediately dangerous to life and health" (IDLH). IDLH labelling is applied when exposure to the atmosphere would pose an immediate threat to life, would cause irreversible adverse health effects, or would interfere with an individual's ability to escape from the dangerous atmosphere.

The regular air that we breathe has an oxygen concentration of 20.9%. Conversely, an atmosphere is IDLH if the oxygen concentration is less than 14%. Although, even if oxygen concentration is normal, an atmosphere can still be IDLH in the case that the concentration of a toxic substance exceeds the IDLH exposure limit for that substance.

OSHA standards require all employers whose workers wear respirators at work to have a written respiratory protection program. Such programs must cover respirator selection, worksite-specific usage procedures, fit testing, training, cleaning and maintenance, and medical screenings. As well, employers need to evaluate the effectiveness of the company's respiratory protection

program often and need to modify the program based on the evaluation results.

Basic Respiratory Protection – Spanish

Key Takeaways:

- Understanding the purpose of using a respirator.
- Observing the factors that influence respirator effectiveness, the limitations and capabilities of respirators, and an employer's responsibilities for respirator use in the workplace.
- Learning about how respirators are used in the workplace, including required medical evaluations, fit testing, inspection, seal checks, and maintenance and storage requirements.
- Recognizing when an employee should leave a respirator use area, the warning signs of an improperly functioning respirator, and the actions workers should take in an emergency situation.

Course Description

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ESSENTIAL 29: First Aid – Fundamentals

Course Description

After completing this course, learners will be able to explain initial responder responsibilities, identify legal and ethical issues related to being a first responder, and explain when it is appropriate to move injured patients and how it should be done.

First Aid: Fundamentals – Spanish

Key Takeaways:

- Learning the initial responder's responsibilities, and understanding the legal and ethical issues related to acting as an initial responder.
- Understanding how to initially assess and respond appropriately to a medical emergency situation.
- Learning the procedures to follow when responding to a conscious or unconscious victim.
- Learning when it is and is not appropriate to move an injured or ill person and how to appropriately position them while waiting for EMS to arrive.
- Identifying the symptoms of shock and learning how to respond to persons suffering from shock.

Course Description

After completing this lesson, learners will be able to explain the initial responder's responsibilities, identify the legal and ethical issues related to acting as an initial responder, and explain when it is appropriate to move injured patients and how it should be done.

ESSENTIAL 29: Confined Space Entry – Permit Required

Course Description

Upon completion, learners will be able to identify characteristics, examples, and hazards of confined spaces,

differences between permit-required and non-permit-required confined spaces, and requirements of a permit-required confined space entry program.

Essential 29: Confined Space Entry – Permit Required – Spanish

Course Description

Upon completion, learners will be able to identify characteristics, examples, and hazards of confined spaces, differences between permit-required and non-permit-required confined spaces, and requirements of a permit-required confined space entry program. (Spanish Version)

BETTER BUSINESS: HIPAA – Privacy and Security Basics

Key Takeaways

- Observing the costs of violating Health Insurance Portability and Accountability Act (HIPAA) regulations
- Understanding the importance of the HIPAA
- Appreciating the importance of protecting individuals' Personal Health Information (PHI)
- Understanding roles for protecting PHI and Personal Health Records (PHR) under HIPAA

Course Description

It's easy to empathize with the potential disaster of leaked Personal Health Information (PHI). Imagine knowing your coworker has hemorrhoids or some illness. Imagine if you had an illness (if you don't) and everyone in your community knew. Often, this violation of privacy can be embarrassing or invite pity that you didn't want; sometimes being treated as unhealthy is very difficult. This is why the Health Insurance Portability and Accountability Act (HIPAA) was enacted to protect your information. Nowadays, it's so easy to have PHI on an online database, but it also invites the opportunities for an invasion of privacy. The solution is not revert back to paper, but rather you should be educated on techniques for ensuring privacy is protected. This course is designed to do exactly that.

You will learn about the basics surrounding the HIPAA, including: what information is considered to fall under PHI; who is responsible for protecting PHI and Personal Health Records (PHR) under the HIPAA; and the significant financial consequences for violating the HIPAA. If you didn't have your fill of acronyms, we will also discuss basic IT measures that can be taken to reduce the risk of violating privacy. There is a lot that you, personally, can do to protect everyone's PHI. This course will identify behaviors and methods that make it easier for information to be hacked or leaked, such as Bluetooth and public networks. In addition, we will supply you with methods to improve security on mobile devices and within the workplace.

No one wants their medical information widely discussed and known to everyone. Our hope with this course is that we can help you ensure that never happens in your workplace.

ESSENTIAL 29: Emergency Response

Key Takeaways:

- Accepting that it is more effective to plan for emergency response than it is prevent emergencies
- Learning ways to respond to emergencies that reduces their severity
- Understanding the importance of reacting to emergencies for everyone's safety

Course Description

Emergencies in the workplace come in many different forms, ranging from natural disasters like fires, earthquakes, floods, and tornados to human caused events like terrorism, Active Shooter events, spills, and critical failure. For fires, is estimated by the United States Fire Administration that there were 100 300 fires annually from 2014 to 2016 in nonresidential buildings. This amounted to around \$7.2 billion in property losses, with cooking issues being the leading cause. Comparitively, Statistics Canada reported that from 2005 to 2014, 40% of structural fires were nonresidential, with cooking equipment being a cause in a third of all fires. One lesson from all these statistics may be to remove employee cooking equipment from the workplace, but a more important lesson should be that fires are very common.

Likewise, other natural disasters can be quite common or uncommon depending on the environmental factors in your workplace, in addition to how the climate in your region is changing. Nonetheless, human caused emergencies happen all the time, in every industry. Accidents like hazardous chemical spills or improperly maintained equipment can lead to dangerous exposure or even explosions in the workplace. Everyone has heard horror stories within their industries and have learned from them. As well, workplace violence is prevelant in our society. Extreme events such as terrorism and Active Shooters have the potential to be common, depending on your location of work. Incidents of severe

bullying or domestic abuse can be seen in the workplace and can be considered emergencies for everyone's safety. In short, the potential for emergencies is always there.

Majority of the parts of a health and safety system are aimed at preventing emergencies. Unfortunately, there are never guarantees, and if an emergency does happen, you need to be able to respond immediately and appropriately. In other words, you can't prevent emergencies, therefore your time is more effectively spent preparing for them. Often, there is a belief that a good workplace has no emergencies whatsoever. That is simply not true, because it isn't possible. A good workplace is not emergency-free, but a good workplace has systems in place for reacting to emergencies that effectively save lives and business alike.

This course will teach basic emergency response information and key response planning tools. Although it will not make you a professional first-responder, it will help you deal with an emergency if you are at the scene. You will be taught skills on proactive actions that can be taken when danger is imminent, such as calling the authorities, isolating the hazard, establishing protocols for saving lives, and more. You do not need to know how to eliminate the potential for emergencies, but you do need to know how to reduce the potential for devastating emergencies by establishing proper reaction procedures.

BETTER BUSINESS: Critical Thinking and Problem Solving

Key Takeaways:

- Addressing problems in new ways
- Learning techniques to improve your response to situations

Course Description

We have all felt the satisfaction of solving an issue that perplexes everyone else. As well, we have all had someone solve an issue that we simply could not have figured out. Being an effective problem solver is valuable to every environment, and often it is highly desired. That's why we have designed this course: to create more problem solvers in the workplace. Our aim is to teach you skills and techniques that will significantly improve how you address problems, yielding better results everytime.

Our main discipline in this lesson will be critical thinking. Nowadays, that's a pretty common buzzword with little in-depth exploration. Often, not much more than "think outside the box" and "break the status quo" are applied to the term. While we have certainly used such phrases, our aim is to fulfill that necessary step of explaining critical thinking and providing actual steps in which you can practice it. We will discuss two different approaches to critical thinking and the characteristics of each. Through that, you will be able to practice and actualize the behaviors necessary for effective problem solving. Lastly, the course will provide explanations of the improved characteristics you can gain through practicing critical thinking.

We hope that this course will help improve your engagement in problems, in all aspects of life. Our aim is to help you learn easy skills that will have a big impact on the success of your life. Through our visuals, knowledge checks, and supplementary materials, our goal is to play a part in the improvement of your business.

BETTER BUSINESS: Coaching and

Feedback

Key Takeaways:

- Establishing an easy-to-understand coaching model
- Understanding how to deliver feedback and coaching so that it is effective
- Learning strategies to increase trust and unity within a team
- Seeing the importance of long-term mentoring for individual and professional growth

Course Description

This course is meant to improve your coaching and feedback in a simple and effective manner. Consider your experience coaching and giving feedback, and being coached and receiving feedback. Likely, there have been experiences when no matter what you or someone else does, nothing improves. As well, there are probably experiences where a few words of wisdom revitalized a person or project and produced success beyond anyone's expectations. Feedback and coaching can be priceless or utterly useless and negative. The purpose of this course is not to convince you that feedback and coaching are important or that employees crave them, but rather it is to help you understand what makes these techniques worth everything or nothing.

Odds are, somebody does something in your life that you don't appreciate. That statement is essentially a certainty because not everyone is you. Asking someone to change and coaching them through it can be very difficult and still yield no results. You might be tempted to give them feedback on what they are doing wrong or inadequately, so that they can understand what exactly is the issue. As you will see through this course, it is important to make the distinction between feedback and coaching and when to implement either for the best results. Mismanagement of either technique can be disastrous, leading to distrust and an aggravated work environment. This is why we will teach you step-by-step methods that you can practice to ensure feedback and coaching are worth everything to your workplace. We will also explain the term "constructive feedback" so that you have an in-

depth knowledge of the subject and how to properly implement it in the workplace.

Lastly, this course will focus on the value of trust in the workplace, as it relates to development and success through coaching and feedback. You will learn ways to build and foster trust in your and others' relationships, so that mentoring is prominent in your workplace. Mentoring is very different than coaching, mostly on the focus of time length but there are other criteria which we will discuss as well. Overall, this lesson is meant to help you achieve higher performance, together. We hope to help you foster powerful relationships in the workplace so that people are engaged and love where they work, providing you with stupendous results.

BETTER BUSINESS: Improving Presentation Skills

Course Description

This course will help you improve your presentation skills, including customizing your message for your audience, creating an outline, writing and revising, using visual aids, and delivering your presentation with power.

ESSENTIAL 29: Struck-by and

Caught - Between

Key Takeaways:

- Identifying common struck-by and caught-between hazards
- Recognizing higher risk environments
- Discovering techniques and methods to reduce overall risks
- Evaluating unsafe behaviors that increase risk

Course Description

This course is meant to help you identify and correct unsafe work practices, in addition to creating and enforcing safe work practices so everyone can avoid struck-by and caught-between injuries and incidents.

A struck-by incident is when the impact alone creates an injury (e.g. a worker is hit and injured by a tool or equipment). Often, struck-by incidents are related to improper material handling and unsafe practices around heavy equipment, tools, and machinery. These incidents can result in blindness, concussions, permanent brain damage, and other serious injuries.

A caught-in or -between incident is when an injury is a result of the crushing force between two objects. This includes getting caught or crushed in operating equipment, between a moving and stationary object, or between two or more moving objects. Annually, caught-in injuries result in serious and often fatal crushing injuries and hundreds of amputations each year. In total, these hazards account for:

- Approximately 100 deaths each year
- 5% of all construction fatalities
- More than 2 amputations EVERY work day
- Over 550 amputations each year
- Thousands of disabling injuries

Don't let yourself become one of these statistics!

These incidents can happen in every type of job but are most common, and most deadly, in construction and road work, oil and gas work, any work involving material handling, machines, and

heavy equipment.

The prevention of struck-by and caught-between related hazards and injuries is a primary focus of OHS/OSHA inspectors. By taking this course, you can help your organization protect workers and keep them safe on the job.

HOW TO: How to Navigate a Course

Key Takeaways:

- Identifying course user interface
- Understanding how to utilize course features

Course Description

Courses are likely the most common user experience within Bridge, and the aim of this lesson is to educate you on the features of courses. You will learn how to progress through the course, recognize the user interface, participate in the comment section, reply and upvote comments, and upload pictures. This simple lesson will teach you everything you need to know about enrolling in a course through Bridge.

BETTER BUSINESS: Management Basics

Key Takeaways:

- Identifying the common pitfalls of management
- Learning techniques to improve the results given by your team

- Observing ways to designate tasks and goals so that stress is reduced
- Identifying ways to deliver assignments and when to choose each way

Course Description

The aim of this course is to provide skills and strategies that make management easier. There are countless ways that management can be an issue. Perhaps you have been called a micro-manager, have been frequently criticized, have not seen the results you want, struggle to motivate your team, or maybe you find that your entire day is spent in meetings and dealing with others, while your work piles up. In any case, this course will focus on techniques designed to make everyday easier, such as ones for goal setting, assigning tasks, giving feedback, and monitoring work. Management is not a set checklist of tasks to ensure success, which is why it can be helpful to have some guidance.

We will first distinguish management from leadership, as those two terms are often grouped or confused. Both need each other to provide overall success, but reliance on one can be fatal. As you will see, there are pros and cons to leadership and management, but when used together in the right ways they prove to be miraculous. For instance, the attributes of leadership identified in this course play a significant role in setting goals. Goals can be the biggest motivation or do absolutely nothing, which is why we will focus on what makes goals SMART.

From there, we will proceed to discuss strategies to ensure that there is no drama when you give out assignments. It is clear that there is no one-size-fits-all form of management. Rather, you will learn about and when to use the four general categories of management: directing, coaching, supporting, and delegating. Often, there are micro-managers and seagull managers (accurately named for swooping in, dumping on everyone, and swooping out), and both lose motivation and productivity fast. This is why we will also discuss ways to avoid becoming and overcome these management types. Lastly, we will offer guidance on the more personal sides of management, being feedback, priorities, and monitoring. It's

not easy to be someone's boss, do your own work, and ensure the work given to you is high quality. Likely, this is the hardest part of the job. Our hope with this course is to supply you with the skills to overcome these hurdles in your path. By implementing animated videos, quizzes, and takeaway resources, we have designed this course to help you become the best manager that you can be.

HOW TO: Your Sandbox

Key Takeaways:

- Identifying the features of Admin status in Bridge

Course Description

In this course, you will be given a brief outline of things you can do as an Admin in Bridge. Using this learning management system (LMS), you can create training, surveys, live training, programs, and reports, in addition to participating in LMS evaluations. Our goal with this course is to give you the concept of what you can achieve with Bridge.

OSHA: Intro to Combustible Dust Hazards

Key Takeaways:

- Learning about combustible dust and its sources.
- Recognizing potential ignition sources that may contribute to a dust explosion.
- Acknowledging combustible dust dangers in their workplace/industry.
- Learning methods to prevent the occurrence of combustible dust

explosions.

Course Description

The aim of this course is to improve the safety of workers in environments where combustible dusts are encountered by increasing employee awareness and by demonstrating how the hazard can be identified and addressed in the workplace.

Combustible dust is composed of fine particles which present an explosion hazard while suspended in the air, in certain conditions. These explosions can be catastrophic and cause employee deaths, injuries, and destruction of entire buildings. Across many combustible dust incidents, it was reported that employers and employees were unaware a hazard even existed. Your company must determine if they do have this hazard, and if they do, they must take action now to prevent tragic consequences.

High Risk Industries

There are a variety of industries in which combustible dust explosion hazards exist, including: agriculture, chemicals, food (e.g., candy, sugar, spice, starch, flour, feed), grain, fertilizer, tobacco, plastics, wood, forest, paper, pulp, rubber, furniture, textiles, pesticides, pharmaceuticals, tire and rubber manufacturing, dyes, coal, metal processing (e.g., aluminum, chromium, iron, magnesium, and zinc), recycling operations, fossil fuel power generation (coal), and 3D welding (a form of 3D printing).

Recommendations for Dust Control:

- Develop a hazardous dust inspection, testing, housekeeping, and control program;
- Utilize proper dust collection systems and filters;
- Reduce the escape of dust from process equipment or ventilation systems;
- Work on surfaces that minimize dust accumulation and facilitate cleaning;
- Supply access to all hidden or remote areas to permit inspection;
- Search for dust residues in open and hidden areas at regular intervals;

- If ignition sources are present, use cleaning methods that do not generate dust clouds;
 - Use only vacuum cleaners approved for dust collection; and
 - Locate relief valves away from dust deposits.
-

ESSENTIAL 29: Electrical Safety

Course Description

To enable employees to reduce workplace accidents involving electricity by learning to identify electrical hazards, take proper control measures and follow safe work practices, and response actions in the event of shock or fire.

OSHA: Electrical Safety Overview

Key Takeaways:

- Learning about how electricity works regarding hazards on the job
- Understanding basic safety controls and practices at work
- Recognizing and understanding how to respond to electrical emergencies

Course Description

This lesson will provide an overview to prepare workers for working safely with and around electricity. However, this lesson will not address arc-flash hazards and controls, lock-out/tag-out procedures, or high voltage (220V or 440V) electrical safety.

annually, there are nearly 230 electrical related fatalities. The National Institute for Occupation Safety & Health (NIOSH) discovered that, “61% of electrocutions occur in two occupation divisions: 46% among craftsmen and 15% among laborers. These two groups also had the highest rates of electrocution death: 1.4 per 100,000 workers each.”

NIOSH also stated that “Electricity is the flow of an atom’s electrons through a conductor. Electrons, the outer particles of an atom, contain a negative charge. If electrons collect on an object, that object is negatively charged. If the electrons flow from an object through a conductor, the flow is called electric current. Voltage is the fundamental force or pressure that causes electricity to flow through a conductor and is measured in volts.”

Typically, fatal electrical accidents happen in the high-risk workforce when an aerial lift or boom, or scaffolding set up, results in the unexpected connection with a power line, creating a circuit.

You should always remember that electrical hazards can cause burns, shocks and electrocution (death).

- Always assume that overhead wires are energized at lethal voltages. Do not assume a wire is safe to touch, even if it is down or appears to be insulated.
- Do not touch a fallen overhead power line. Instead, always call the electric utility company to report fallen electrical lines.
- Maintain at least 10 feet (3 meters) distance from overhead wires during cleanup and other activities. While working at heights or handling long objects, always survey the area before starting work for the presence of overhead wires.
- In the case that an overhead wire falls across your vehicle when you are driving, stay inside the vehicle and continue to drive away from the line. When an engine stalls, never leave your vehicle. Warn anyone nearby not to touch the vehicle or the wire. Call, or get another person to call, the local electric utility company and emergency services.
- Do not operate electrical equipment when you are standing in water.

- Do not repair electrical cords or equipment unless qualified and authorized.
- Always get a qualified electrician to inspect electrical equipment that has gotten wet before energizing it.
- In the case that you are working in damp locations, inspect electric cords and equipment to ensure that they are in good condition and free of defects, and use a ground-fault circuit interrupter (GFCI).
- Remember to be cautious when working near electricity.