

Absences from the Workplace

Key Takeaways:

- Understanding employee rights to request both jury duty leave and pay for jury duty leave, in addition to the differences between jury duty leave and witness leave.
- Knowing employee benefits and the general exceptions of the Uniformed Services Employment and Reemployment Rights Act, (USERRA), the employer's requirements, rights, responsibilities, and the general exceptions.
- Being capable of explaining the employee benefits provided under the Family and Medical Leave Act, the employee and employer's requirements, rights, responsibilities, and the general exceptions.

Course Description

Let's say you are sick or want to take a vacation. It's normal, and you shouldn't lose your job because of these circumstances. Now what if you or your partner has just had a child, or you need to attend the funeral of a loved one, unexpectedly? There are laws to guarantee that workers receive some grace in each of these scenarios, through either paid or unpaid leave. The purpose of this course is to teach you what are your rights related to absence from the workplace.

The Family and Medical Leave Act (FMLA), requires employers to allow up to 12 weeks of unpaid, job-protected leave for employees with certain family medical reasons. An employer is subjected to the FMLA standards if the business has at least 50 workers on the job everyday for 20 straight weeks, in the current calendar year or the last.

Along with the 50 or more employee threshold, those employees must work within a 75 mile radius. Consider an employer who has 25 employees working at headquarters and 40 more employees working at another site 100 miles away, they are not considered a "covered employer." FMLA applies to public agencies regardless of the number of employees, although. All schools, private or public, are considered public agencies.

As stated before, the FMLA allows eligible employees to be guaranteed at most 12 weeks of unpaid leave, which must be taken within a year. An “eligible” employee is someone who has been employed by a “covered employer” for at least 1,250 hours during the previous 12-month period before the start of the leave. The 1,250 hours do not need to be consecutive months. In the case that claims are contested by employees, the employer must show, through recordkeeping, that the employee has not worked the required 1,250 hours. If the employer cannot show a record of work hours, the employee is eligible for FMLA benefits.

Regardless of being the mother or father, you can request FMLA leave to care for your child after birth or after placement of an adopted child or foster care. As well, you can request FMLA leave to care for your spouse, son, daughter, or parent, who has a serious health condition. Finally, you can request FMLA leave to care for your own serious health condition if you are prevented from performing your job.

If you and your partner are employed with the same company, you are entitled to a only combined total of 12 weeks for the birth of a child, when adopting a child, or when caring for a parent with a serious health condition. Some state laws provide for leave that is in addition to federal FMLA. Understand your state regulations for special conditions that go beyond the FMLA.

FMLA states that “A serious health condition under the FMLA is defined as an illness, injury, impairment, or physical or mental condition that involves inpatient care requiring an overnight stay in a hospital, hospice, or residential medical care facility, including any period of incapacity or any subsequent treatment in connection with the inpatient care or continuing care by a health care provider.”

You must provide 30 days of notice for foreseeable events that require FMLA leave.

Your employer is allowed to:

- Delay the start of FMLA without a 30-day notice
- Ask for documentation showing the need for the leave

- Delay the FMLA until the documentation has been received
- Ask questions about what why you need to take leave

Your employer is not allowed to:

- Ask intrusive questions relating to your condition
- Take negative employment action based on information asked

Your employer must do the following:

- Give you written notice, within two business days, if you are not eligible for FMLA leave
- Give you information about medical certification and other requirements that will apply to the specific leave
- Not terminate your FMLA leave if the company falls below 50 employees during your leave
- Pay During FMLA

FMLA leave is unpaid leave

Certain kinds of paid leave may be substituted for unpaid leave:

- Vacation leave
- Sick leave
- Personal leave

FMLA leave can be taken on an intermittent basis

Employment Benefits During FMLA

- Your benefits accrued before the start of leave will not be lost.
- You are entitled to have your health benefits maintained during your leave.
- You will be responsible for paying your portion of any premiums the same as if you were not on leave.
- You do not accrue benefits such as vacation during FMLA leave.
- You must be provided with the same benefits at the same levels when you return from leave.
- You are entitled to the same or an equivalent job with equivalent pay, benefits, and responsibilities, upon return from FMLA covered leave events.

It is important you understand the Family and Medical Leave Act because it offers protections against unfair employment practices

that take advantage of personal tragedy or penalize you for tending to life events more important than any paycheck.

If you have questions about the FMLA, ask your employer.

FUNDAMENTAL 55: Safety Awareness

Key Takeaways:

- Recognizing human error and workplace incidents
- Managing safety risk factors
- Learning how to watch for safety everyday

Course Description

This course is aimed at explaining the meaning of safety awareness in the workplace. Essentially, we will focus on techniques and strategies to increase hazard awareness on an individual level, to ripple throughout the company.

Safety awareness is one of those terms that everyone believes they know, but aren't confident in explaining it themselves. This course will instill confidence amongst employees and employers alike around understanding this crucial protocol in the workplace. Safety awareness is fundamental in day-to-day operations and reduces the amount of incidents that injure and kill employees, in addition to creating significant costs on their company. If everyone was watching for safety at all moments, then innumerable incidents that are caused by human error which could be prevented. Think of anytime someone forgot to ensure a machine guard was in place before using a saw, placed an oily rag near sparks, or didn't wear gloves while cleaning up hazardous waste. Everyone knows of a horror story where someone else made a fatal error. Safety awareness is meant to reduce the potential of these accidents in the workplace by teaching everyone how to identify

hazards and keep safety in mind.

Help protect your team by learning about safety awareness. Not only will it help save your life, but it will also save others from leaving work at the end of the day. Truly, learning and practicing safety awareness does everyone a service.

Excavation, Trenching, and Shoring Safety

Key Takeaways:

- Acknowledging safety requirements when setting up an excavation site.
- Learning about the hazards in and around an excavation, trenching, and shoring site.
- Acknowledging precautions, protective measures, and the types of support systems used at an excavation site.
- Understanding cave-in protection requirements and identify proper procedures to keep employees safe on an excavation.

Course Description

Excavation cave-in deaths account for almost 1% of all annual occupational deaths in the North America.

Prior to starting any excavation, trenching, and shoring activities, you must take specific steps to setup the site to avoid the accidental disruption of utilities, and assure the stability of adjacent structures – you must engineer some controls and implement precautionary measures. On any job, you must ensure your safe access into and out of the excavation and avoid the hazards of contaminated atmospheres, falling materials, and the collapse of excavation walls, through the use of protective systems. There's lots in these scenarios that can go horrifically wrong, so awareness and preparedness are, as usual, crucial

priorities for shielding the workforce.

Before opening an excavation, you need to take the proper steps to protect yourself, other employees, and any underground equipment. Firstly, your employer must determine the location of utility installations, such as sewer, telephone, fuel, electric, and water lines, or any other underground installations. Majority of areas have a 'call before you dig' local resource for locating problem dig areas. Utilize that number and share it with your team; especially if excavation work is a daily part of your business, that number should be memorized.

To guarantee your safety, an excavation needs to have a proper method of access and escape. The size of the excavation determines if the necessary means include structural ramps, stairs, or ladders, used only by authorized employees. As well, it is fundamental that areas are clearly marked to keep non-participants, like other contractors on a job site, out and away for excavation operations.

The following are basic safety precautions for your use in excavation work:

- Excavations less than four feet deep are not required to have a stairway, anchored ladder, or ramp. Conversely, excavations four or more feet deep are required to have at least one of these structures, or other safe means of access and egress. This way, employees are prevented from having to travel more than 25 feet to exit an excavation from any point within.
- As well, walkways need to be provided everywhere employees or equipment are allowed to cross over excavations. Guardrails, fulfilling OSHA requirements, need to be provided anywhere walkways are six or more feet above lower levels. Always stay aware of your surroundings and never go beneath loads carried by lifting or digging equipment.
- Keep away from vehicles in the process of being loaded or unloaded, to avoid being struck by all spillage or falling materials. However, operators can remain in vehicle cabs that are being loaded or unloaded whenever vehicles are equipped to provide adequate protection.

- It is required that warning devices are in place when mobile equipment is operated around the edge of an excavation and the operator is unable to see the edge of the excavation. Such warning systems may be barricades, stop logs, and hand or mechanical signals. When feasible, any grade is best sloped away from the excavation.
 - Have emergency rescue equipment readily available. There needs to be a breathing apparatus on site, in addition to a safety harness and lifeline, which are both required in confined spaces, and a basket stretcher.
 - To restrict surface water from filling the excavation and to supply adequate drainage of the area next to the excavation, use diversion ditches, dikes, or other suitable methods.
 - In circumstances where the stability of nearby buildings, walls, or other structures is jeopardized by excavation operations, then support systems are required. Such systems can be shoring, bracing, and underpinning, to ensure stability and protect employees.
 - Within an excavation, you need to be shielded from cave-ins by a protective system. Examples of protective systems include sloping, bench, and support systems, such as aluminum hydraulic shoring. As well, these systems need to have the capacity to resist any reasonably expected load which could be applied to the system.
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FUNDAMENTAL 55: Hand Safety

Key Takeaways:

- Evaluating common hazards to the hands
- Describing methods and devices used to prevent hand injuries
- Learning the differences in hand protection devices (gloves)

Course Description

There are more than one million emergency room visits per year because of occupational hand injuries.

Regardless of the work you do, likely you use many tools in your job. As well, at many times your hands are the tools for the job, but the rules you'd use to take care of other tools also apply to your hands. One example of a rule is to always use the correct tool for the job. Using a tool for something other than it was intended is called "misuse." It's not worth it to risk your hands when the appropriate tool exists for the job.

To prevent hand injuries, you need to know the hazards involved in your job and how to avoid them.

Often, injuries happen when workers have bypassed or deactivated safety features on equipment. Maybe it feels pointless, but guards and other safety features serve an important purpose – do not tamper with them or modify controls, they protect you from specific injury, no matter how inconvenient they may appear.

As well, never take off personal protective equipment (PPE). Frostbite often occurs when a worker removes their protective gloves in an extremely cold environment. You might believe some task that requires greater finger dexterity than can be accomplished with your gloves on, and it won't take long, but this miscalculation creates serious risk.

Various injuries come from employees not following process instructions. Typically, this happens from boredom with a routine task or a mistaken sense that the worker is experienced enough to bypass instructions.

Also, distractions such as a wandering mind or wandering eyes can lead to injury. When hazards are close, you need to always focus on the task and keep your eyes on the job. Never rush and if you get frustrated, stop and take a break. Getting frustrated often leads to carelessness and injury.

Lastly, never think you can bend the rules "just this once."

In total, there are three types of safety controls employers can use to prevent hand injuries: engineering controls, administrative controls and personal protective equipment (PPE).

- Engineering controls significantly reduce hazards through

safeguards built specifically to mitigate certain hazards (i.e. equipment that has built-in measures to protect the user). The preferred way to eliminate or reduce hazards is always engineering controls, because the safety measure is built-in; the first line of defense. Routinely, engineering controls need to be calibrated and maintained to ensure they work the correct way, every time.

- Administrative controls are protocols used to protect your workforce. Although engineering controls are preferred, administrative controls benefit when engineering controls cannot be implemented, or if engineering controls are unable effectively reduce risk alone. It is critical that employees follow the policies safety professionals prescribe because administrative controls will not eliminate hazards. An important illustration is the adoption of a 100% glove use policy – gloves are used for all tasks.

- Personal protective equipment reduces exposure to hazards when engineering and administrative controls are not feasible or are not sufficient to bring hazards down to acceptable levels. Gloves are the primary piece of PPE to protect hands from specific injuries. After engineering and administrative controls, PPE is considered the third line of defense.

An incredibly effective way to protect your hands is to wear gloves when appropriate. The U.S. Bureau of Labor Statistics states that 70% of workers who get hand injuries were not wearing gloves. Those who were wearing gloves, the remaining 30%, were injured because their gloves were inadequate, damaged, or the wrong type of glove for the hazard.

OSHA: Hand Safety Overview

Key Takeaways:

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- Describing methods and devices used to prevent hand injuries
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Hand Safety – Spanish

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- Describing methods and devices used to prevent hand injuries
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wrong type of glove for the hazard.

FUNDAMENTAL 55: Chemical Safety

Key Takeaways:

- Identifying all workplace chemical hazards and the risks associated with them.
- Understanding the conditions which present an exposure risk, possible routes of exposure, and the factors influencing an individual's reaction to a chemical exposure incident.
- Practicing safety precautions on the behalf of both workers and employers to minimize exposure to chemicals.
- Learning safe storage, transport, and disposal practices for hazardous chemicals.
- Understanding appropriate response actions in the event of a chemical incident.

Course Description

Each day you work with industrial chemicals, there is a high-risk work environment. Although chemicals are a broad category, almost always the substances we're talking about are unpredictable, unstable, and dangerous when handled unsafely. Chemicals can be composed of organic or inorganic compounds that are not naturally occurring in the environment, which is why they pose some danger.

The danger of chemicals comes from the many ways in which these substances can inflict trauma for workers: some chemicals contaminate the air and cause respiratory distress, others are highly combustible. A few create nasty problems when they contact the skin or are physically ingested. When handled improperly, chemicals can burn, explode, cause cancer and other illnesses, or poison and sicken.

Chemicals come in many different forms across different workplaces; they may be dusts, mixtures, paints, fuels, or

solvents. Health risks from exposure depend upon the chemical itself, how it is used, and what protections are in place.

Chemicals will always involve risk. However, it is carelessness and ignorance of chemical dangers that increases the risk of exposure, or property damage and personal injury. Since so much can be learned about the safe handling of specific chemicals, ignorance is the factor most commonly cited in chemical related accidents.

Comprehending the potential dangers of chemicals in your workplace will help you make informed decisions on safe handling and the appropriate protective measures needed to avoid accidental exposure. These measures include the use of personal protective equipment and precautions to avoid taking the risk of chemical exposure home with you.

Everyday you see numerous signs and symbols designed to provide clear information and direction you are being kept out of harm's way. Like road signs that notify you of laws, there are signs in your workplace designed to guide you.

The OSHA Hazard Communication Standard (HCS) is protocol for identifying and clearly marking chemical hazards. A large, industrial drum barrel with an unusual label, involving different colors or symbols, is the outcome of the Hazard Communication Standard. HCS has two types of labels. Recognition of these simple, special labels will help you identify chemical hazards.

The original manufacturer's label required on original shipping containers is the first type of label. As chemicals are manufactured and placed into containers, they must be properly labeled for identification and use. The second type is a manufacturer's label that meets OSHA's HCS system requirements for secondary containers.

Chemicals in original manufacturer containers use pictograms that represent the physical, health, and environmental hazards of the chemical inside. There are nine pictograms defined by the HCS which are standardized under the Globally Harmonized System (GHS),

and represent distinct hazard classifications. These pictograms should be on the manufacturer's label, depending upon the hazards present. As well, these same pictograms will be found on the chemical's Safety Data Sheet.

It is important to be familiar with all of this because, again, ignorance causes problems when it comes to dealing with chemicals.

GHS pictograms classification can be separated into three categories: physical hazards, health hazards and environmental hazards.

For chemicals to harm you, they must get into or onto your body. Of the several ways this can occur, these are known as routes of exposure: inhalation, ingestion, absorption, and injection. As well, the duration of and how often you are exposed to chemicals will influence the effects it has on your body.

Some chemicals have the potential to cause serious and immediate health effects while others take years to cause damage to the body. Acute exposure is a brief, intense exposure of a high concentration, that produces an immediate health effect. The effects of acute exposure include nausea, headache, blurred vision, trouble breathing and coughing.

Chronic exposure, is the type most associated with chemical related occupational illness. It usually involves a consistently low exposure over an extended period of time. Continued exposure to materials like asbestos, lead, and silica accounts for a chronic exposure risk. The effects of chronic exposure can vary widely depending upon the material, exposure, and your individual susceptibility.

FUNDAMENTAL 55: Asbestos Hazard Awareness

Key Takeaways:

- Knowing what asbestos is
- Remembering examples of asbestos at workplace environments
- Understanding the health effects of asbestos exposure
- Actively preventing exposure to asbestos on the job
- Knowing what to do when exposed to asbestos

Course Description

Asbestos is an incredibly dangerous material that has caused thousands of deaths. In this course, learners will be trained to understand the dangers of exposure and inhalation of asbestos as well as how to minimize exposure of the toxic material.

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- Remembering examples of asbestos at workplace environments
- Understanding the health effects of asbestos exposure
- Actively preventing exposure to asbestos on the job
- Knowing what to do when exposed to asbestos

Course Description

It is crucial to protect your high-risk workforce from this notorious, airborne, health hazard. Asbestos is a natural, fibrous silicate mineral. It is proven that exposure to Asbestos is extremely dangerous; microscopic asbestos fibers, when inhaled,

cause certain types of fatal lung disease, which makes asbestos hazard awareness an essential training topic.

Asbestos was used in innumerable construction products before 1980, and many buildings built before that year are considered to have used asbestos materials (any material containing more than 1% asbestos) during construction.

Nowadays, industrial activity including salvage, demolition, and construction, often present Asbestos exposure risks. Even work like brake and clutch repairs or building maintenance and cleaning, can present exposure risks – it comes down to what you're working with and where.

Asbestos Exposure Health Risks – Airborne asbestos is a health risk because the tiny fibers can be breathed in unknowingly. Inhaled asbestos fibers create serious diseases for the lungs and other organs that may not appear until years after initial exposure. Asbestos fibers act like every other type of airborne particle and move out of the air just like dust or soot. In many past instances, fibers accumulation on clothing was a serious problem; these fibers would be carried away from the worksite and into homes where others would be exposed. – Diseases like asbestosis, mesothelioma, and lung cancer can all originate from chronic exposure to airborne asbestos. Asbestosis is a disease that builds scar-like tissue up in the lungs and often progresses to disability and death. Mesothelioma is cancer in the chest cavity lining; a rare condition, but it is almost always fatal due to rapid spreading. – Asbestos in the built environment does not always create a hazard, permitting it is contained. Controlling asbestos problem areas typically involves coating the outside surface of the concerning area, to prevent the asbestos fibers from becoming airborne. The most important thing to remember from this is that you should never disturb or break the surface of newly discovered asbestos material. Leave it alone and then mitigate as quickly as possible by stabilizing the material. OSHA guidelines require you use signs to mark areas where asbestos may be disturbed, and label the identified asbestos-containing materials. When your team works places that are likely to have asbestos, you must provide additional asbestos hazard awareness

training, coordinate annual medical exams, and supply the proper protective equipment. Also, you must provide changing rooms and access to hygiene facilities. Employers and supervisors are responsible for identifying hazards in the workplace, including asbestos. Workers are responsible for reporting unsafe conditions, like the release or potential release of asbestos. For example, if employees are disturbing asbestos material, the situation must be reported immediately; workers need to get in touch with a health or safety professional. Minimizing Asbestos Exposure You are also responsible for reducing overall exposure to asbestos. The easiest way to you can reduce exposure is by staying out of areas containing asbestos, unless you are required to work there, and keep others away. Do not enter posted asbestos hazard or danger areas without specific training and proper protective equipment. If you do have to work in areas where the possibility of airborne asbestos exists, do not spend any more time in the area than necessary. Again, if you suspect that material may contain asbestos, make it known, promptly. Years ago, the rules surrounding respirators and the technology of the personal protective equipment were generally less protective than the standards of today, which resulted in the preventable deaths of many industrial laborers. As a result, litigation resolving disputes and claims associated with mesothelioma—directly linked to asbestos exposure—is a thriving legal business. Perhaps you’ve seen the national advertisements over the years?

Intro to Silica Hazards

Key Takeaways:

- Learning about silica and its most common source materials.
- Understanding the potential chronic health effects of chronic silica exposure.
- Acknowledging workplace activities that may generate airborne respirable silica.

- Learning basic methods to mitigate airborne silica dust.
- Learning actions which minimize the risk of exposure to crystalline silica.
- Comprehending the basics of combined protections that can be implemented to prevent exposure to silica-containing compounds.

Course Description

This lesson will improve the safety of workers in environments containing silica exposure hazards by increasing individual employee awareness of silica and exploring how silica can be recognized and addressed in the workplace.

OSHA has issued a rule to reduce lung cancer, silicosis, chronic obstructive pulmonary disease and kidney disease in America's workers by minimizing their exposure to respirable crystalline silica. This rule contains two standards, one for Construction and one for General Industry and Maritime.

OSHA projects the rule, once its effects are fully realized, will annually save more than 600 lives and prevent over 900 new cases of silicosis, in addition to providing net benefits of about \$7.7 billion.

approximately 2.3 million workers are exposed to respirable crystalline silica at their worksites, including around 2 million construction workers who drill, cut, crush, or grind silica-containing materials like concrete and stone, in addition to 300,000 workers in general industry operations such as brick manufacturing, foundries, and hydraulic fracturing (fracking). Responsible employers protect and have been protecting workers from harmful exposure to respirable crystalline silica for years, utilizing widely-available equipment that controls dust with water or a vacuum system.

Key Provisions

- Minimizes the permissible exposure limit (PEL) for respirable crystalline silica to 50 micrograms per cubic meter of air, averaged over an 8-hour shift.
- Guarantees employers: use engineering controls (such as water or ventilation) to limit worker exposure to the PEL; provide

respirators when engineering controls cannot adequately limit exposure; limit worker access to high exposure areas; develop a written exposure control plan; offer medical exams to highly exposed workers; and train workers on silica risks and how to limit exposures.

- Supplies medical exams to monitor highly exposed workers and offers them information about their lung health.
- Offers flexibility to help employers – especially those of small businesses – protect workers from silica exposure.

Compliance Schedule

The standards within the OSHA rule took effect on June 23, 2016, after which industries have one to five years to comply with most requirements, based on the following schedule:

- Construction – June 23, 2017, one year afterwards.
- General Industry and Maritime – June 23, 2018, two years afterwards.
- Hydraulic Fracturing – June 23, 2018, two years afterwards for all provisions except Engineering Controls, which have a compliance date of June 23, 2021.

Source: <https://www.osha.gov/silica/index.html>

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FUNDAMENTAL 55: Introduction to Radiation Safety

Key Takeaways:

- Learning about the sources of radiation they will likely encounter in a lab or clinical setting
- Comprehending the radiation safety program
- Realizing the requirements for projects that involve radiation.
- Understanding what radiation is
- Understanding the forms of radiation
- Learning how radiation is measured.
- Realizing the routes of exposure to radiation
- Realizing the effects of exposure to radiation

Course Description

Exposure to radiation in laboratories must be monitored and mitigated with appropriate safety precautions, because there is a risk for radiation poisoning. Although, proper Personal Protective Equipment (PPE) and knowledge of appropriate safety measures, laboratory environments can limit the likelihood of exposure for students and staff.

There are various common sources that you may not be aware of within your work environment. Some examples include x-rays, radioactive isotopes, radioactive materials, reactors, particle accelerators, or even smoke detectors. Many of these sources aren't as severe as dealing with something like Uranium or Plutonium, but they all do produce or emit radiation. Over time, the effects of low radiation can be a factor in health effects like cancer.

As well, there are two exposure pathways possible for radioactive material, both external and internal. External exposure often comes from wavelengths like x-rays or gamma rays that pass through your body. On the other hand, internal exposure happens when radiation is ingested, drunk, inhaled, or injected. The risk from either pathway depends largely on the type of radiation, where it stays, how often it is emitted, and the amount of energy the material radiates. Lastly, it is important to note that children and fetuses are at a greater risk of radiation, due to their cellular development. So take care on Take Your Kid to Work Day and when pregnant.

Therefore, before entering lab environments, it is extremely important you know the safety basics around dangerous radiation. This introduction will cover radiation safety basics.

Hazardous Waste Management

Key Takeaways:

- Learning hazardous waste, explaining the importance of managing it properly, and listing the categories of hazardous waste generators.
- Understanding some actions industrial facilities use to manage hazardous waste and realizing how you can assist your company with its hazardous waste management efforts.
- Comprehending how to handle common types of hazardous waste.
- Learning how you, and other individuals with various roles and responsibilities, must respond to an unintended release of hazardous waste.

Course Description

The Environmental Protection Agency (EPA) states that “Hazardous waste is waste that is dangerous or potentially harmful to our health or the environment. Hazardous wastes can be liquids, solids, gases, or sludges. They can be discarded commercial products, like cleaning fluids or pesticides, or the by-products of manufacturing processes.”

Awareness of the dangerous side effects of hazardous waste contamination has been growing. Not too long ago, numerous industrial plants released heavy metals and unstable organic compounds directly into streams or inserted them into the earth’s subsurface through wells, spreading illness to the people living around these toxic sites.

As a result of agricultural applications, nitrates, phosphates, and synthetic organic compounds in pesticides and fertilizers made their way into streams and ground water. Then, in the atomic age, radionuclide contamination came from man-made sources, like nuclear power plants.

There are various forms of hazardous waste, such as solid, semi-solid, liquid, or gaseous forms. As well, it can include spent solvents like many pesticides and excess, discarded, or spilled chemicals.

Here's why hazardous waste is an environmental concern: – It lasts for many years; – It never breaks down easily in the environment; – It moves through the air, water, soils, and sediments; – It moves from one organism to another. This importance was shown by the World Health Organization (WHO) and the National Cancer Institute, who estimate that 60 to 90 percent of cancers are environmentally induced by contaminants such as heavy metals and toxic chemicals. The various other chronic health effects from waste contaminants include stroke, kidney and thyroid disease, cardiovascular damage, nervous disorders, and impairment of speech, hearing, vision, and memory. Regulations on hazardous wastes now: – Force safe treatment, storage, transportation, and disposal; – Prevents pollution to restrict the generation of hazardous waste; – Restrict the amount of all hazardous substance, pollutant, or contaminant released into the environment. Various treatment technologies can include: – Distillation – Stabilization – Neutralization – Incineration – Evaporation Prevent hazardous wastes creation by: – Modifying process (avoid the need for the hazardous material). – Substituting product (purchase the least toxic substance available). – Minimizing product purchase (purchase minimum quantity and in small containers initially). Waste Management Practices – Hold waste materials in their properly designated containers. – Cover chemical containers. – Label chemical containers. – Keep chemicals away from the weather. – Learn the guidelines for proper management, handling, and disposal of hazardous wastes or "unknowns". – Notify your company's Environmental or Health, Fire, & Safety Departments about all chemical spills. – Get rid of aerosol cans in ways approved by state or local regulations (these normally incorporate provisions for capturing and safe disposal of any remaining container contents and disposal of the empty aerosol cans). – Place drained used oil filters in a marked container. – Dispose of used oil in bulk used oil containers. – Do not leave lids off of oil funnels, solvent containers, or other waste containers. – Do not place full or partially full aerosol cans in trash containers. – Avoid placing waste streams in improper, unlabeled containers. – Never store chemical containers on bare ground. – Always store chemical containers indoors and on paved surfaces. – Restrict the

spill release reporting guidelines for chemical releases and spills. – If you have waste management issues and questions, contact your company's Environmental Department personnel for direction. Precautions – Procedures for proper response to an accidental spill or release should be in place. – Emergency response supplies and equipment should be on hand. – Waste receptacles should be clearly identified for the types of waste. When you discover a hazardous material spill or release at work: – Report it to your manager, supervisor, building administrator, or company environmental organization as soon as possible. – Right away, call your company's emergency number if it is life threatening or immediately hazardous.

Hearing Conservation – Spanish

Key Takeaways:

- Learning how noise impacts hearing and the factors that determine the extent of hearing loss.
- Recognizing noise exposure levels that require hearing protection according to Part VII of Canadian Regulations.
- Understanding how the types of hearing protectors are selected for a job, and their advantages and disadvantages for controlling noise exposure.
- Learning correct use, care, and maintenance practices for hearing protectors.
- Comprehending the requirements of a Hearing Conservation Program.

Course Description

Sometimes people take hearing for granted. Picture yourself unable to hear. Visualize how your life will be changed. It is important to learn about noise hazards and how to protect yourself against noise hazards.

The damage is cumulative and the hearing loss cannot be reversed

by medicine or surgery. A hearing aid cannot completely restore hearing either.

Sound, measured in decibels (dBA), ranges in various levels of extremity. Although 140 dBA will cause immediate pain, the National Institute for Occupational Safety and Health (NIOSH) recommends that workplaces limit noise exposure to 85 dBA during an 8 hour day. For comparison, this noise level is about little louder than a freight train 100 feet away. However, this threshold goes down exponentially at higher levels. NIOSH recommends a maximum of 15 minutes of exposure to 100 dBA, or the level of noise at a construction site.

Sound damage is serious, which is why OSHA created requirements for general industries forcing companies to create a Hearing Conservation Program when workers are exposed to an average level of 85 dBA during an 8 hour shift. These programs require measuring noise levels, providing free hearing exams and free hearing protection, providing training, and evaluating the adequacy of protectors. Alternaticely, employers can change tools, equipment, and schedules to reduce exposure below 85 dBA. (<https://www.osha.gov/SLTC/noisehearingconservation/loud.html>)

It is important you understand noise hazards in your workplace. You need to have the correct hearing protections in place so that you can keep your hearing.

ESSENTIAL 29 : Hearing Conservation

Key Takeaways:

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- Recognizing noise exposure levels that require hearing

protection.

- Understanding how the types of hearing protectors are selected for a job, and their advantages and disadvantages for controlling noise exposure.
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First Aid: Soft Tissue Injuries

Course Description

Soft tissue injuries are among the most common workplace injuries, and while many are minor, they can become life-threatening without prompt and proper first aid.

First Aid: Soft Tissue Injuries – Spanish

Key Takeaways:

- Learning how to appropriately respond to soft tissue injuries such as cuts, puncture wounds, impaled objects, bleeding, and severe bleeding.
- Evaluating the severity of a burn and understanding how to respond to victims suffering from minor, major and chemical burns.
- Learning how to respond to a victim who has suffered an electrical injury.

Course Description

The biggest culprit in soft tissue injuries very often is previous injuries being reinjured. Therefore, being able to prevent a soft tissue injury is just as important as knowing how to treat one. No one wants to go home from work with a cast or bandages, being unable to use their fingers or other appendages. By taking this

course, you will learn techniques and strategies to utilize in the workplace for everyone's safety, especially your own.

ESSENTIAL 29: Back Safety and Injury Prevention

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.

Back Safety and Injury Prevention – Spanish

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.

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FUNDAMENTAL 55: Hand and Power Tools

Course Description

Employees will understand the different types of power tools and be able to recognize different types of tools, identify hazards of use, and recall safe work procedures.

Fundamental 55: Hand and Power Tools (Spanish)

Course Description

Employees will understand the different types of power tools and be able to recognize different types of tools, identify hazards of use, and recall safe work procedures. (Spanish Version)

Hazard Communication and Health Hazards – Construction

Key Takeaways:

- Learning the purpose and importance of a hazard communication program
- Understanding common physical and health hazards associated with hazardous chemicals
- Acknowledging chemicals and their hazards, through labeling, markings, pictograms, and warning practices
- Learning the purpose and components of a Safety Data Sheet

Course Description

The Occupational Safety & Health Administration (OSHA) estimates that the Globally Harmonized System (GHS) covers more than 43 million workers who produce or handle hazardous chemicals in over 5 million workplaces across the nation. As well, the GHS is estimated to prevent more than 500 workplace injuries and illnesses and 43 fatalities every year, and save American businesses of over \$475 million in productivity improvements, fewer safety data sheet and label updates, and simpler new hazard communication training.

The GHS is meant to standardize our communication about chemical hazards in the workplace. This is why OSHA has adapted its Hazard Communication Standard to align with the globally harmonized system.

Hazard Communication Standard

Identifies types of physical hazards:

- Flammables
- Explosives
- Reactives
- Corrosives
- Oxidizers
- Gases under pressure

Industrial businesses must have a written hazard communication program and provide workers with additional training regarding site-specific chemicals.

Hazard communication programs should consist of three key areas:

Chemical Inventories and Safety Data Sheets (SDS)

- Updated stock of the dangerous chemicals in the workplace.
- Every hazardous chemical needs to have a Safety Data Sheet (SDS).
- Safety Data Sheets need to record required information and be easily understandable and accessible.

Labels and Warnings

- Connect chemicals and corresponding hazards through labels and warning information.

Hazard Communication Training

- Solidifies safety practices through a hazard communication training program.
- Teaches employees of the hazards of non-routine tasks.

Safety Data Sheets (SDS)

The greatest information source about a hazardous chemical is the SDS; a technical bulletin of the chemical's hazards. For everyone's safety, OSHA requires this information to be consistent between manufacturers. Both chemical manufacturers and

distributors alike are required by federal law to supply SDS for hazardous products and then OSHA requires employers to ensure they are easily available to workers.

Good precautions for safe handling of hazardous chemicals include general hygiene, like not eating and drinking in the work areas. Safe storage conditions include best practices like ventilation needs, storage room designs and packaging requirements.

In the case that employees are assigned to respond to accidents and spills, they must be trained in related responsibilities and properly equipped; part of being properly equipped is to have easy access to the Safety Data Sheet collection.

Always, workers need to read the SDS prior to working with any new chemical. OSHA standards require that SDS are readily available throughout all work shifts, to every employee. A central location may hold your facility's SDS binders, or there may be electronic SDS provided through computer terminals. All safety professionals must know where the SDS are located and make this location clear to the workforce.

Business protocols might allot the cleanup of small amounts of specific chemicals by people not part of a spill response team. Although, trained and properly equipped individuals who have access to spill response kits should be the only ones to clean up even the smallest of spills. They can ensure that no accidents will happen.

The Hazard Communication Standard ensures that pictograms are used on manufacturer and supplier labels of chemical containers to warn of potential hazards of exposure. Such pictograms are globally harmonized symbols and each individually represent a distinct hazard. As well as the original manufacturers' label, employers must use in-house labels, which can be referred to as secondary labels. However, these labels need to meet the Hazard Communication Standard requirements.

Alternatively, the National Fire Protection Association and the Workplace Hazardous Material Information System offer acceptable

labeling systems and are often used for workplace containers. When an in-house label is used on a container previously labeled by the manufacturer, it cannot block out any portion of the manufacturer's label.

Whenever in-house labels are used, you must understand the labels' coding and information.

Best practices for employers:

- It is recommended that employers review the new SDS in a timely fashion upon receipt.
 - In the case that the employer does not receive the SDSs in a timely fashion, the manufacturer should be promptly communicated with to obtain the SDSs. When the employer does not receive the SDS, OSHA has indicated that it will not cite employers who show "good faith efforts" to obtain the SDS.
 - It is recommended that employers regularly evaluate the workplace using the SDS to identify hazardous chemicals and how their employees can be exposed.
 - It is required that employers whose employees work with or around hazardous chemicals ensure that they review the updated SDS and evaluate all the employer's underlying compliance programs (e.g., emergency action plan, storage of flammable and combustible materials, PPE, respiratory protection, etc.) which may be impacted by the SDS.
 - Employers need to guarantee that employees working with or around hazardous chemicals are trained to recognize the pictograms and hazard warnings required under the new Hazard Communication Standard. It is also recommended that employers document this training and develop mechanisms to guarantee employees understand the hazards of working with or around hazardous chemicals.
-

Radio Communications

Key Takeaways:

- Learning why radio operator training is required and recognize key operator responsibilities.
- Learning how to prioritize messages and recognize approved and prohibited message content.
- Understanding proper procedures for calling and acknowledging radio messages.
- Recognizing radio code words.
- Comprehending general radio communication requirements.

Course Description

Statistics are unnecessary to prove that radio communication saves lives.

Imagine how vital radio communication is to the ship that's sending out a distress call, or for the airplane experiencing technical issues, or for the first responders to a natural disaster. Consider people working in isolation in high-risk work environments, like corrections personnel, or a team of backcountry firefighters. For them, radio communications systems can mean the difference between life and death. When someone needs immediate medical attention, a radio carries the promise of a better outcome, so it is fundamental to understand how they work and what they can and cannot do, and what rules govern the use of these systems.

Numerous companies with larger industrial operations, or open work sites where workers may not be visible at all times, employ a radio communications systems to facilitate work and working safely. All radio communications systems operate under the permission of the Federal Communications Commission (FCC), the agency that controls the airwaves, amongst other things. Not operators, but licensed employers are fully responsible for the actions of personnel who operate radio systems. Since the FCC holds the licensed employer responsible for all operator actions, workers need to comply with all of the organization's rules and operating procedures.

As stated before, employers are responsible for the proper functioning and operation of radio systems. Typically, there is a system operator on duty with authority for the operation and use of the organization's radio system, who is assigned to monitor the organization's own compliance with FCC regulations. Every radio operator has the responsibility of knowing and following the "rules and regulations" governing the use and misuse of all radio equipment. Radio operators are also responsible for the prevention of any damage to the organization's radios or radio equipment in any licensed installation.

Appropriate radio traffic is limited to communication essential to each organization's business. Allowed message content includes information such as station, caller, and recipient identification, requests, instructions, reports, new job assignments, reporting clear from an assignment with a brief description of work done, current location, or requests for additional materials needed to complete the work in progress. Also permitted are Mobile units reporting in or out of service and specific and authorized radio system tests.

Compared to permitted messages which contain essential company business, the FCC has identified message content that is not permitted.

Message Content Prohibited – Violates federal, state, or local law – Unnecessary, unidentified, or superfluous – Obscene, indecent, or profane – Music, whistling, or entertainment – Not in English or approved code words – Personal (except for family emergencies)

All radio transmissions are required by FCC regulations to be identified. To fulfill this requirement, call signs must be used. Businesses will have official FCC system call signs. Generally, radio operators use the vehicle number, portable radio number, or base station location, as applicable, to identify themselves.

Steps in sending a message: – To avoid interrupting another call, always listen before transmitting – Always use the base station or mobile number assigned to you for identification – Use the word "to" – Report the identification number of the station you are calling – Report the channel you are calling on

When messages are

not answered: – Call again – Confirm your radio settings are on the proper channel and receive volume – Drive one or two vehicle lengths (if transmitting from a vehicle) before transmitting again Post stating personal identification, the identification of the unit being called, and the channel being used, employees still need to know what they are going to say before keying the microphone; encourage them to write it down if necessary. This keeps messages brief and prevents unnecessary repetition. Follow these basic best practices for operating most radio systems. Push the transmit key for a second before talking to avoid clipping the beginning of messages. Keep the microphone about 6 inches from the mouth. Talk slowly and clearly with a normal tone of voice. Never tie up the channel for extensive periods with long continuous messages. Answering a call – Report with your assigned identification – Never use your name, employee number, or other codes – Say your identification once, “to” and the identification you are answering if more than one station is calling – When clarification is needed, the message may be repeated

ESSENTIAL 29: Aerial and Scissor Lift Safety

Key Takeaways:

- Recognizing different types and uses for aerial and scissor lifts.
- Identifying the hazards of aerial and scissor lift use and operation.
- Being able to correctly choose inspection criteria for a vehicle, lift, and the work surroundings prior to lift operation.
- Knowing safe work practice for operating aerial and scissor lifts.

Course Description

If your team has to complete jobs in high and hard-to-reach

workspaces, then you need to make sure your people know how to work at heights safely.

An aerial lift is any vehicle-mounted device that elevates people. Some types of lifts include extendable boom platforms, vertical towers, and scissor lifts. Aerial lifts are useful for many jobs in general industry, such as cleaning, maintenance, or inspection. However, they are most commonly used when you are a painter, HVAC tech, or electrician.

Operating aerial lifts safely requires preventive maintenance and conditioning of machinery, as well as a lot of considerations before even turning on the key, because the majority of aerial lift accidents happen because of a lack of training or inattention.

The most common hazards surrounding aerial lifts are falls, tip-overs, ejections, structural failure, and electrocution. Inexperience with equipment is another common cause of aerial lift accidents. At the very least, you need to be familiar with correct lift operation, how to perform inspections, and knowledge of manufacturers' requirements.

Things to Remember When Working on Aerial and Scissor Lifts:

- Check that the control labels, switches, and instructions on the console, are marked and legible; it is important to know which direction levers and shifts will take you where, and exactly what happens when you work with other instruments on the console.
- Know each of the lift controls and practice using the lift's functions in a open, level area before heading into the workspace as a warm up.
- Take the combined weight of the workers, tools, and materials into account when calculating the load; exceeding load capacity or boom limits is a dangerous mistake that is easily preventable. Pay attention to the listed limitations.
- Aerial lifts are designed to one job: safely elevate workers and materials. It is not a good idea to take this machinery and try to use it for jobs that should be performed by other industrial equipment. For example, an aerial lift should not be used as a crane.

- Unless the manufacturer's instructions allow it, never ride around in an aerial lift when it is raised or when a boom is extended; it may save time, but this is the most common way accidents happen when working from aerial lifts.
- Another way problem is operating the lower level controls without communicating with the worker in the lift; you have to check to make sure the aerial lift is clear of workers before manipulating those controls, or else you can throw them off balance, or put them into a hazard they may not be aware of.
- Working the equipment beyond vertical or horizontal reach limits stresses aerial lift machinery and can create a special set of problems; the hazards you may normally encounter, like issues of balance and stability, are all worse when you increase the height past the intended limitations. As a rule, the higher you rise in an aerial lift, the more aware you need to be.
- The work environment and exposure to the elements are very important to consider constantly. For example, operating a lift when winds are above a certain speed (recommended by the manufacturer) is inviting trouble.
- The other often overlooked consideration is awareness for the people who may happen to be working below you. In those circumstances, your activities above may present hazards below, and the activities of those working below can create unforeseen dangers for worker using aerial lifts.

Aerial lift training and situational awareness is so critical for the safe operation of this equipment. Retraining must happen when there is an accident during lift use, a change in workplace hazards involving lifts, when a different lift is introduced, or if an employer sees someone working a lift the wrong way.

Aerial and Scissor Lift Safety

– Spanish

Key Takeaways:

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