

OSHA: Compressed Gas Safety Overview

Key Takeaways:

- Understanding all the hazards of cylinder dispensing and control components and contents
- Comprehending identification labels and markings on compressed gas cylinders
- Knowing the practices to safely use compressed gas cylinders and their components
- Recognizing safe methods of moving and storing compressed gas cylinders

Course Description

Compressed gas cylinders are especially hazardous, both because of the contents of the cylinders and gas pressure within the cylinders. A compromised cylinder raises the worries about how the container may behave and the potential harm of whatever chemical is stored inside.

Typically these cylinders are heavy and full of pressurized, dangerous gas – compressed gas cylinder work means being aware of an inherently dangerous situation, and understanding the complexities to mitigate for. Perhaps the most recognizable, feared scenario surrounding compressed gas tanks involves the rapid loss of pressurization, turning the vessel into a missile-like device with ballistic properties. This happens when the cylinder has ruptured in some fashion, which is why the federal Office of Compliance once referred to pressurized cylinders as “the loaded weapon in your workplace.”

To recognize the hazards of compressed gas cylinders, you must first recognize every specific part of the cylinder and understand how they work. Every compressed gas cylinder poses the risk of an explosion when the metal pressure vessel fails. The misuse or abuse of the cylinder or valve while it is under pressure is a common factor of that scenario. Other important factors to this scenario include the sudden release of pressure from the cylinder,

as mentioned above.

There are also compressed gas cylinders that contain many types of gases. Many common gases that are used in pressure cylinders include those that are combustible, flammable and/or explosive, poisonous, or that are corrosive, reactive, or inert. Each compressed gas cylinders also could contain gases that have multiple of these characteristics. Crucially, everyone needs to know what is inside a cylinder, so accurate labeling, marking, and dating are each critical precautions for safety.

Here are some basics around working with compressed gas cylinders.

Safety comes first. Make sure only properly trained personnel with the needed personal protective equipment handle compressed gas cylinders because the release of these gases risks injury or death from fire, explosion or exposure. When using compressed gases, you must be trained in the safe use of pressurized systems and the materials they contain. It is also a good idea to be trained on all parts of your company's Hazard Communication Program and in the hazards and precautions around the materials you are using.

Always read the label before working with a compressed gas cylinder. Take the time to understand what you're working with. The gases in any compressed gas cylinder need to be clearly identified. Simply don't accept a cylinder that does not legibly identify the contents; it's not safe.

Gases may be identified through stencils or stamps on the cylinder. Their identification can also be on a label solidly attached to the cylinder. Tag systems available commercially are also useable for identification.

You cannot rely on the color of a cylinder for identification because cylinder colors may vary with supplier, and because these containers are reused. In addition, do not rely on the cylinder cap label because the caps are interchangeable. In the case that the cylinder label becomes unclear, mark it "contents unknown" and send the cylinder back to the supplier – it's just safer that way. Convenience is not worth the problems for you when working with a

vendor.

You should take two basic precautions before working with a compressed gas cylinder. First, work in a well-ventilated area. Second, equip the cylinder with the correct regulator; inspect the regulator and cylinder valves for grease, oil, dirt, or solvent, and either clean what you find or do not use the contaminated component.

It is important to remember oxygen is not compressed air. In no case should you use oxygen as a substitute for compressed air with pneumatic tools, in oil heating burners, to start internal combustion engines, to blow out pipelines, to dust off clothing or equipment, or to create pressure for ventilation. Never smoke around oxygen and fuel gases because a fire could result.

Take care to store compressed gas cylinders in a well-ventilated, cool, dry area. Make sure stored cylinders are protected from unauthorized access and are protected from the elements. Optimal storage locations are away from direct sunlight, where internal temperature will not exceed 125 degrees Fahrenheit.

HOW TO: Admin Training

Key Takeaways:

- Understanding general applications of Bridge
- Learning how to manage users and groups, find Insights, send and view surveys, and manage account settings

Course Description

In conjunction with our 8-part Bridge curriculum, this course will teach you about general administrative applications for Bridge. Bridge is a powerful tool that allows you to teach mass audiences about safety and other aspects of your workplace. You can use it to supply employees with policies, maintain training regulations, analyze average competency for specific topics, and much more. In

this course, you will learn skills to manage both the people who use your site and the site itself. To start, we will discuss the analytical side of Bridge. Did you know that you can not only view how many people completed your courses, but also the average procrastination period? You can also access extensive reporting technology that will allow you to filter data on your users in areas such as device use, active periods, comprehension rate, and average enrollment. We will show you where each of these reports are located and the overall layout of the powerful Insights tab.

Next, you learn all about the Admin tab. Users are fundamental and likely the reason you use Bridge, so we will discuss how to add users efficiently and manage their permissions when accessing the site. As well, you will see Bridge's smart technology in generating smart groups that adapt in real time. Instead of needing to manually move people from group to group as they change positions or migrate in and out of the company, Bridge will automatically do the work for you in real time using your criteria. Other highlights under this tab include branding the site and user experience, altering notifications, generating SubAccounts, managing tags and categories, and exporting your data. The Admin tab, like the Insights tab, has many resources that can prove beneficial to your business and user management.

Lastly, we will discuss the Author tab and surveys. If your organization collects information on employee or customer satisfaction, user knowledge, or other criteria, then Bridge can easily send surveys to your users and organize the results. You will learn not only how to create a survey, but also how to send it to specific groups and find comparative results amongst your users. This information can be utilized to make new courses for training or follow-up, and Bridge will automatically enroll all users within your choice of a survey response range.

Bridge is a user-friendly, powerful tool to manage training and communication between your users. The analytics of the application can significantly guide you in making corporate decisions and impacting your users. Our hope with this course is to supply you with the basic skills to utilize Bridge to your advantage.

BETTER BUSINESS: Generational Awareness

Key Takeaways:

- Understanding general characteristics about different generations
- Learning about important events that took place while generations entered their formative years
- Improving communications and relations between generations
- Decrease stigma between generations

Course Description

We all know the stereotypes of the generations of our society. They have many different names, such as Traditionalists, Baby Boomers, Generation X, Millennials, Generation Z. Many of us disagree on what periods of time determine which generation you are, perhaps most notably is the disagreement on the cut-off for being a Millennial. Nonetheless, generations more now than ever are a significant part of the workplace. Age diversity is significant with many putting off retirement and others rising the ranks quickly. Sometimes, this can lead to stigma between coworkers. One may have an inept skill with technology and the other may prefer to talk face-to-face. Our course was developed with the potential of barriers between generations in mind. The aim of this course is to improve communications and relations between generations in your workplace by teaching you about what makes each generation distinct.

We will first look to the past and see the significant historical events that influenced the formative years of your colleagues, such as the Civil Rights Movement, the AIDS Crisis, Terrorism, the Beatles, MTV, or the birth of social media. The events that happen in our cultures influence our perception of the world, and it is important for you to understand what was significant in your colleagues' lives before you can improve relations with them.

After this history lesson, we will explore characteristics that are particularly common for specific generations so that you can take them into account when communicating with others. We do not want to promote discrimination or treating others differently because of when they were born, but rather we want to make you more conscious of how you interact with people accustomed to things like texting or written letters. Our hope with this course is to help you improve relationships within your workplace. Anybody can be young and hip or experienced and wise, and there's nothing wrong with either. Through our implementation of visuals, quizzes, and additional resources, we want to further improve your capabilities of forming relationships with every generation.

BETTER BUSINESS: Emotional Intelligence

Key Takeaways:

- Understanding how improving emotional intelligence benefits daily success
- Identifying ways to improve how you deal with:
 - Managing personal behavior
 - Navigating social situations
 - Making personal decisions
- Utilizing techniques and methods to improve self-awareness, self-regulation, self-motivation, social awareness, and social skills
- Developing verbal and nonverbal communication skills

Course Description

The aim of this course is to teach you the importance of emotional intelligence in social situations, specifically the workplace. Have you ever been in a situation where someone rolled their eyes at you, stormed out, pounded their fists on the table, or told you off? Have you ever done that to anyone? On either ends of those

situations, nobody is happy. The work environment feels awkward or hostile, productivity is lowered, and it's difficult to approach others afterwards. Often, what is needed is improved emotional intelligence. That sounds patronizing, but emotional intelligence is crucial for effective communication and relationships. There's nothing weak or demeaning about having working on emotional intelligence, it can only make you more empathetic to others and foster easier relationships.

Through this course, we will explore examples of the influence that emotional intelligence has on the workplace. You will learn about the five domains of emotional intelligence (self-awareness, self-regulation, self-motivation, social awareness, and social skills), in addition to actual techniques that you can practice to improve each of them. Some of the techniques that we have inserted in this course include verbal and nonverbal communication skills. As well, we will focus on the importance of values such as empathy, optimism, fun, and humour in the workplace as they relate to individual performance and workplace atmosphere.

Our hope is to provide you with techniques and strategies that make emotional intelligence easy and natural for you. We designed this course to make it easier to change behavior for the better, without making you feel walked on or like your losing character. Also, we want to reduce stigma around disagreeing and having negative feelings. After all, what's important is that you learn strategies to better interact and engage with frustrations, not ignore those feelings or beat them down. Our Emotional Intelligence course is meant to be a welcoming experience to help you be the best you that you can be with others in the workplace.

Valuing Diversity at Work

Key Takeaways:

- Understanding how stereotypes and personal biases impair judgement of others
- Recognizing the influence that judgement and discrimination can have on others
- Evaluating how you treat others
- Understanding everyone's rights in the workplace

Course Description

Stereotypes, personal biases, and discrimination have a profound impact on society. In the workplace, this can lead to decreased productivity, limited decision capabilities, reduced growth, and many more long-reaching negative effects. These sorts of judgements are natural and taught to us at an early age, but like poison or tornadoes, not all natural things are good. You may very well have stereotypes and personal biases of your own, like you believe that all people of one political identity are fascists, or the other are all ridiculous and wimpy; that everyone from a foreign country is spying on you; that redheads have a temper; that one race is smarter than another; that old people are slowing progress; that poor people are the problem with society; that women belong in the kitchen; or that men are all pigs. The list goes on. Stereotypes and biases, if it was not already clear, are oversimplified misconceptions about members of a classification. Acts of sexism, racism, ageism, and any other form of discrimination based on skin colour, nationality, sexual-orientation, religion, or other unreasonable criteria is against the law. Harassment doesn't have to be as extreme as physical abuse, demotion, or name-calling (although it certainly can be), it can also be less severe, such as jokes, comments, or even compliments. You may not intend to hurt someone, or believe they are overreacting, but harassment is a key topic because it impedes on diversity.

The aim of this course is to teach you about diversity and why it is so important to the workplace. Although times are certainly

better now, diversity can still be an issue for many workplaces and industries. As previously suggested, this course will focus largely on stereotypes and personal biases and how to overcome them. It can be hard to change what you've known for years, which is why we have offered some guidance on the topic. We want to show you all the long-reaching potential diversity allows and the legality around attacking it. Our hope is to help you foster diversity in the workplace by teaching you strategies to help both you and others overcome stereotypes and biases in life.

BETTER BUSINESS: Being an Effective Team

Key Takeaways:

- Understanding how team dynamics affect the success of a team
- Viewing techniques and strategies to improve your own team
- Appreciating core values which influence teams

Course Description

In this simple, quick course, we will teach you how to improve your teams in the workplace. It is likely we have all been on great teams and not so great teams sometimes in life, think of grade school, sitting in on a town hall meeting, planning a wedding, organizing a trip, competing in sports, or any number of activities and there will likely be an example in your head. Being on a poor team is unenjoyable; things tend to slow down, there's lots of resistance, people fight or are passive aggressive, and at the end of the day you gain some distaste for teamwork. The truth is, though, that being on a great team provides some of the most fantastic experiences imaginable. Sure, it sounds cliché and like a motivational speech, but it's undeniably true. Teamwork has established our infrastructure, food systems, water supply, and nearly all entertainment. Naturally, you may think of counterexamples, but even those are likely to have others who

helped publish and distribute the book, design and build the hardware, engineer and replicate the science, or participated in the movement. Great teams can be amazing and lead to great things, and the purpose of this course is to help you foster amazing environments that you love working in and produce your best work.

We will address strategies that apply to both leaders and team members individually and together. We won't stop there although; we will also discuss team dynamics. There are many different types and we will explain the advantages and drawbacks of each to you. Depending on your situation, certain qualities are more important than others, and by understanding team types you can decide what is most effective for you. Moving on from team dynamics, you will learn about behaviours that hinder teams and how to counter them. Our main focus will be a four stage model that you can implement to ensure the team's success over time. This model is simple and logical, and we hope that it will help you overcome the inevitable hiccups that arise from collaboration. As well, we will offer mentalities and research done on mass thought and development, to further teach you successful ways to engage in working with others.

After this course, you will go on with a list of strategies, techniques, and resources to help assist you in improving team efficiency at work. We hope that this course can also make relationships easier and more enjoyable in team settings so that you feel like you are fulfilling your passions.

FUNDAMENTAL 55: Hot Work

This course covers the hazards of hot work, requirements for performing hot work, equipment and precautions to ensure the safety of hot work employees, and safety practices for arc welding and cutting and oxygen-fuel gas cutting and welding.

Hot Work – Spanish

Key Takeaways:

- Understanding the hazards of hot work.
- Comprehending the basic requirements for performing hot work.
- Recognizing the elements of equipment safety.
- Observing special equipment and precautions that ensure the personal safety of hot work employees.
- Learning appropriate safety practices for arc welding and cutting and oxygen-fuel gas cutting and welding.

Course Description

The most common serious occupational injury for welders is eye injuries, at about 25% of total welding injuries each year.

Hot work is defined as any labor involving open flames or produces sparks, or that can start a fire by other means. Usually, this is welding, wheel or torch cutting, brazing, soldering, and grinding, but it can include other work.

Hot work requires a substantial amount of controls because it poses such a unique combination of both safety and health hazards to workers. Luckily, these hazards can be greatly reduced if you follow the proper procedures and use the controls that are in place.

First and foremost, employees working around hazards created by hot work operations must be protected by personal protective equipment (PPE). Employees performing hot work need to wear fire retardant long-sleeved clothing without cuffs, or else they sacrifice body protection.

All sleeves and collars need to be buttoned up. Do not wear clothing with tears, snags, rips, or worn spots that could easily be ignited by sparks. Proven protective equipment also includes welding “leathers” such as jackets, sleeves, aprons and gauntlet gloves.

As well, your feet must be protected with high top leather shoes, preferably safety shoes. Anytime low shoes are worn, your ankles must be protected by fire resistant leggings. Both hot work employees and helpers must wear suitable protection for their heads, faces, and eyes depending on the particular job. Always consider how sparks and bits of hot metal can inflict damage; sparks can be more distracting than directly dangerous and then present new risks associated with inattention.

Remember to ensure personal protective equipment (PPE) is well-maintained and in working order. The purpose of welding helmets and hand shields is to protect the eyes, face, neck, and ears from the harmful radiation produced by the arc. Do not use a welding helmet or shield if the filter plate or cover plate is cracked or broken. Preferably, use a flame-proof skull cap to protect your hair and head. Lastly, transparent face shields and ventilated goggles both insulate from heat.

Often overlooked, but the potential for fire, explosion, or health hazards makes for the strong recommendation to prohibit welding, cutting, or hot work being attempted on used drums, barrels, or tanks that have not been properly cleaned and purged. The possibility of introducing an ignition source to your misfortune should make you want to be abundantly sure about what's inside of these units before performing any hot work.

Never weld directly on a concrete floor. The heat from the arc can create steam from the moisture within the concrete, which can then explode. As well, in the case that the welding operation must be done on steel or another conductive material, an insulating mat must be underneath the welder. Anytime the welding area is wet or damp or the welder is actively perspiring, then they must wear insulating rubber gloves under the welding gloves. Always equip the welding area with a fire blanket and a well-stocked first aid kit.

In addition, noisy situations necessitate hearing protection.

For everyone's safety, ensure your workforce follow these precautions to prevent electric shock when working with an

electric arc welder:

- Ensure the workpiece is grounded.
 - Using dry insulating materials between the workpiece and ground is required.
 - Always wear dry, hole-free insulated gloves and body protection.
 - Wear a helmet when welding or watching welding work. Only use a helmet that is properly fitted and comfortable, with the properly shaded glass eyepiece filter to protect your face and eyes.
 - Ensure the welding area is well ventilated and use the necessary respiratory equipment.
 - Never touch electrically energized (“hot”) parts or electrodes with bare skin, or wet clothing, or other conductive material.
 - Never allow heated weld areas to come into contact with exposed skin.
 - In the case that the wet area and welding operator cannot be insulated from the workpiece with dry insulation, use a semiautomatic, constant-voltage welder or stick welder with a voltage reducing device.
 - Maintain the electrode holder and lead cable insulation’s good condition and do not use if the insulation is damaged or missing.
 - Do not dip an energized (“hot”) electrode holder in water.
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ESSENTIAL 29: Fall Protection – Construction

Key Takeaways:

- Understanding the reasons for using fall protection equipment and training on that use are required in the construction industry
- Recognizing the requirements for equipment used in work positioning, fall restraint, and fall arrest systems
- Learning the requirements for proper use of work positioning, fall protection, fall restraint, and fall arrest systems
- Realizing the hazards posed by falling six feet (1.85 m) or

more, both with and without a personal fall arrest system

- Learning the components of a personal fall arrest system and how they work together to arrest a fall
- Comprehending the steps for properly inspecting and donning a full-body harness
- Learning the criteria for properly attaching the connecting device to an anchorage connector, and a vertical or horizontal lifeline

Course Description

Falls happen too often to ignore, even to seasoned professionals in the construction industry. There is high potential for fatal injuries caused by falls from scaffolding, ladders, beams, and residential frames. When the right safety precautions are taken, many falls are preventable, so why do falls occur so frequently? Everyone, usually to be faster, sometimes cut corners and work without fall protection equipment to accomplish little tasks, removing the systems when they present an inconvenience, or dispensing with them altogether. It is because of this that risk is invited and bad accidents can happen.

One of the major sources of injury to the American workforce is falls. Falls are part of the “Fatal Four” hazards, along with electrical, caught-in, and struck-by hazards, which account for the majority of the injuries and fatalities in construction. The single-greatest source of injury, accounting for thirty-eight percent of all construction fatalities, is falls from heights. Considering recent statistics, falls from heights caused 348 fatalities in construction and utilities-related accidents, and 10,150 non-fatal injuries. Fall-related violations have been found to be at least three of the top ten most frequently cited construction violations.

When there are serious fall hazards, and protection by other means such as guardrails or nets are not used, the Occupational Safety & Health Administration (OSHA) requires employers create a personal fall arrest program. Typical programs will 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. It is a dangerous idea to bypassing personal fall arrest systems, regardless of how long these systems may take to deploy.

Realizing and correcting unsafe conditions does more than creating a safer work environment. If you want to avoid a citation from OSHA, do your best to keep your jobsite free of fall hazards.

Typical Construction Fall Hazards – Leading edges on a constructed building or around open excavations; – Scaffold systems which lack proper guardrail protection; – Improperly guarded, open holes in floors; – Fall protection is required across nearly every industry activity by law. Although, the requirements vary depending on the situation, even in the construction industry. Contractors need to address fall exposures of six feet for most work. Fall protection is needed while working: – At self-supporting scaffolding heights of 10 feet (3.05 m) or greater – On a steel erection 15 to 30 feet (4.6 to 9.1 m) high – Upon nearly all other types of construction that a fall hazard of 6 feet (1.83 m) or more exists In certain circumstances, fall protection is not required. Examples include self-supporting step ladders or extension ladders, erecting or dismantling scaffold, performing certain steel erection work operations, or working from a scissor lift (with integral fall protection in the form of a guardrail). Fall prevention barriers reduce employee exposure to fall hazards. An example of which, guardrail systems, may be used extensively throughout the work site. There may be permanent guardrails on stairways, landings, work platforms, and equipment access platforms. On the other hand, temporary guardrails may be seen on scaffolds and at construction sites, excavation sites, and other areas where a temporary fall hazard exists. Warning Line Systems – Implemented at construction sites and excavation sites when there is limited exposure to fall hazards; – Are made up of ropes, wires, or chains, and supporting stanchions; – Need to be flagged no less than every six feet with high-visibility material; – Signage can be used to indicate controlled access during construction; Perimeter Safety Cables Multi-story structures should have perimeter safety cables installed at the final interior (around shaft openings) and exterior perimeter of each floor prevent you from being exposed to

fall hazards. Safety Monitors – Use competent personnel to keep others away from a fall hazard; – They must not perform any other duties; – Only utilize when all other means of fall protection are not possible; – Circumstances for needing warning monitors must be specifically described in your company's fall protection requirements. Fall Restraint Systems A fall restraint system holds an employee to prevent them from falling to a lower level, as suggested by the name. These systems can consist of anchorages, connectors, body belts/harnesses, lanyards, lifelines and rope grabs. Every anchorage points used must be able to hold four times the intended load, and must be ridged so there is no vertical free fall if the employee slips. Fall Arrest Systems To minimize injury from a fall, use a fall arrest system. It is fundamental to use fall arrest equipment correctly to prevent injury as much as possible. Some examples of equipment include body support devices (harnesses), lanyards and anchorages. Lanyards Lanyards hoist the body support device and must stretch when loaded. By stretching, impact speed and arresting force are decelerated when the wearer falls. Common lanyard harnesses are capable of holding a total 310 pounds. Employers should 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. As for 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 Personal fall arrest equipment must be attached to an anchorage point that can ultimately support the equipment and the individual if they fall. OSHA guidelines enforce that any anchorage used for attachment of personal fall arrest equipment must be independent of any anchorage being used to support or suspend platforms. Examples of anchorages include but are not limited to 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.

ESSENTIAL 29: BBP – Bloodborne Pathogens

Course Description

This course teaches employees how to identify common bloodborne pathogens in the workplace, how they are transmitted, engineering and work practice controls used to prevent contact with, and infection from, body fluids, and what to do if exposure occurs.

BBP – Bloodborne Pathogens – Spanish

Key Takeaways:

- Understanding which bloodborne pathogens pose the most serious health threats
- Learning about the ways HIV, HBV, and HCV pathogens are transmitted
- Understanding basic precautions to prevent exposure
- Observing the key components of the Exposure Control Plan
- Comprehending the actions to take in case of exposure to bloodborne pathogens

Course Description

In just one year, the CDC estimated that 20 million people globally acquired hepatitis B virus (HBV) infections from unsafe medical injections.

Bloodborne Pathogen Safety at Work

For your discretion, bloodborne Pathogens (BBP) are viruses that live in human blood and other body fluids, causing disease in people. There are many different bloodborne pathogens, including malaria and syphilis, but the human immunodeficiency virus (HIV), hepatitis B (HBV), and hepatitis C (HCV) viruses, which can each lead to liver cancer, pose the most serious threat of workplace exposure.

Perhaps no other profession is more at risk of the hazards posed by bloodborne pathogens (BBP) than the medical profession, but that's not to say that awareness and prevention measures shouldn't be prevalent in all workplaces, because the price of ignorance can be very costly and simple understanding of some bloodborne pathogen basics, really can save lives.

The primary means of transmission is through unprotected sexual contact with an infected person, sharing contaminated needles or syringes, transfusions from infected blood, and contact with open sores or wounds of an infected person. Infected mothers can also transmit these diseases to their babies during pregnancy, birth, or breastfeeding.

In the workplace, transmission is usually through injuries from contaminated sharp objects that penetrate the skin, such as needles, knives, broken glass, or from splashes into the mucous membranes of your eyes, nose, or mouth, or through exposed openings or abrasions in the skin from scratches, cuts, bites, or wounds.

Number One Rule

Treat all blood and body fluids as if they were infected.

Prevention

- The primary prevention tool against hepatitis B is vaccination before and after any exposure.
- For mitigating potential exposure hazards to bloodborne pathogens (BBP), the most desirable approach is to implement engineering controls that minimize or eliminate exposure to a risk at its source, such as physical barriers which can include sharps containers, biological safety cabinets that

lock, self-sheathing needles, and containers specifically designed and labeled with color coding that identifies them as contaminated waste.

- Practice controls is another line of defense from spreading bloodborne pathogens (BBP). Making folks wash their hands following an exposure incident or mandatory use of an appropriate antiseptic if there is no hand wash facility, are examples of work practice controls.
- Proper Personal Protective Equipment (PPE) is another line of defense from exposure. This can include disposable gloves, masks, and eye protection such as goggles or glasses with side shields, and face shields.
- Most companies with occupational exposure furnish biohazard spill cleanup kits, or should be doing so to minimize risk—if that isn't the case where you work, you might consider checking into it.

Some standard first aid kits now include disposable one-way resuscitation mouth pieces because in an emergency scenario where Cardiopulmonary Resuscitation CPR is required, people act fast and often without recognizing the risk of bloodborne pathogens. If blood is present during a first aid response, the responder should use the appropriate personal protective equipment to prevent direct contact with blood.

Key practices to help prevent the transmission of Bloodborne Pathogens (BBP):

- Always wear disposable gloves whenever there is a potential for exposure to blood, body fluids, or other potentially infectious materials.
- Keep cuts and/or sores covered.
- Wash hands or other affected body parts anytime there is contact with blood or body fluids, or other potentially infectious materials. Even if there's a shred of doubt about exposure, scrub the suspect area.
- Dispose of needles in puncture and leak proof, medical hazard containers, and disinfect surfaces visibly soiled with blood or body fluids.

ESSENTIAL 29: Workplace Violence Awareness and Prevention

Key Takeaways:

- Understanding workplace violence.
- Recognizing job tasks and occupations at increased risk for workplace violence.
- Comprehending the categories of perpetrators of workplace violence.
- Appreciating precautions to help prevent workplace violence.
- Identifying warning signs of violent behavior and how to respond to them.
- Learning the appropriate response to a violent event occurring in the workplace.
- Learning what to do after a violent incident takes place.

Course Description

OSHA has defined workplace violence as violence or the threat of physical violence against workers. Workplace violence can occur at the workplace or anywhere a job takes an individual, and can also range from threats and verbal abuse to physical assaults and murder. Perhaps obviously, Active Shooter events are categorized as workplace violence.

In some cases, domestic abuse creeps into the workplace, or a disgruntled current or former employees with an agenda. In other cases, heated arguments between colleagues turn violent, or customers threaten and physically intimidate workers. Workplace violence also includes acts of aggression such as stalking,

brandishing a weapon on company property, or behavior that indicates lack of respect and worth of an individual (i.e. verbal abuse, bullying, harassment, and emotional abuse). For every job, workplace violence is different, but there are common standards for deterring incidents of violence at work.

Training and education are fundamental in responding to and reducing violence in the workplace. When an employee is trained on how to avoid and handle workplace violence, they have a far greater chance of coming out of a violent situation unharmed. Of course, sometimes certain acts of violence are beyond anyone's control, and in these types of situations, training on how to quickly get to safety is crucial. Lastly, training helps employees deter and alleviate a potentially violent situation before it escalates.

While training your workforce, it's highly beneficial to incorporate assets like engaging visuals, current statistics, and periodic knowledge test questions to help workers retain important safety information. As well, using a series of videos that teaches safety lessons through progressive storytelling can also play a significant factor in knowledge retention.

Those who are most vulnerable to workplace violence:

- Exchange money with the public
- Transport passengers, goods, or services
- Are alone at work or are in small groups during late night or early morning hours
- Regularly work in high-crime areas
- Work either in healthcare and social services
- Regularly work in community settings and homes where they have extensive contact with the public, industries such as:
 - Gas and water utility employees
 - Phone and cable TV installers
 - Letter carriers
 - Retail workers
 - Taxi drivers

Types of Perpetrators

Type 1: Criminal Intent

In the first type, the perpetrator has no legitimate relationship with the business or its employees, although they may pretend to be a customer to gain entrance into the workplace. Usually, theft is the motive and there may be a deadly weapon involved, which significantly increases the risk of fatal injury. Examples of criminal intent incidents include robbery, shoplifting, trespassing, and most workplace homicides.

Type 2: Customer

In the second type, the perpetrator has a legitimate customer relationship with the business and proceeds to become violent while receiving service from the business. This type includes any group the business provides services for (e.g. customers, patients, students, and inmates).

Type 3: Worker on Worker

In the third type, the perpetrator has some employment-related involvement with the affected workplace (i.e. an employee, past employee, or prospective employee) and they attack or threaten another employee in the workplace. Usually, these events will take place after a series of increasingly hostile behaviors from the perpetrator. Nearly 7% of all workplace violence homicides come from worker-on-worker hostile events.

Type 4: Personal Relationship

Lastly, in the fourth type, the perpetrator is not or has been an employee and does not have a relationship with the business, but they have a personal relationship with the intended victim, who is an employee. Typically, this event will be domestic violence following the victim into the workplace. Perpetrators include current or former spouses or partners, relatives, or a friends.

Regular safeguards against workplace violence

- Try not to travel alone in unfamiliar locations or situations whenever possible.
- Only carry the minimal money and required identification

into community settings with extensive contact with the public.

- Secure your workplace.
- Reduce cash on hand.
- When necessary, use cellular phones and hand-held alarms.
- When necessary, implement the buddy system.
- Create and follow an off-site visit policy.

Personal Practices

- Lock your vehicle at all times.
 - Try to walk with others when you leave or return to your vehicle.
 - Keep your keys quickly available as you approach your vehicle.
 - Lock your doors after entering the vehicle.
 - In the case that you must work late or alone, ensure you know how to get assistance quickly if it becomes necessary.
 - Always ensure someone knows where you are.
 - Ensure your work area is always well lit and remain alert to your surroundings.
 - Have extra caution when using rest rooms, stairs, and elevators.
 - Notify someone when you leave the workplace.
 - Memorize and follow your company's policy for responding to strangers in the workplace.
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HOW TO: Manage Reports

Key Takeaways:

- Utilizing the Insights tab within Bridge
- Learning how to access data reports on your users

Course Description

The aim of this course is to educate you on how to access your data within your Bridge application. Bridge comes built in with data analytics and premade reports for your ease of access, in addition to raw data that you may analyze as you wish. The home of this functionality exists under the Insights tab. Through this course, you will learn all the abilities of Insights, including being able to look at enrollment details, page statistics, device distribution, and account synopsis. We will show you how to quickly set a time frame, view completion details, see team completion rates, and identify overdue and completed learners. Insights is not only limited to whole number and percentages, although. The Deep Dive function grants you access to the raw data of your users, in both premade and custom reports. Here, you can filter data, sort data, and export data into CSV sheets. Our hope with this course is to help you get up and running with managing reports in Bridge, quickly and efficiently.

BETTER BUSINESS: Customer Service Success

Key Takeaways:

- Realizing the presence of customer service in every position of the workplace
- Learning strategies to improve customer service
- Identifying measures that can be taken to go the extra mile in customer service

Course Description

In every job there is an exchange being made between people, which is why customer service is so critical. Typically, customer service is used to refer to interactions with complaints, dealing with customers face-to-face, or actively selling products, but customer covers a far larger scope than you may realize. Customer service is everywhere in the workplace. There are the examples

listed before, but customer service is also present when doing payroll, leading meetings, fulfilling goals, delegation, reception, and in organizing teams. In other words, anywhere there is an exchange of material, information, or activity there is also an element of customer service. This course was designed to help improve those relationships to foster trust and respect in the workplace.

You will learn about the importance of superb customer service as it relates to loyalty, purchases, frequency of interaction, apprehensions, and expansion. We will explain the two types of customers found in the workplace so that you can understand the different behaviors needed for each. For your benefit, we will also provide behaviors that you can utilize. Our step-by-step process will provide a framework for improving customer service by going the extra mile with every customer. We will provide a list of comparisons to ordinary sayings and improved ones which, while so simple, significantly change the experience you deliver to customers.

Importantly, you will also learn strategies to deal with the what is the biggest headache for many industries: customer complaints. This course explores the typical pitfalls of dealing with customer complaints, in addition to active means of countering those problems before they arise. Afterwards, we will supply you with follow up strategies to ensure that customers are satisfied and come back to you again. With this course, our hope is to help you improve your customer service with strategies that are easy to learn and quick to implement. Through our visuals, knowledge checks, and supplementary materials, our goal is to play a part in the improvement of your business.

HOW TO: LMS Navigation

Key Takeaways:

- Utilizing Bridge's learning management system (LMS)
- Navigating through Bridges menus

Course Description

In continuation of our 8-part Bridge curriculum, this course will give a brief overview of navigating Bridge. If you wish for a more extensive coverage of Bridge's key features, please see our Admin Training course. This course will show all the applications of Bridge to every type of user, ranging from learners to managers. You will learn about the two main layouts: Admin, which focuses on managing users and authoring content; and Learner, which solely focuses on the learner experience. In addition, you will be given a brief overview of the My Learning, Author, Insights, and Admin tabs, along with the purposes of each. Lastly, we will discuss how to access your account information and personalize it as you wish. Our hope with this course is to get you up and running with Bridge so that you can quickly access what you need.

FUNDAMENTAL 55: Discrimination-Free Workplace

Key Takeaways:

- Learning what constitutes employment discrimination.
- Recalling the federal discrimination laws in place to protect individual workers' rights.
- Understanding the importance of promoting a discrimination-free workplace.

Course Description

Discrimination in the workplace happens when an employee or group of employees is treated less favorably than similarly situated employees of a different race, sex, age, national origin, religion, genetic makeup, etc. Discrimination can both be obvious (such as jokes, slurs, and innuendoes) or subtle (such as job assignments, lack of training opportunities, reduction of hours/pay, demotions and disciplinary actions, and fewer promotions).

Examples of discriminatory practices include and are not limited to a bias in hiring, firing, job assignment, transfer, layoff, recall, fringe benefits, retirement plans, leave, or any other terms or conditions of employment.

Avoiding stopping workplace discrimination can cause harm to everyone, resulting in loss of productivity, poor performance, disruptive work environments, and loss of good employees and managers. Also important, It is against the law and can lead to discrimination charges, costly litigation, and jury awards – negligence in this area of employment is one of the fastest ways to find your business in the courtroom.

Plenty of different laws regard aspects of employment related to discrimination...

Title VII of the Civil Rights Act of 1964 prevents:

- Discriminating against any employee or applicant because of their race or color in regard to hiring, termination, promotion, compensation, job training, or any other term, condition, or privilege of employment;
- Employment decisions based on stereotypes and any and all assumptions about abilities, traits, or the performance of individuals of specific racial groups;
- Acts of intentional discrimination and neutral job policies that disproportionately exclude minorities which are not job related;

- Refusal of equal employment opportunity on the basis of marriage to or association with an individual of a different race, membership in or association with ethnic based organizations or groups, or attendance or participation in schools or places of worship generally associated with certain minority groups;
- Discrimination because of an immutable characteristic associated with race, including but not limited to skin color, hair texture, or certain facial features;
- Discrimination due to a condition that predominantly affects one race, such as height or weight, unless practice is purely job related and consistent with business necessity;
- Harassment because of gender, race, and/or color. The Age Discrimination in Employment Act (ADEA)
- Criminalizes discrimination against an employee based on his or her age; – Ensures employees 40 years of age or older are not discriminated against because of age in hiring, promotion, discharge, compensation, terms, conditions, or privileges of employment;
- Lays out explicit guidelines for benefit, pension and retirement plans.

The Americans with Disabilities Act (ADA)

- Criminalizes employment discrimination against people with disabilities;
- In the case that an employee has a mental, physical, or sensory disability, but can still perform the essential job functions, with or without accommodation, the employer must reasonably accommodate the disability.
- The only exception is when the accommodation produces an undue hardship on the operation of the employer's business.
- Every situation is different, and disability issues should be analyzed on a case-by-case basis.

The Equal Pay Act (EPA)

- Shields men and women who perform arguably equal work in the same establishment from sex-based wage discrimination;
- Is important in helping women, who are the chief victims of unequal pay;
- Does not apply to pay differences based on factors that are not gender. These and more Employment Discrimination Laws protect employees against retaliation. They criminalize retaliation against an individual on the basis of filing a charge of discrimination, participating or serving as a witness in an investigation or lawsuit involving a discrimination charge, opposing discriminatory practices.

Workplace policies must...

- Assert no tolerance for discrimination, harassment, or retaliation; – Be verbal, printed in employee handbooks, and posted throughout the workplace;
- Affirm that all complaints will be investigated, and any violation has the potential to result in disciplinary action, including termination;
- Provide equal access and not disadvantage people because they belong to particular groups; – Consistently affect applicants and employees.

Employee Obligations

- Study the employee handbook and posted workplace rules, policies, practices, and behaviors.
- Recognize their employer's policy forbids discrimination, harassment, and retaliation.
- Acknowledge that violations of the policy can lead to disciplinary action that could include termination.

Obligations of Managers and Supervisors

- Reduce discrimination and harassment by being a role model.
 - Fully back your company's policies regarding equal treatment of all employees.
 - Address individuals when they make fun of others because of their race, gender, ethnic background, religion, appearance, disability, genetic information, or sexual orientation.
 - Think about the impact of your own comments and actions before you speak.
 - Never make jokes that are derogatory to any group, culture, or sex.
 - Never assume because of stereotypes.
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FUNDAMENTAL 55: Laboratory Safety

Key Takeaways:

- Realizing the hazardous substances in your laboratory and the need to minimize exposure.
Understanding the purpose of the Laboratory and Hazard Communication standards and their primary directives.
- Learning your employer's responsibility to supply information and training at the time of your initial assignment to a work area or a new exposure situation.
- Comprehending the information that needs to be included in a Chemical Hygiene Plan and your employer's responsibility to communicate the location and availability of the plan.
- Recognizing the various controls that protect laboratory personnel, including engineering, administrative, work practices, and personal

protective equipment.

- Learning your employer's responsibilities and your rights relative to exposure monitoring, medical consultation and examinations, and records.

Course Description

OSHA stated that "More than 500,000 workers are employed in laboratories in the U.S. The laboratory environment can be a hazardous place to work. Laboratory workers are exposed to numerous potential hazards including chemical, biological, physical and radioactive hazards, as well as musculoskeletal stresses."

In non-production laboratories, chemicals pose physical health hazards to workers, which is why they are the number one concern for laboratory employees. These employees will likely be exposed to compounds of certain volatile chemicals. Even individually, chemicals can be dangerous or unstable, but when stored beside other unpredictable chemicals or mixed with dangerous compounds, the potential for risk exponentially increases.

A variety of chemical properties lead to physical health hazards. For example, chemicals that are flammable or reactive are most closely associated with physical hazards, in addition to compounds displaying corrosive or toxic properties. There are even some chemicals that are both flammable and corrosive, or reactive and toxic; every chemical must be treated as a unique hazard with unique risks. The two OSHA standards (the occupational exposure to hazardous chemicals in laboratories standard and the Hazard Communication standards) are the primary regulations in place to safeguard your workforce against hazardous chemicals incidents.

While interacting with chemicals, you should also refer to the hierarchy of controls, which prioritizes hazard mitigation strategies on the premise that the best way to control a hazard is to systematically eliminate it or substitute a less hazardous technique, process, or material. In the case that elimination and substitution aren't feasible, laboratories should implement the necessary engineering and administrative controls, and determine the appropriate level of personal protective equipment (PPE) you

need to provide as much protection as needed.

The following administrative controls can be inserted into general policy or standard operating procedures for laboratory safety:

- Laboratory Safety Manual
- Chemical hygiene plans (CHP)
- Policies and standard operating procedures
- Guidelines and reference materials
- Prior approval
- Required training
- Hazard signs and symbols

Basic procedures which minimize the duration, frequency, or intensity of chemical exposure include:

- General precautions around interacting with all laboratory chemicals.
- As a cardinal rule, dodging skin contact with chemicals.
- Not consuming, smoking, gum chewing, or applying cosmetics where chemicals are present, in addition to washing hands before conducting these activities.
- Prohibiting the dual use of containers or utensils for food handling, consumption or storage.
- Cleaning chemical spills with appropriate protective apparel and equipment.
- Correctly disposing of all hazardous waste material.
- Immediately reporting any and all accidents and potential chemical exposures.

The first line of defense is engineering controls, built into equipment operation or instruments and require no actions from the employee. Examples include building design, ventilation systems, fume hoods, and self-capping syringe needles. The purpose of engineering controls is to eliminate or reduce exposure to chemical or physical hazards by different methods. Prior to

designing the high-risk industrial or manufacturing environment, safety professionals should be involved to evaluate the necessity for engineering controls, consult on healthy workflow practices, and improve safety outcomes through design. To further this point, one of the most important safety devices in a laboratory is a properly functioning fume hood, which controls airborne hazards that are released inside the ventilation device. Safety professionals know where a vent hood should be placed, and they can ensure that hazards are mitigated before they ever manifest.

Secondly, personal protective equipment (PPE) will provide a barrier between personnel and the chemicals they are asked to work with. Personal protective equipment should be implemented last, after administrative and engineering controls, but nonetheless, it is just as important as the other lines of defense against hazards. What type of PPE workers need is determined and provided by employers based on the type and degree of hazard in both specific operations and throughout the laboratory setting.

Majority of personal protective equipment used in laboratories are eye protection, lab coats, and protective gloves. It may be a good idea to require your team to wear additional PPE, such as face, hearing, head, foot protections and respirators, when appropriate. It cannot be exaggerated that workers need to understand how to properly use and maintain it. It is up to employers to provide training on the use and maintenance of general and specific PPE.

All employees in the laboratory workplace must have a clear responsibility to use engineering controls, follow administrative controls, and wear personal protective equipment correctly.

CMVs – Safe Driving Behavior

for Commercial Motor Vehicles

Key Takeaways:

- Recognizing the undesirable driving habits which cause majority of commercial motor vehicle crashes
- Understanding driver pre-trip responsibilities for the avoidance of crashes
- Learning safe driver responsibilities and desired driving behaviors on the road
- Identifying and learning how to address potential roadway hazards

Course Description

Annually, there are approximately 3,500 people killed and 80,000 others injured in accidents involving Commercial Motor Vehicles (CMVs) in the United States alone.

Anytime you are driving a Commercial Motor Vehicle (CMV), your top responsibility is to drive safely. Whenever a CMV weighing 10,000 pounds or more smashes into a car weighing 4,000 pounds, the car always loses; the responsibilities of driving a commercial motor vehicle are massive.

Recently, it was discovered that the majority of crashes are caused by four types of undesirable driver behavior: recognition, decision, performance, and non-performance errors. Below are some examples of each.

Recognition Errors:

- Taking your eyes off the road and reading a map
- Calling someone or texting while driving
- Being distracted by dashboard indicators
- Concentrating on something outside the vehicle while driving, such as a delivery address or interesting event

Decision Errors:

- Speeding above safe conditions
- Tailgating

- Underestimating another vehicle's speed or distance
- Failing to avoid a road hazard
- Road rage

Performance Errors:

- Freezing
- Panicking
- Slamming the brakes
- Swerving

Non-Performance Errors:

- Intoxication
- Fatigue
- Poor health

The probability of a safe trip increases when drivers prepare themselves and their vehicle before all trips. Workers especially have the obligation to come prepared to drive as licensed drivers of commercial motor vehicles; they must be well rested and not under the influence of drugs, either legal or illegal, or alcohol. As well, safety professionals need to emphasize the importance of coming to work ready to drive.

Here are some basic principles for safely operating a Commercial Motor Vehicle.

At the very least, drivers need to possess a valid driver license, maintain a lawful status to drive, and always use seatbelts when operating a CMV. It is worthwhile to perform background checks for commercial drivers, as it can prevent ugly situations and minimize the risk of serious liability.

Prior to any trip, drivers must inspect the engine, cab, exterior, wheels, and load. Often to save time, drivers neglect this important check step to get on the road because many drivers do not make money while sitting in port. Nonetheless, unless cargo is delivered safely, no one profits from the arrangement; accidents are costly for commercial motor vehicle drivers and for the companies that employ them.

Practicing defensive driving is the basis for all good driving habits. Drivers who are alert and aware of what is going on, can react to a variety of possible hazards, such as unsafe drivers, changing weather conditions, changing traffic conditions, and road construction. Drivers who drive defensively allow for more reaction time and better options to avoid crashing.

During poor weather conditions, the ability to see, steer, and brake decrease. Rainy conditions should push drivers to decrease speed by one third, whereas for snowy conditions drivers should decrease speed by one half. Anytime that you are in doubt, you should add extra seconds between your vehicle and the vehicle ahead.

For CMVs, blind spots are particularly dangerous when reversing. Ahead of backing up, ensure the backup alarm is working, to warn people near the vehicle. Exit the vehicle and inspect the area of travel, to guarantee that it is free from obstructions. If you can, use a spotter to help guide you into the spot you're backing into.

Your low light eyesight diminishes with age, causing slower reaction times to complete defensive actions. When you are driving at night, evaluating risks associated with road conditions and obstructions, animals, and pedestrians is more difficult than during daytime. Additional nighttime hazards include but are not limited to driving with a single or weak headlight, momentary blindness caused by looking into the headlights of oncoming traffic, and driving at a speed where your headlights do not illuminate hazards quick enough to react safely.

CMVs – Safe Driving Behavior

for Commercial Motor Vehicles – Spanish

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Air Emissions Management

Key Takeaways:

- Understanding the aims of the Clean Air Act Amendments

(CAAA) of 1990.

- Knowing the meanings of attainment and nonattainment areas in the Clean Air Act.
- Knowing the key terms associated with Title I compliance requirements, including National Ambient Air Quality Standards (NAAQS), degrees of nonattainment, major source, Criteria Air Pollutants, and New Source Performance Standards (NSPS).
- Understanding the requirements for attainment and maintenance of National Ambient Air Quality Standards as explained in Title I.
- Understanding how to meet the required limits for Hazardous Air Pollutants as defined in Title III.
- Knowing the key terms associated with Title III compliance requirements, including Hazardous Air Pollutants, Maximum Air Control Technology, and Risk Management Planning, and NESHAPS.
- Comprehending the aims and requirements of Operating Permits as defined in Title V.
- Knowing the key terms surrounding Title V compliance requirements, including Potential To Emit, Actual Emissions, and Allowable Emissions
- Retaining the process for determining air-permitting compliance.
- Knowing the types of air permits from degree of least stringency to highest, including permit exemption, construction permits, minor source permits, synthetic minor permit, and major source permit.

Course Description

AIR POLLUTION

The World Health Organization (WHO) states that “Air pollution is contamination of the indoor or outdoor environment by any chemical, physical or biological agent that modifies the natural characteristics of the atmosphere. Household combustion devices, motor vehicles, industrial facilities and forest fires are common sources of air pollution. Pollutants of major public health concern include particulate matter, carbon monoxide, ozone,

nitrogen dioxide and sulfur dioxide. Outdoor and indoor air pollution cause respiratory and other diseases, which can be fatal.” “Air pollution is a major environmental risk to health. By reducing air pollution levels, countries can reduce the burden of disease from stroke, heart disease, lung cancer, and both chronic and acute respiratory diseases, including asthma.”

In response to activism, the Clean Air Act Amendments of 1990 were passed to reduce pollution and establish needed standards for industrial air emissions. Clean Air Act (CAA) Amendments of 1990:

- Permit the EPA to limit the level of air pollutants anywhere in the country.
- Permit individual states to have stricter air emission regulations, but weaker regulations than those decided by the EPA.
- Allow facilities to have air emission permits where needed, and that the permit is properly documented (note: not all emission sources need permits). The most common air pollutants recognized by the EPA are “Criteria Air Pollutants”, because the EPA developed a health-based criteria to set permissible levels of exposure to them. These Criteria Air Pollutants lead to respiratory health issues and negatively impact our environment. Every Criteria Air Pollutant also has a National Ambient Air Quality Standard associated with it. The six Criteria Air Pollutants are: oxides of nitrogen, sulfur dioxide, lead, ozone, carbon monoxide, and particulate matter.

What to know about Air Quality

- What are the air emission sources and rates?
- What regulations apply?
- Is the facility compliant?
- Does the facility need permits?

Determining if a facility needs permits is complicated sometimes. In this section, we will outline the six steps involved in the permitting/compliance process.

Step 1: Emission inventory check – Discover potential air emission sources (such as boilers or heating equipment, emergency power generators, paint booths, foundries, and fuel oil tanks). – Record associated pollutants, which can sometimes be accomplished by using MSDS. – Calculate emission rates through material usage records. – Investigate operating practices and production rates. – Calculate established emission rates. – Perform emission testing, as a last resort—emission test results may be used to determine PTE and actual emissions, provided that the tests are an accurate portrayal of current conditions at the facility.

Step 2: Research the current performance of control equipment – Review vendor information (operating/maintenance manuals). – Review operating parameters. – Verify control efficiencies.

Step 3: Calculate actual and potential emissions everywhere – Include all emissions, regardless of whether they are released outside through a stack, or conduit, or through doors, windows and general purpose ventilating systems (i.e., fugitive emissions). – Presume the maximum design capacity of the source, operating 24 hours per day, 365 days per year, for a total of 8,760 hours per year. – Calculate $PTE = \text{emission rate} \times 8,760 \text{ hours/year}$.

Step 4: Determine applicability of regulations – Research Clean Air Act Amendments. – Research state regulations. – Find a good state regulatory contact for educational purposes. – Secure a copy of state and local regulations because most air programs are administered at a state or local level.

Step 5: Determine compliance status

Step 6: Provide supporting documentation for the source ID, emission inventory and compliance status determination

Lead Awareness – Spanish

Key Takeaways:

- Understanding the hazards of lead in the workplace.
- Learning how lead can enter the body.
- Learning the health effects of lead overexposure.
- Recognizing where lead is found.
- Understanding OSHA's permissible exposure limit for lead.
- Recognizing practices for limiting lead exposure.
- Learning the purpose for monitoring airborne lead exposure.
- Comprehending the requirements for using PPE such as respirators and protective clothing.
- Learning housekeeping and hygiene practices which limit lead exposure.
- Understanding the two components of the medical surveillance program.
- Acknowledging the purpose of the Medical Removal Program and its benefits.
- Realizing recordkeeping requirements.

Course Description

The Centers for Disease Control & Prevention stated that despite improvements in public health policies and substantial reductions in blood lead levels (BLLs) in adults, lead exposure remains an important health problem worldwide. Around 95% of all elevated blood lead levels reported among adults in the United States are work-related.

Just little lead poisoning causes serious health problems, and at very high levels, it can be fatal.

Lead is a soft, heavy, grayish blue metallic element native to the earth's crust. The majority of occupational exposure to lead comes from activities like mining, smelting, manufacturing, and through the use and work with manufactured products containing lead. Although, lead is likely most commonly associated with paint as a historically important ingredient until the negative effects of lead paint became known, resulting in the banning of its use and

the rise of safer alternatives like latex. Lead was used until about the late 1970's, so lead paint remains a common hazard for those working in the demolition, renovation, and general construction industries, though exposure to lead paint is a diminishing risk.

Lead poisoning can result in damage to the brain, liver, kidneys, and red blood cells. Also, it can damage bones and cartilage, and harm the reproductive system. When there is skin or eye contact with lead dust, irritation can occur. Entry points to the body for lead include ingestion and inhalation. Ingestion happens through eating lead contaminated foods and drinking water that has passed through older lead pipes. Also, it can be inhaled by breathing air containing lead dust or particles of lead such as fumes from heated lead.

Airborne lead has a permissible exposure limit (PEL), the amount of lead exposure the average person can safely endure, of 50 micrograms of lead per cubic meter of air averaged over an 8-hour work-day. Keeping the lead exposure level below this number protects everyone from excessive exposure. Areas where lead concentration is over the action level, employers need to supply the workforce with personal protective equipment (PPE) suitable for controlling the hazard. To easily and efficiently reduce airborne lead, replace lead and products that contain lead with less or non-toxic materials, such as using latex paint instead of lead paint.

There are several ways to handle the removal of lead, or lead containing materials. Firstly, the entire piece can be removed and replaced.

As well, lead-containing material can be covered with another material. Prior to removing material containing lead, consult with federal and state Occupational Safety & Health Administration (OSHA) and Environmental Protection Agency (EPA) regulations.

Change rooms, showers, and filtered air lunchrooms must be available for workers exposed to lead above the permissible exposure limit (PEL). Following showering, no clothing or

equipment worn during the shift can be worn home, because lead toxicity poses dangerous risks for children. Lunchrooms must not be entered while wearing protective clothing or equipment unless surface dust has been removed by vacuuming, a downdraft booth, or other cleaning method. Whenever workers are exposed to lead dust, hand washing and face scrubbing prior to eating, drinking, smoking, or applying cosmetics, should be strongly encouraged or better yet, mandatory.

In areas where lead is a hazard, signs need to be posted to warn the employees of the danger of lead hazard in the area. It is critical to allow the workforce to understand and implement best practices for working with lead.

At times that exposure to lead is not controlled below the PEL by other means, employers must provide and assure the use of respirators. Workers must be trained on proper respirator use and respirators need to fit properly to protect from airborne lead. Every employer must test fits so that respirators provide adequate protection. In the case that workers have difficulty breathing during a fit test or while using a respirator, a medical examination needs to be made available to them to determine if they can safely wear a respirator.

In the case that workers are exposed to lead above the PEL, or if they are exposed to lead compounds such as lead arsenate or lead azide, they need personal protective equipment clothing to prevent skin and eye irritation. Examples of protective clothing include full body work clothing, hats, gloves, shoes, shoe coverlets, face shields, or vented goggles.

Investigation

Key Takeaways:

- Understanding the purpose and benefits of an incident investigation.
- Learning the common practices to follow and information to be gathered during an investigation.
- Realizing documenting and reporting responsibilities.
- Comprehending the importance of and common practices for determining root cause.
- Acknowledging the importance of implementing corrective actions.

Course Description

This course covers the purpose and benefits of incident investigations and investigation methods, as well as common practices for information gathering and documentation, and tools for determining root cause and implementing corrective actions.

Traffic Control – Work Zone Safety

Course Description

This course discusses the hazards associated with work zones and important ways to protect yourself, your co-workers, pedestrians, and motorists in a road construction zone from injuries as a result of work zone accidents.

OSHA: Back Safety and Injury Prevention Overview

Key Takeaways:

- Learning how to practice good posture, improve work area conditions and work ergonomically to protect and strengthen your back.
- Understand what makes a healthy lifestyle, improved strength and flexibility, and how that protects you from work-related back injuries.
- Recall the specific actions takable to prevent work-related back injuries from moving or lifting materials.

Course Description

There's incredibly good reasons to keep the back of your workforce by providing the proper personal protective equipment (PPE) to avoid injuries, and training employees in safe lifting techniques.

One of the most common health complaints around the world is back pain. Back pain hurts 80% of people during some point in their lives. The danger is higher for manufacturing, warehouse, hospitality and trades workers, and any other physically demanding job.

Common Variables that Increase the Risk of Back Injury:

Aging

Over the years, the discs between the vertebrae in our backs wear away and shrink. Our bones will eventually rub against each other, causing pain and stiffness. As well, the space around our spines narrows eventually, increasing pressure on the cord and spinal nerves, which causing pain.

Forceful Exertion

Forceful exertion is the physical effort expended to conquer the weight, resistance, or inertia needed for a job. Examples of

activities requiring forceful exertion include everything from carrying a heavy box from a delivery truck to operating a handcart containing heavy materials.

Awkward Postures

Awkward postures are body positions such as bending, twisting, or reaching. All awkward postures compress tendons, nerves, and blood vessels, which increases the force a worker must use. Reaching up, running wiring to an overhead light fixture, kneeling and bending to install carpet all are examples of awkward posture activities.

Vibration

Vibration is used here as the quivering or trembling that comes from power tools and heavy equipment. Constant vibration restricts blood supply to affected body parts, which, depending on the intensity and duration of vibration, can manifest ergonomic injuries. Examples of vibration activities include drilling a hole or operating a forklift.

Repetitive Motion

Repeating the same actions with little variation implements the use of only a few muscles or body parts while the rest of the body is unaffected. Motions that are repeated frequently have inadequate time for muscles and tendons to recover, causing them to become strained and fatigued. Activities requiring repetitive motions include moving items from a low box to a high shelf or loading cans onto a production line.

5 General Tips for Maintaining a Healthy Back

1. Stay a healthy weight

- Overweight people are at greater risk for back pain, joint pain, and muscle strain. Especially when the weight is on the stomach, this is true because excess weight pulls the pelvis forward and strains the lower back. A healthy diet and a safe exercise program can help you achieve or maintain a healthy weight.

2. Get the right amount of rest

- Sleep is fundamental to our bodies; it is important to get

enough sleep and to sleep in a position with a natural alignment of the spine. Although, it is also important to be active if you don't want to develop back pain. Most lower back problems originate from muscles because if muscles are not moved and stretched regularly; they become tight, short, and stiff, eventually causing back pain and injuries.

3. Keep good posture

- Correct posture and body mechanics expend less strain on the discs, the muscles, ligaments and back joints. If your posture is good and you move your body correctly, then you minimize your risk of back injury. A professional can help you optimize your working posture by doing an ergonomic assessment of your job and your work environment.

4. Reduce stress

- Stress increases tension on every muscle, including your back muscles. As result, stress-reduction techniques, such as deep breathing and meditation, may help you reduce your risk of back pain and injury.

5. Be flexible

- Inflexibility through tight hamstrings and limited range of motion in the trunk increases your risk for back injury or makes existing back pain worse. There are forms of exercise, such as yoga, Pilates and tai chi, that may relieve and prevent back pain because they increase flexibility.

Intro to Personal Safety

Course Description

Personal safety is about the choices we make, moment by moment, that keep us from getting hurt. It's about awareness, habits, and the mindset of putting safety first no matter where you are or what job you do.