
OSHA 10+
CONTRACTOR SAFETY PROGRAM
GUIDE

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Acknowledgments

The OSHA 10+ Contractor Safety Program is a voluntary, cooperative initiative involving the Wisconsin Paper Council's member firms, plus dedicated construction associations, contractors, employees in the construction and related trades, the Occupational Safety & Health Administration (OSHA) and the Wisconsin Safety Consultation (WiSCon) program.

The participation of these interests emphasizes their shared objective: a safe job site for all workers.

It is important to acknowledge that any success that this initiative may realize will be possible only because of the long-term and continuing commitment to safety demonstrated by all involved.

Without their decades of safety achievements this initiative would not be possible.

These interests are committed to assuring work sites where the rules and regulations of the Occupational Safety & Health Administration (OSHA) are minimum standards, rigorously applied and followed, and where safety best management practices go beyond compliance (see: 29 CFR Part 1910, General Industry, and CFR Part 1926, Construction Industry).

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Publication Format

This document's format is uniform. For each of the safety topics following the title header, there is a brief **Introduction**.

It is followed by a list of several **Keys** identifying focal areas for each topic.

The bulk of each topic is comprised of further **Discussion** (text, bullet points) describing awareness level expectations.

The discussion sections are based on outlines developed with the advice and guidance of several dozen volunteer safety professionals representing OSHA, trade organizations, contractors and contractor associations and paper companies.

Without their assistance and expertise this project would not have been possible.

Their commitment to safe work places is sincerely appreciated.

BLOOD-BORNE PATHOGENS

Introduction

Accidents can occur at worksites. Accidents create a risk for exposure to blood-borne pathogens, including, but not limited to, hepatitis (non-A, non-B) and human immunodeficiency virus (HIV or AIDs). Contractor employees need to be aware of basic practices and equipment that can limit their exposure risk.

Keys to Blood-Borne Pathogens

- Personal Protective Equipment (PPE).
- Required for training.
- Safe response practices.
- Housekeeping.
- Response to exposure.

Personal Protective Equipment (PPE)

Contractor employees responding to an accident will be aware of the need to keep a clear mind and avoid irrational impulses or actions. They will be aware that universal practices call for the use of first aid kits and appropriate PPE, including gloves, protective eyewear and use of a one-way ventilation device or rescue bag. Contractor employees will understand the need for PPE to be free of defects, correctly fit the individual, and be appropriate to the task.

Required for Training

Contractor employees will be aware that they require specialized training before responding to situations presenting a risk of blood-borne pathogens.

Response Practices

Contractor employees will be aware that instruction that enables individuals to respond to the risk of blood-borne pathogens includes:

- Use of disposable gloves and other necessary personal protective equipment.
- Covering fluids with a paper towel, cloth or other absorbent materials, allowing fluids to be absorbed.
- Cleaning the exposed area with disinfectant.

- Removing all PPE, except disposable gloves, and depositing them in a medical hazard waste bag or container.
- Removing disposable gloves by turning them inside out and depositing them in the medical hazard waste bag or container.
- Securing the disposable bag or container and disposing of it in a “hazard waste” receptacle.
- Cleaning hands with disinfectant.

Housekeeping

Contractor employees will be aware of the importance of maintaining a clean working environment, including the safe disposal of any potentially contaminated PPE or equipment.

Response to Exposure

Contractor employees will be aware of the appropriate responses if they or a co-worker have been exposed to blood-borne pathogens.

CONFINED SPACE ENTRY

Introduction

A confined space, generally speaking, is one in which an individual’s ability to move about or exit is limited or restricted. Potential risks include oxygen deficiency, toxic atmosphere, entrapment, engulfment, fire or other physical danger. Some confined spaces are obvious, but others may not be apparent. It is important for all construction workers to be aware of what confined spaces are and the potential hazards they represent. It is imperative that contractor employees are aware that only those individuals having received specialized training are permitted to enter a confined space regardless of circumstances.

Keys to Confined Space Entry

- Definitions of “confined space” and “permit-required confined space.”
- Hazards.
- Entry procedures; individuals who may enter a confined space or be involved in a confined space entry.
- Roles and responsibilities of supervisors, attendants and entrants.
- Rescue.

Confined Space/Permit Required Confined Space

Contractor employees will know the definitions of a confined space and a permit-required confined space.

Confined Space – A confined space is one that:

- Is large enough to enter.
- Has limited or restricted means of entry or exit.
- Is not designed for continuous occupancy.

Some paper industry examples include:

- | | | |
|----------------|---------------------|---------------|
| • Boilers | • Chests | • Tunnels |
| • Diked Areas | • Dryer Cans | • Digesters |
| • Manholes | • Open-Top Spaces - | • Excavations |
| • Pits | 4' deep or greater | • Silos |
| • Storage Bins | • Process Vessels | • Tank Cars |
| • Trenches | • Tanks | |

Permit-Required Confined Space - Contractor employees will know that a permit-required confined space meets all of the three criteria of a confined space (above) and any of the following:

- Contains, or has potential to contain, hazardous atmosphere.
- Contains a material with the potential for engulfing an entrant.
- Has an internal configuration that may cause an entrant to be trapped or asphyxiated.
- Contains any other recognized serious safety or health hazard, such as risk of falling or tripping, excessive noise, risk of burns or mechanical equipment.

Contractor employees will know that personnel not authorized by permit are forbidden from entering a permit-required space.

Types of Confined Space Hazards

Contractor employees will be aware of the potential dangers of confined space entry, including:

Atmosphere - Hazards include gases, vapors, airborne dust, and oxygen enrichment and oxygen depletion. Atmospheric hazards can suffocate or poison an entrant, explode, or feed a fire.

Energy Sources - Energy sources are those with the potential to release electrical or stored energy if not properly controlled or deactivated.

Hot Work - Hot work includes welding and cutting, burning and heating, and riveting. All can create sparks, flame or heat sufficient to ignite flammable materials in a confined space causing an explosion and/or fire.

Entrapment - Entrapment occurs if the shape, size or other attribute of a confined space slows or halts exit.

Special Considerations - Confined spaces must be assessed for the presence of special health risks including, but not limited to arsenic, asbestos, lead, silica or radiation.

Sewer Entry - Entry into a sewer system is an example of a specific atmospheric risk.

Engulfment - Engulfment describes an entrant becoming trapped or enveloped inside a confined space by a liquid or a “flowable” solid (some paper industry examples include wood chips, starch or pelletized substances).

Radiation - Confined spaces must be tested and monitored to assure they do not present a risk of radiation exposure.

Site Specific - Contractor employees will be aware that different work sites present the potential for different hazards and safety rules/procedures. They will be aware that personnel involved in a confined space entry will receive site-specific information/training prior to the entry.

Confined Space Entry Procedures

Contractor employees will be aware that there are specific procedures required before and during safe operations in a permit-required confined space. They include:

Cleaning, Purging, Flushing or Ventilation - Many confined spaces need specific treatment – such as cleaning, purging, inerting (i.e., making the atmosphere non-flammable, non-explosive and non-reactive), flushing, ventilating – by trained individuals before and/or during a safe entry.

Isolation of Energy (Lockout, Blanking, Blocking & Bleeds) - Equipment in a confined space must be in a “zero energy state” by trained personnel to prevent unexpected activation or release of energy.

Testing for Specific Atmospheric Hazards - Prior to entry, the atmosphere in a confined space must be tested at all elevations or levels, and in all areas, by trained personnel using calibrated equipment. The atmosphere must be continuously monitored, or retested periodically, as long as the space is occupied. The atmosphere should be tested for its oxygen content first.

Sampling of Special Situations - Confined spaces need to be sampled to assure they do not pose a risk for exposure to various substances, including but not limited to arsenic, asbestos, lead, silica or radiation.

Electrical Protection (Low Voltage/GFCI) - Electric-powered tools and lighting used in confined spaces must be low voltage and connected to a ground fault circuit interrupter.

Prevention of Unauthorized Entry - Individuals who are not authorized must never enter a permit-required confined space. Appropriate measures will be taken by employers to preclude unauthorized entry.

Protective Barriers/Warnings - Confined spaces must be adequately barricaded and clearly identified with signage and/or other devices that warn of the potential danger.

Personal Protective Equipment for Confined Space - Safe entry into a confined space may require the use of specialized personal protective equipment, such as safety harnesses and life lines, extrication devices, respirators and related gear. PPE selection is specific to the confined space and is the responsibility of a trained individual.

Multi-Contractor/Sub-Contractor Work Site Coordination - When more than one contractor or sub-contractor is active at a work site, communication must be coordinated to assure all appropriate personnel are aware of confined space dangers.

Responsibilities and Duties of Supervisors, Attendants, Entrants

Contractor employees will understand that safe entry into a permit-required confined space requires the existence of a detailed, printed plan developed by the employer; the issuance of an approved permit; and establishing employee proficiency in the duties and roles required, as indicated:

Supervisor - The supervisor is responsible for assuring safe conditions before and during the entry.

The supervisor knows the hazards the space presents, assures that safe entry conditions exist, terminates an entry when unsafe conditions are detected, assures that rescue services are available, stops unauthorized

individuals from entering the space and removes unauthorized individuals who enter the space. The supervisor may also serve simultaneously as the attendant. When doing so, the supervisor assumes the responsibilities for both roles.

Attendants - Attendants are responsible for continuously monitoring the entry and supporting the entrant.

Attendants know the hazards the space presents, know the possible behavioral effects of the hazards on entrants, maintain a continuous count of the entrants, communicate with entrants to monitor their status, terminate an entry when unsafe conditions are detected. Attendants also know how to communicate with the rescue service, perform non-entry rescues, stop unauthorized individuals from entering the space and remove unauthorized individuals who enter the space, assist the supervisor, and remain at the confined space until relieved.

Entrants - Entrants are individuals that have received specialized training, are authorized by permit to enter the space, perform identified tasks under specified conditions during a limited and defined time period.

Entrants know the hazards the space presents comply with all entry rules, communicate with attendants, and immediately alert attendants and other entrants to any warning sign of an unsafe entry.

Rescue – Contractor employees will understand the need to plan ahead should a rescue be necessary.

For example, the entry permit must identify the rescue service to be contacted and how to contact it, plus any rescue equipment to be available at the entry site. Additionally, contractor employees will understand that individuals assigned to a rescue team will have received specialized training prior to being involved in a rescue, and will have practiced rescues.

DEMOLITION

Introduction

Contractor employees will be aware that demolition is a highly specialized activity that requires thorough planning and competent supervision to be performed safely. They will further understand that demolition includes remodeling and renovation activities.

Keys to Demolition

- Engineering survey.
- Safe Practices.

Engineering Survey

Contractor employees will be aware that prior to starting a demolition project, a “competent person” must have performed an engineering survey to determine the condition of the framing, flooring, walls, and the potential for an unplanned collapse of any portion of the structure or object. Any adjacent structure where paper or contractor employees may be exposed must also be similarly checked.

Safe Practices

Contractor employees will be aware that demolition activities may be performed only under competent supervision. Demolition projects require a written plan identifying the safe work practices to be followed.

Additionally, contractor employees will be aware of general safe practices required by law, including:

- The demolition area must be barricaded to prevent unauthorized persons to enter or move within.
- All electric, gas, water, steam, sewer and other service lines shall be shut off, capped or otherwise controlled outside the building line before demolition work commences. Any public or private utility that is involved must be notified in advance.
- If it is necessary to maintain any utilities during demolition, they must be relocated and protected.
- If also must be determined if any hazardous chemicals, gases, explosives, flammable materials or other dangerous substances have been used in any pipes, tanks or other equipment on the property. If their presence is apparent or suspected, testing and purging must be performed and the hazard eliminated before demolition commences.
- If a structure to be demolished has been damaged by fire, explosion or other catastrophe, the walls and floor must be shored or braced.
- Contractor employees may not work below other employees during demolition projects.

- If a hazard exists for contractor or paper employees falling through a wall opening, it must be protected to a height of approximately 42 inches.
- Related hazards, such as the risk of fragmented or broken glass, must be removed or eliminated.
- Unstable structures must never be left in-place without temporary support.
- Waste materials generally should not be dropped or thrown to the ground. They must be lowered through the use of cranes or chutes. If use of a chute is not possible, the area in which debris is dropped must be completely enclosed (barricades at least 42 inches high and 6 feet back from the projected edge of the opening above). Signs warning of the hazard of falling materials must be posted at each level.
- All floor openings must be covered with material substantial enough to support any load placed upon it.
- Employee entrances to multi-story structures being demolished must be completely protected by sidewalk sheds and/or canopies providing protection from the face of the building for a minimum of 8 feet.
- Any asbestos-containing materials must be removed according to local, state and federal regulations.
- Crane operators involved in demolition work must be able to see the work, or a signal person must be utilized to direct the crane operator.

ELECTRICAL SAFETY

Introduction

Unsafe electrical practices pose numerous risks to workers, including shocks, burns and fire, and electrocution. Electrical safety awareness provides workers with the knowledge, skills and tools to avoid these risks, whether their potential exposure is direct, indirect or incidental to their assignment.

Keys to Electrical Safety

- Potential hazards.
- Qualified people.
- “Diggers” Hotlines (utility or municipal).

Keys to Electrical Safety, continued

- Assured equipment ground program.
- Ground Fault Circuit Interrupters (GFCI).
- Related safety practices and procedures.

Potential Hazards

Awareness will include an understanding of the potential harmful effects of electricity, including:

- Burns
- Fire
- Explosions
- Shocks

Contractor workers will understand that a range of hazards is possible. Some of the most likely include temporary electrical set-ups, frayed or worn extension or power cords, and exposed junction boxes.

Awareness will include an understanding of important terms and concepts, including:

- Circuits (faulted, short)
- Energized parts or equipment
- Grounding
- Interruption
- Wiring (permanent, temporary)
- Electrical Isolation
- Ground fault
- Insulators
- Ohm's Law
- Resistance

Qualified People

Contractor employees will be aware that only qualified people can work with exposed live conductors and electrical parts. Qualified people are those individuals who have the necessary training to avoid the electrical hazards of working on or near exposed energized parts.

Diggers Hotlines

Contractor employees will be aware of the need to contact appropriate utility services – such as public or private utilities' "digger hotlines" – or the owner's representative to identify precisely locations of underground utilities and related information prior to starting work.

Assured Equipment Ground Program

Contractor employees will understand what an Assured Equipment Grounding Program is, including its capabilities and limitations, and its key aspects including:

- Requirement for written programs.
- Role of competent person(s).
- Inspections and testing.
- Record-keeping.

Ground Fault Circuit Interrupter (GFCI)

Contractor employees will be aware of the use of Ground Fault Circuit Interrupters (GFCI) in electric safety, including:

- Capabilities and limitations.
- Who uses GFCI's.
- When GFCI's are used.

Related Safety Practices

Contractor employees will be aware of important related practices that help assure electrical safety, including:

Electric Line Awareness - Contractor employees will understand safety practices needed when working around overhead, buried or concealed electric lines. Awareness will include an understanding of working clearances around energized lines and safety practices related to conductive equipment (e.g., back hoes, cranes, aerial lifts) and platforms and scaffolds.

Flexible/Extension Cords - Contractor employees will be aware of flexible cord set safety practices, including how to use cords, misuse/abuse to avoid, maintenance and the need to tag defective cords and tools as "Do Not Use" and to remove them from service.

Lockout/Tagout - Contractor employees will be aware of the importance and function of lockout / tagout programs in electric safety. They will be aware that only qualified people (see below) may work with exposed live conductors and electrical parts. They will also be aware of the importance of safe procedures, including circuit tests that are followed whenever equipment is deenergized and reenergized.

Conductive Materials - Contractor employees will have an awareness of the safe use of conductive materials, such as duct tape.

Personal Protection Equipment - Contractor employees will be aware that certain PPE is necessary to assure electrical safety, including (but not limited to):

- Eye/face protection.
- Insulated tools for qualified personnel.
- Non-conductive headwear.
- Task-specific or specialized PPE.
- Testing of PPE and tools.

EXCAVATIONS & TRENCHING

Introduction

Excavations and trenches present a number of serious hazards regardless of the job site. Awareness and application of safety practices reduce the potential risks presented by unsafe work habits, changes in soil stability and vibrations in the work place.

Keys to Excavations & Trenching

- Excavation types.
- Safety practices prior to starting work.
- Competent and qualified person.
- Emergency response/equipment team.
- Sloping and protective systems.

Excavation Types

Contractor employees will understand what constitutes and how to recognize an excavation (operations at a depth of 4 feet deep or greater) and related activities, including:

- | | |
|-----------------|---------------|
| • Cavities | • Depressions |
| • Man-Made Cuts | • Shielding |
| • Sloping | • Trenches |

Contractor employees will understand that an exit, or safe means of escape, must be available within 25 feet of any worker in excavations that are 4 feet or

more deep. For example, a ladder used for exit purposes must not be outside of the trench box.

Additionally, protective systems are needed in any excavation that is 5 feet or deeper, and may be required in excavations that are less than 5 feet deep under certain circumstances.

Contractor employees will have an awareness of related safety provisions, including the use of sloping (inclination of side walls) to protect workers, the need to avoid exposure to falling loads, and the importance and use of warning systems on mobile equipment adjacent to excavations.

Contractor employees will understand the potential dangers related to each type and the rules, procedures and equipment used to eliminate or control the dangers. Contractor employees also will understand the risks posed by underground utilities and the steps necessary to eliminate or control the risk.

Safety Practices Prior to Starting Work

Contractor employees will be aware of the steps that must be undertaken and permit(s) required prior to beginning excavation, trenching and shoring activity.

Competent and Qualified Person

Contractor employees will understand the roles of the “competent person” and the “qualified person” (registered professional engineer) – individuals trained to address the specifics of excavating, trenching and shoring activities and safety practices, including soil classification and the use of protective systems.

Definitions - OSHA defines a competent person as “...one who is capable of identifying existing and predictable hazards...who has authorization to take prompt, corrective measures to eliminate them.”

OSHA defines a qualified person as one who “...has knowledge, skills, experience, training, certification or professional standing to solve or resolve problems related to the subject matter, the work or the project.”

These are important terms as they are referenced in all OSHA regulations.

Protective systems include: (a) side supports for excavations or shoring, (b) shields, and (c) sloping or benching of the sides of excavations.

Individuals will be aware of the types of soil classifications (A, B, C and rock), the role of the competent person in performing soil type analysis, and the potential dangers presented by various soil types.

Emergency Response/Equipment Team

Contractor employees will be aware of the importance and role of emergency response equipment/teams related to excavations, trenching and shoring, including the need to develop an advance plan that addresses:

- Who is responsible for calling for rescue, fire or other professional help?
- Who is responsible for initial rescue and aid efforts?
- What rescue and emergency equipment is available on the job site, where it is located, who is qualified to use it?
- Who is responsible for directing rescue, fire and other professional help to the accident scene?

FALL PROTECTION

Introduction to Fall Protection

OSHA reports that more than 100,000 job site falls occur annually. Most fall injuries (85%) result in lost time. Falls account for 11% to 12% of all fatal work injuries in the United States. Most common are falls from roofs, scaffolds and ladders, open-sided floors and work platforms, hole openings in floors, falls associated with the use of aerial lifts, and falls occurring when working above machinery or other hazards.

But all falls are potentially serious. A safe workplace also protects workers from falling objects.

Keys to Fall Protection

- Recognizing fall hazards.
- Fall protection devices and selection.
- Personal fall arrest systems.
- Anchorage points.
- Maintenance, cleaning and storage.

Fall Protection Devices and Selection

Contractor employees will be aware of the potential dangers and causes of falls and the rules, procedures and tools used to eliminate or control the dangers.

Contractor employees will understand the types of equipment and devices used to prevent and arrest falls (separately and in combination), and when fall

protection is required, including requirements related to height and elevated work for these devices:

- Personal fall arrest systems (see below), plus:
 - Canopies
 - Controlled access zones
 - Guardrails
 - Hole covers
 - Positioning device systems
 - Safety monitoring systems
 - Safety net systems
 - Warning line systems

Contractor employees will be aware that employers must provide and install all required fall and falling object protection devices prior to the commencement of work. The equipment must include anchoring devices selected by a competent person.

Contractor employees must be aware that employers must create a rescue plan for workers who are in an arrested condition.

Employers also must provide training, with a competent person as the instructor, whenever workers may be exposed to fall hazards.

Personal Fall Arrest Systems

Contractor employees will be aware of personal fall arrest systems, including their components such as the body harness, lines, connecting devices and anchor, and may include, as necessary, a lifeline, a deceleration device, or both.

Contractor employees will understand that personal fall arrest systems must be rigged so that the wearer can not fall more than 6 feet and can not come into contact with any lower level. They will understand that the device must bring an individual to a complete stop and limit maximum deceleration traveled to 3.5 feet.

Contractor workers will be aware of the components of a body harness and their proper use, including:

- Shoulder straps and retainer
- Waist straps
- Thigh straps
- Sub-pelvic support
- D-ring
- Adjustment buckles

Anchorage Points

Contractor employees will be aware of the importance of proper anchorage (the secure point of attachment for equipment such as lifelines, lanyards and deceleration devices).

They will understand that fall arrest systems must limit the maximum arresting force on the employee to 1,800 pounds and that anchorage points must be capable of supporting at least 5,000 pounds per attached employee.

Contractor employees will be aware that anchorage must be independent of any other anchorage in use to support or suspend platforms, and that personal fall arrest systems must not be attached to guardrails.

Maintenance, Cleaning and Storage

Contractor employees will understand the importance of proper maintenance, inspection, cleaning and storage of fall protection devices and equipment.

Contractor workers will be aware of the need to replace equipment after a fall.

FIRE PREVENTION & HOTWORK

Introduction

Fire and explosions are a serious threat to life and property in all aspects of our daily lives. Fires and explosions in the workplace are estimated by OSHA to be responsible for well over \$2 billion in damages, plus the death of several hundred individuals annually.

Hotwork – welding, cutting, brazing, soldering and related activities – presents a unique risk for fire and explosions to welders, their assistants, and others in the vicinity. Hotwork also requires eye protection for those involved and the need for caution by others in the vicinity.

It is often said that the best protection from fire is to avoid starting one. Contractor employees will be aware of fire hazards – including the use of cigarettes and other tobacco products – and those presented by hotwork, plus the rules, procedures and equipment used to eliminate or control the dangers.

Keys to Fire Prevention & Hotwork

- Combustion and fire components.
- Fire extinguishers.
- Paper industry specific fire hazards.
- Flammable and combustible liquids and gases.
- Hot work precautions.
- Potential ignition sources.

Combustion and Fire Components

Contractor employees will understand the importance of preventing fires and the basic elements or components of combustion and fire. Awareness will include an understanding of the four components of fire in the context of fire prevention and suppression:

- Fuel
- Oxygen
- Chemical reaction
- Heat

Fire Extinguishers

Contractor employees will understand the basic types of fires, including:

- Class A: paper, plastics, rubber, wood.
- Class B: liquids, gases, grease.
- Class C: electrical, including circuit breakers, fuse boxes, electrical equipment, wiring.
- Class D: metals.

Contractor workers will know the types, location and proper operation of fire extinguishers used for each.

Paper Industry Specific Fire Hazards.

Contractor employees will be aware of specific fire hazards common to the pulp and paper industry, including:

- | | |
|------------------------------------|---------------|
| • Noncombustible gases (NCG) | • Paper dust |
| • Roll & broke paper storage areas | • Sawdust |
| • Turpentine | • Waste paper |

Contractor employees will be aware of the procedures and equipment used to eliminate or control the hazards.

Hot Work Precautions

Contractor employees will understand the intent and purpose of permit requirements, the proper use of shields, and the precautions necessary around various categories of hotwork, including:

- Cutting
- Burning
- Soldering
- Brazing
- Grinding (spark-causing activities)
- Welding

Contractor employees will understand fire watch procedures, when they are implemented, and the need for eye protection.

Flammable & Combustible Liquids & Gases

Contractor employees will be aware of specific procedures and equipment necessary for the safe handling and storage of flammable and combustible liquids and gases, including those presented by compressed gas cylinders and welding gas cylinders and carts.

Potential Ignition Sources

Contractor employees will be aware of potential ignition sources, such as welding and cutting operations, lighting systems and temporary heaters during cold weather seasons.

Additionally, they will be aware that smoking is prohibited by OSHA regulations at or in the vicinity of operations that are a fire hazard. Such operations will be conspicuously posted with signs indicating: NO SMOKING OR OPEN FLAME

HAZARD COMMUNICATION (HazCom)

Introduction

OSHA estimates that approximately 25% of the workforce handles, or is in the vicinity of, hazardous chemicals on a daily basis. All workers will understand they have a right to know what chemicals they may be exposed to and will know how to protect themselves from potential hazards.

Keys to Hazard Communication

- Types of hazards.
- HazCom rights and obligations.
- Material Safety Data Sheets (MSDS).
- Written HazCom program.
- Paper industry specific chemicals/processes.
- Substances requiring specific training.
- Related safety topics and practices.
- Labeling requirements.

Types of Hazards

Contractor employees will be aware of the two basic types of hazards – health and physical – and the categories of each:

Health Hazards – includes exposure to chemicals that may cause acute or chronic impacts to human health. Contractor employees will be aware of the types of substances that can cause acute or chronic health impacts, including:

- Carcinogens
- Corrosives
- Irritants
- Toxins
- Organ-specific reactors (sulfuric acid, asbestos)
- Sensitizers
- CNS (Central nervous system disorders)

Physical Hazards – includes the following categories:

- Compressed gases.
- Explosives.
- Flammable liquids or solids.
- Flammable liquids or solids.
- Organic peroxides.
- Oxidizers.
- Pyrophoric substances (spontaneously ignitable in air at or less than 130° Fahrenheit).
- Unstable materials.
- Water-reactive materials.

HazCom Rights and Obligations

Contractor employees will be aware of their rights and obligations relating to federal and state regulations, including access to information and training regarding all hazardous chemicals with which they work or are exposed, how to protect themselves and their employer's training requirements, including:

- Determining hazards of chemicals.
- Availability of a written hazard communication program.

- Availability of material safety data sheets.
- Requirements regarding hazard training and information, including:
 - How to detect the presence of hazardous chemicals in the workplace.
 - Health and physical hazards of chemicals in the workplace.
 - How to protect against chemical hazards.
 - Information on the employer's hazard communication program.

Material Safety Data Sheets (MSDS)

Contractor employees will be familiar with material safety data sheets, including their basic information, why they are required, information provided and related key aspects, including:

- Employee and employer responsibilities.
- What are material safety data sheets.
- How to access MSDS.
- How to read MSDS, including common terms.
- The importance of information sharing in workplaces with multiple contractors / sub-contractors.

Contractor employees will be aware of basic information provided in material safety data sheets, including:

- Identity of the chemical.
- Physical and chemical characteristics.
- Health and physical hazards.
- Routes of entry into the body.
- Exposure limits used (PELs, TLVs) or recommended by the MSDS preparer.
- Precautions that allow safe handling and use.
- Control measures.
- Emergency and first aid procedures (also see below).
- Manufacturer's name and contact information.
- Date latest revision was prepared.

Written Haz/Com Program

Contractor employees will be aware that a written hazardous communication program must be available and what information it must contain, including:

- List of all hazardous chemicals present in the workplace.
- How MSDS requirements are satisfied.
- The type of labeling system in use.
- How workers will be informed of "non-routine" hazards.

They also will be aware that training must be provided – initially and whenever a new hazard is introduced into the workplace – to assure a safe working environment.

Paper Industry Specific Chemicals / Processes

Contractor employees will be aware of the potential hazards presented by chemicals commonly used in paper installations and how to protect themselves. They encompass process safety management chemicals listed under OSHA Guidelines, Part 1910.119, which require written programs and include substances such as:

- Ammonia.
- Cadmium.
- Chlorine dioxide.
- Hydrogen sulfide.
- Ozone.
- Sulfur dioxide.
- Turpentine.
- Bleach liquors.
- Chlorine.
- Hydrogen peroxide.
- Non-combustible gasses.
- Sodium hydroxide.
- Sulfuric acid.

Specific Training

Contractor employees will be aware that only those personnel with specific training may address certain substances. Some of these are:

- Asbestos.
- Cadmium.
- Formaldehyde.
- Ionizing radiation.
- Lead.
- Silica.

Related Safety Topics and Practices

Contractor employees will be aware of these safety practices and procedures.

General First Aid for Chemical Exposures - Contractor employees will know basic first aid procedures needed to respond to chemical exposures and reporting procedures.

Exposure Control Methods & Procedures - Contractor employees will know methods and procedures for controlling exposure to hazardous materials, including appropriate personal protection equipment (PPE).

Basic Chemistry - Contractor employees will understand basic chemistry terms and concepts (examples: flammable, oxidizer, corrosive) to facilitate

competency in the routine handling of hazardous materials or in responding to emergencies.

Basic Handling Procedures - Contractor employees will understand handling procedures for hazardous materials whether exposure is to small or single-use quantities, or those in large or bulk volumes.

Site specific training is likely to be required to address labels and labeling topics.

Emergency Response Procedures - Contractor employees will know the appropriate procedures for responding to hazardous materials emergencies.

Nuclear and Ionizing Devices - Contractor employees will be aware of the potential hazards associated with naturally occurring radiation and nuclear and ionizing devices used in paper installations and how to protect themselves.

Labels and Other Forms of Warning - Contractor employees will be aware of requirements that all containers (original containers and those containing transferred substances) of hazardous chemicals must be labeled, tagged or marked with the identity of the material and appropriate hazard warnings. They will be aware that such containers may also include information on precautionary measures.

Contractor employees will be aware that contractors have a responsibility to notify paper mills of any hazardous materials they bring into a work site, including providing a MSDS.

LOCKOUT / TAGOUT

Introduction

Lockout / tagout programs protect employees from the potential hazards created by the accidental release of energy.

- Lockout programs – involve physically turning off and locking out energy flows from a power source to a circuit or device that utilizes the energy.
- Tag-out programs – involve the placement of warning / informational tags on power sources cautioning against restoring energy flows.

Keys to Lockout / Tagout

- Lockout / tagout general awareness.
- Energy control procedures.
- Shut-down and start-up procedures.
- Paper industry process equipment hazards.
- Group lockout.
- Removal of locks.

Lockout / Tagout General Awareness

Contractor employees will understand lock-out / tag-out programs, including:

- Purpose and objectives.
- Responsibilities of “affected” and “authorized” employees.
- Procedures for controlling energy sources.
- Importance of “verification: try, lock and try.”

Contractor employees will know the difference between “lockout” and “tagout” procedures and why each is necessary for workplace safety.

Energy Control (Primary, Secondary) Procedures

Contractor employees will be aware of the risk presented by hazardous energy, including:

- Accidental (intentional, unintentional) start-up.
- Electric shock.
- Unexpected release of stored, residual or potential energy.

Contractor employees will be aware of the types of energy and methods used to control each, including:

- | | |
|--------------|--------------------------|
| • Chemical | • Gravity |
| • Electrical | • Hydraulic |
| • Mechanical | • Pneumatic |
| • Potential | • Steam |
| • Thermal | • Water (under pressure) |
| • Radiation | |

Shut Down and Start Up Procedures

Contractor employees will be aware of the steps and procedures used by authorized employees to shut down and start up equipment or energy sources controlled by a lock-out program, including:

Preparing a Shut Down – Includes:

- Identification of the type and magnitude of the energy to be controlled.
- Identification of associated hazards of the energy to be controlled.
- Identification of control methods to be used.

Performing a Shut Down – Includes:

- Notification of all affected contractor employees.
- Identification and location of all energy sources.
- Compliance with procedures specific to each energy source.
- Turning off energy, and/or release of stored energy or the attainment of “zero energy state.”
- Lock out of energy control devices.
- Use of multiple lockout devices if more than one individual will work on the equipment.
- Attempted restart of the equipment to verify successful lockout.
- Implementation of lockout procedures at shift or personnel changes if necessary.
- Continual inspection/monitoring of equipment and lockout status.

Performing a Start Up – Includes:

- An assessment by authorized employees that it is safe to remove lockout and tagout devices before a start up.
- Testing or inspection by a qualified person that equipment may be reenergized and that all tools and related electric devices have been properly removed.

Removal of Locks and Group Lockout – Contractor employees will be aware that each lock and tag is to be removed by the individual who applied it or that individual supervises the removal.

Special circumstances are required if the individual who applied the lock and tag is not available at the time of removal.

Paper Industry Process Equipment Hazards

Contractor employees will be aware of the potential hazards presented by paper industry process equipment, and that those process equipment hazards also are addressed in site specific training.

MATERIAL HANDLING, HOISTS, CRANES & RIGGING

Introduction

Material handling addresses a range of activities, including proper procedures by individuals performing “hands on” activities and those working with or in the vicinity of simple (hand truck, wheelbarrow) to complex/sophisticated (forklifts, cranes) material-handling equipment, hoists and rigging.

Each present unique risks, which are managed through a variety of safety practices and devices.

Keys to Material Handling, Hoists, Cranes & Rigging

- Hazard awareness.
- Safety practices and procedures.
- Qualified operators for cranes.

Hazard Awareness

Contractor employees will be aware of the potential dangers associated with material handling – whether with specialized equipment or “by hand” – and the rules, procedures and devices used to eliminate or control the dangers.

Some equipment common to paper industry construction sites include:

- | | |
|---------------------|-------------------|
| • Deck cranes. | • Fork trucks. |
| • Gantry equipment. | • Scissors lifts. |
| • Tracked cranes. | • Wheeled cranes. |

Safety Practices and Procedures

Contractor employees will be aware of the following safety practices and procedures.

Inspections & Record-Keeping - Contractor employees will be aware of the essential importance of pre-job and periodic “quick” inspections, combined with routinely scheduled inspections, plus record-keeping by a competent person, to assure the safety of material handling equipment and devices.

Need for Safe Working Loads & Operations - Contractor employees will be aware that safety requirements vary depending on the load type and lifting operation. Individuals will be aware of the role of riggers in assuring safe material handling operations.

Contractor employees will understand that whenever rigging is used on a jobsite a competent person must inspect it before the lift is undertaken.

Contractor employees will understand that loads must never be hoisted over workers and load limits may never be exceeded.

Paper Installations Hazards – Contractor employees will be aware of hazards specific to paper installations, including paper roll stands, and safety regulations when working in areas where pulp logs are received, stored, transported or handled.

Types of Ropes, Lines, Chains, Hooks, Ends & Attachments -

Contractor employees will be aware of safety considerations and procedures related to the various types of ropes, lines, chains, hooks, ends and attachments used in material handling operations.

Slings - Contractor employees will be aware of the potential dangers specific to the use of slings. The use of slings requires the expertise of riggers and application of the rules relating to rigging.

Dangers and Precautions Around Suspended Loads - Contractor employees will understand guidelines necessary to assure safe conditions around and in the vicinity of suspended loads.

Industrial Trucks, Forklifts & Related Equipment - Contractor employees will be aware of safety procedures utilized when in an area where industrial trucks, forklifts and similar equipment pass (near or through) or are operated.

“Hands On” Material Handling - Contractor employees will be aware of the rules, procedures and equipment needed to assure the safe handling of materials when performed by hand (lifting, carrying, pushing, pulling). Examples of “hands on” material handling considerations include:

- Planning the job in advance.
- Use of mechanical devices (e.g., dollies, carts, wagons) whenever possible and practical.
- Assuring that individuals are capable of the weight they will lift, carry, push or pull.
- Assuring the individuals are in satisfactory physical condition to handle the weight they will lift, carry, push or pull.
- Lifting with leg muscles – not with back muscles.

- Starting a lift as close to the load as possible.
- Avoiding turning or twisting when handling materials.
- Clearing a safe path to the destination before handling materials.
- Always seeking help from other workers when necessary.
- Avoiding over-exertion.
- Always erring “on the safe side.”

Material Storage - Contractor employees will be aware of safety procedures used to safely store materials, including how to stack, pile, block, interlock or otherwise secure them.

Floor Loading Requirements – Contractor employees will be aware of the potential hazards from improper floor loads and the need for a competent person to assure floor loading requirements are followed.

Qualified Operators for Cranes

Contractor employees will understand that only qualified individuals may operate cranes, and that there are specific, detailed regulations pertaining to the operation of cranes and related activities.

MOTOR VEHICLES & MOTORIZED EQUIPMENT

Introduction

Motor vehicles are defined as those that may operate legally at work sites and on public roads and highways. Motorized equipment includes specialized devices such as cranes and railroad engines and rolling stock.

Cars, trucks, motorized and railroad equipment add another dimension to workplace hazards. Quite simply, humans almost always are the losers in accidents involving this equipment. A range of devices and practices are utilized to assure safe conditions from common sense – “stop, look and listen” – to specialized tools. Contractor employees need to be aware of these devices and practices.

Keys to Motor Vehicles & Motorized Equipment

- Motor vehicle awareness.
- Motorized equipment awareness.
- Railroad equipment awareness.
- Forklift traffic.

Motor Vehicle Awareness

Contractor employees will be aware of the potential dangers presented by motor vehicles and the rules, procedures and equipment used on paper industry property to eliminate or control the dangers.

Individuals will understand that the level of motor vehicle safety necessary within the perimeter of pulp and paper industry installations is at least the same as that required on public highways and streets – and may be more stringent depending on the specific location, time or circumstance/condition.

Motorized Equipment Awareness

Contractor employees will be aware of safety procedures needed when working with or in the vicinity of various mechanized vehicles, including:

- Construction equipment.
- Earth-moving equipment.
- Fork trucks.
- Other material handling equipment.

Railroad Engines & Rolling Stock

Contractor employees will be aware of the safety procedures needed when working around railroad engines and rolling stock at paper industry installations, including the use of “blue flag” devices.

Fork Lift Traffic

Contractor employees will be aware that paper installations typically have a significant amount of fork lift traffic and will understand the need for caution.

PERSONAL PROTECTIVE EQUIPMENT (PPE)
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Introduction

OSHA reports that, on average, 500 workers are injured on-the-job every day. One simple, but effective protection against a range of common injuries is the use of personal protective equipment – hardhats, ear and eye protection, gloves, hard-toed shoes and boots, and specialized devices such as respirators and life-saving equipment.

Contractor employees need to know what PPE tools are available to them, which are mandatory, and the requirements regarding proper fit, use and maintenance.

Keys to Personal Protective Equipment (PPE)

- PPE assessment.
- PPE awareness and basics.
- PPE equipment and applications.

PPE Assessment

Contractor workers will be aware that employers are required to assess the workplace to determine if hazards are, or are likely to be, present, and if PPE is necessary. If so, employers select the appropriate PPE to be used by workers and assure that the workers utilize the devices.

Awareness and Basics

Contractor employees will have an awareness of the following aspects of personal protective equipment (PPE):

- What, when and where PPE is required.
- How to properly select PPE based on the task to be performed or the workplace environment.
- The proper fit, maintenance, inspection, useful life and disposal of PPE.

Minimum awareness of PPE encompasses the equipment and applications described below.

Additionally, other PPE equipment or procedures may be necessitated in response to special or unique circumstances addressed by local, state, federal, contractor and / or owner rules.

Hardhats - Contractor employees will be aware that ANSI-approved hardhat use is mandatory at paper industry installations. Individuals will further understand the proper use of hardhats, including the function of their components, including the shell and the suspension.

Eye Protection - Appropriate eye protection is mandatory at paper industry installations and may include a range of tools, such as:

- ANSI-approved safety glasses with side shields.
- Goggles/face shield.
- Cutting goggles/welding hood (awareness includes understanding filter lens shade numbers).
- Laser protective devices.

Hearing Protection - Hearing protection awareness includes an understanding of the types of protection (e.g., disposable and reusable plugs, muffs or headsets), ratings of protection devices, an understanding when hearing protection is required, and proper hygiene practices related to hearing protection equipment.

Hand Protection - Contractor employees will be aware when gloves are required to assure safe working conditions, the types of gloves to be utilized depending on the circumstances:

- General
- Chemical
- Welding
- Insulated

Contractor employees will also be aware of other types of hand protection that are required or beneficial, depending on task or environment.

Foot Protection - Contractor employees will be aware that ANSI-approved safety shoes are mandatory at paper industry installations.

Contractor employees also will be aware of the need for adequate foot protection in general, and the types of protective footwear that may be required depending on the circumstances.

Clothing - Contractor employees will be aware that clothing requirements may be included in PPE safety programs, including mandatory requirements regarding types of pants/leg covering, shirt and other specialized protective clothing.

Individuals will also be aware that certain activities may necessitate additional limb and/or torso protective wear.

Other PPE Applications - In addition to general PPE awareness and competency, contractor employees will be aware that other types of PPE devices may be required, depending on conditions and activities, such as:

- Harnesses.
- Lifelines
- Life-saving devices.
- Personal flotation devices.
- Safety nets.

POWERED INDUSTRIAL TRUCKS

Introduction

Powered industrial trucks used to move material at pulp and paper mills are complex, specialized equipment. Contractor employees will understand that they must not be operated without advance, specific written permission, and specialized training.

Contractor employees also will understand the need to be alert to powered industrial truck traffic in the pulp and paper mill environment.

Keys to Powered Industrial Trucks

- Use of equipment.
- Specialized training.
- Industrial traffic.

Use of Equipment

Contractor employees will understand they are not permitted to use powered industrial trucks owned by the paper company except under rare conditions. Such conditions require the advance, written permission of an authorized representative of the paper company.

Specialized Training

Contractor employees will be aware that in the rare condition that approval is granted to utilize a powered industrial truck, specific training must be provided prior to the usage.

Industrial Traffic

Contractor employees will receive site-specific information regarding safe practices in a paper installation that uses powered industrial trucks. Topics will include:

- Designation of safe walkways and floor markings.
- Designation of safe work area boundaries.
- Signals, horns and alarms used by operators of powered industrial trucks moving forwards and backwards.
- Awareness of the operator's "blind spots."
- Safe conduct around parked and in-use powered industrial trucks.

PROCESS SAFETY MANAGEMENT (PSM)

Introduction

Process safety management (PSM) embodies rules, regulations and procedures designed to prevent or minimize the consequences of an accidental release of toxic, reactive, flammable or explosive chemicals used in pulp and paper manufacturing.

Process means any activity involving hazardous chemicals including using, storing, manufacturing, handling and/or moving them.

It applies to any of more than 130 toxic and reactive chemicals and to flammable liquids and gases in quantities of 10,000 pounds or more. Those most common to paper plants are: chlorine, chlorine dioxide, sulfur dioxide and sulfuric acid.

Contractor employees will understand that the foundation of PSM is process hazard analysis and application:

- Paper companies performing a comprehensive assessment of risks and hazards, and identifying safeguards to be implemented to prevent releases of hazardous chemicals, liquids and gases.

and

- Contractors assuring their employees are adequately trained in PSM topics and procedures in order to perform their jobs safely.

It must be emphasized that PSM generally requires advanced or specialized training, knowledge and skills.

Additionally, PSM requires pre-job planning and preparation, and may necessitate specific tools or equipment, plus certification or permitting by the host paper company and/or contractor.

It also must be stressed that an awareness level understanding of process safety management is not intended to provide the training, knowledge or skills mentioned above.

It is intended to assure that contractor employees know and can recognize potential hazards, understand that specific regulations and procedures exist, and never start or become involved in any project affecting process safety management without the necessary approval(s).

Keys to Process Safety Management

- Process safety information and hazard analysis
- Paper company responsibilities.
- Contractor responsibilities.

Process Safety Information & Hazard Analysis

Contractor employees will be aware that paper companies must conduct a compilation of written process safety information before initiating a process hazard analysis.

The information must include the hazards of the chemical in the process, the technology of the process, and the process equipment.

Hazard analysis includes the availability of the following information:

- Hazards of the process.
- Engineering and administrative controls applicable to the hazards, including applicable detection methodologies.
- Consequences of failure of engineering and administrative controls.
- Human factors.
- Qualitative evaluation of a range of possible safety and health effects on employees in the workplace if there is a failure of controls.

Paper Company Responsibilities

Contractor employees will be aware of paper company PSM responsibilities, including:

- Inform contractor employers of the known potential fire, explosion or toxic release hazards related to the contractor's work and the process.
- Explain to contractor employers the applicable provisions of an emergency action plan.
- Develop and implement safe work practices to control the presence, entrance and exit of contractor employees in covered process areas.
- Evaluate periodically the performance of contractor employers in fulfilling their obligations (see below).
- Maintain a contractor employee injury and illness log related to the contractor's work in the process areas.

Contractor Responsibilities

Contractor employees will be aware of contractor's PSM responsibilities, including:

- Ensure that contractor employees are trained in the work practices necessary to perform their job safely.
- Ensure that contractor employees are instructed in the known potential for explosion or toxic release hazards related to their job and the process.
- Ensure that contractor employees are instructed in the applicable provisions of an emergency action plan.
- Document that each contractor employee has received and understood the training required by the OSHA standard by preparing a record that contains the identity of the employee, the date of training, and the means used to verify that the individual understood the training.
- Ensure that each contractor employee follows the safety rules of the facility, including the required safe work practices.
- Advise the paper company of any unique hazards presented by the contractor employee's work.

RESPIRATORS

Introduction

Respiratory hazards are not always easily detectable. Contractor employees will be aware of situations which may present a respiratory hazard, the types of personal protective equipment (PPE) available to address the hazard and related safety practices.

Keys to Respirators

- Hazard recognition.
- Types of equipment.
- Safety practices.

Hazard Recognition

Contractor employees will understand why, when and where respirators are necessary and that specific regulations govern their use, including the availability of a written policy.

Individuals will be aware of the potential risk to their lungs/respiratory system, including those presented by:

- Chemicals.
- Gases.
- Sprays.
- Smoke and vapors.
- Particulates.
- Oxygen-deficient environments.

Types of equipment.

Contractor employees will be aware of different air-purifying devices and uses, including:

- Disposable masks.
- Reusable respirators.
- Supplied-air respirators.

Safety Practices

Contractor employers will understand the need to follow safety practices, including:

- Medical evaluations before using a respirator.
- Proper fit for respirators.
- Need for regular inspection and maintenance procedures addressing:
 - Holes, cracks, tears, distortion or other damage to equipment.
 - Connections that are not tight or cannot be tightened.
 - Signs of wear in components including face piece seals, headbands, valves, connecting tubes, fittings and cartridges.
 - Dents or corrosion in filters, cartridges or canisters.
 - Maintaining new and standby air or oxygen cylinders at the 90% level.

SCAFFOLDS, LIFTS, LADDERS & STAIRWAYS

Introduction

Accessing elevated work sites and performing tasks at elevations present a number of fall hazards. It should be stressed that at elevations the potential for injury, and the risk of more serious injury, increases dramatically. To assure a safe work environment at all elevations, contractor employees will be aware of the potential dangers associated with the use of scaffolds, lifts, ladders and

stairways, and the rules, procedures and equipment used to eliminate or control the dangers.

Keys to Scaffolds, Aerial Lifts and Personnel Baskets, Manlifts, Ladders & Stairways

- Scaffolds.
- Aerial lifts and personnel baskets.
- Manlifts.
- Ladders and stairways.
- Elevators.

Scaffolds

Contractor employees will be aware of the types of scaffolds and the unique hazards of each, including supported scaffolds and suspension scaffolds. Individuals will understand key topics for each, including:

- Hazards to users.
- Role of guardrails and other fall protection.
- Surface considerations.
- Importance of safe load distribution.
- Assessing the condition of scaffolds.
- Inspection by competent person.
- Erector and user responsibilities.
- Access and egress responsibilities.
- Independent tie-off for suspension scaffolds.

Contractor workers will understand scaffolds must be built only by qualified erectors and that a competent person must inspect scaffolds before they may be used. The role of the competent person also includes assuring that scaffolds remain in a safe condition.

Contractor employees will understand that safe scaffolds must be plumb, level and square.

- Plumb – the scaffolds vertical components are perpendicular to the base.
- Level – the scaffold's horizontal components are parallel to the base.
- Square – the vertical and horizontal components create 90° right angles at the point where they interface or connect.

Aerial Lifts

Contractor employees will be aware of safety procedures required when using an aerial lift or when working in the vicinity where one is in operation. Aerial lifts

typically include aerial ladders, articulating or extensible boom platforms, vertical towers and combinations of these devices.

Contractor employees will be aware that they are required to wear a body harness and lanyard attached to the boom or basket of these devices. Load limits specified by the manufacturer must not be exceeded.

Lifts are to have two sets of controls – the lower set must be capable of overriding the upper set. Operation of lifts must be by authorized persons only and a competent person must test the device daily.

Contractor employees will understand that individual facilities may have more restrictive safety procedures and requirements and that they should receive appropriate instructions or information.

Personnel Baskets

As with aerial lifts (above), contractor employees will understand the potential hazards presented by the use of personnel baskets. Prior to a lift all critical components of the lifting system are to be inspected by the contractor. A communications system is required between personnel in the basket and personnel on the ground.

The area in which the lift is to occur must be inspected for overhead hazards (e.g., electrical lines). A trial lift is required before the actual lift is undertaken.

Fall protection devices must be worn. Individuals must be able to stand on the floor of the lift basket. They may not sit, perch or climb on the basket's edge. They may not use ladders, planks or other devices as a working position.

Contractor employees will understand that individual facilities may have more restrictive safety procedures and requirements and that they should receive appropriate instructions or information.

Manlifts

Manlifts are a specific device to move individuals vertically in multi-floor facilities, including pulp and paper manufacturing installations.

Contractor employees will understand that these are unique devices and should not be used without advance, site-specific information. Additionally, supervised use may be mandatory.

Ladders & Stairways

Contractor employees will be aware of safety procedures when using ladders or stairways, including:

- Safety practices necessary when using fixed or portable ladders and stairways.
- Proper angles and securement / proper tie-off in ladder safety.
- Weight requirements and limitations.
- Surface considerations.
- Proper height above top landing for ladders.
- Condition of ladders.
- User responsibilities.
- Carrying materials up a ladder.

Individuals will understand that any change in elevation of 19 inches or more requires a stairway or ladder if no other means is provided. Ladders must extend at least 3 feet above landings.

Individuals will be aware of the need for proper ladder maintenance and ladder and stairway housekeeping.

Elevators

Contractor employees will be aware of the need for training in the safe use and operation of devices such as freight elevators at paper industry facilities, including load limits and the dangers of overloading.

<h2>SIGNS, SIGNALS & BARRICADES</h2>

Introduction

Contractor employees will be aware of the absolute need to observe and comply with informational safety signs, signals and barricades in assuring a safe working environment.

Contractor employees will be aware that they will receive site specific information regarding signs, signals and/or barricades prior to commencing work at a paper industry installation.

Keys to Signs, Signals & Barricades

- Safety signs.
- Safety signals, alarms and warning lights.
- Traffic and railroad signs.
- Barricades.

Safety Signs

Contractor employees will be familiar with the meaning and use of various types of informational safety signs used in pulp and paper installations and on construction sites at such installations, including:

- Danger and caution signs.
- Safety instruction signs.
- Routine and emergency egress signs.

Safety Signals, Alarms & Warning Lights

Contractor employees will be familiar with the use of various types of informational signal and warning lights used in pulp and paper installations and on construction sites.

Contractor employees will be aware that they should receive site specific training/instructions in the alarms, signals and warning lights unique to the individual paper industry installation at which they are working.

Contractor employees will be familiar with the use of various types of accident prevention tags and tape in pulp and paper installations and on construction sites at such installations to assure safety, including:

- Danger tags & tapes.
- Caution tags & tape.
- Accident prevention tags.
- Informational tags.

Danger signs: alert workers to hazards that are an immediate threat.

Caution signs: warn of potential hazards or are reminders to avoid unsafe practices.

Accident prevention tags are temporary and warn against an existing hazard. They may include messages such as:

- Out of Order
- Do Not Use
- Do Not Operate

Traffic and Railroad Signs

Contractor employees will understand the importance of observing traffic and railroad signs posted in and around pulp and paper installations. Contractor employees will understand the meaning of railroad “blue flag” devices.

Barricades

Contractor employees will understand the importance of barricades (including safety cones and similar devices) used to demarcate safe work areas.

SITE – SPECIFIC SAFETY ORIENTATION

Introduction

Broad safety programs are effective at addressing potential workplace hazards and risks. They are essential in preventing accidents, mitigating the affects of accidents that do occur, assuring effective emergency responses, and minimizing reoccurrences.

Nevertheless, paper companies recognize that each of their installations is different. Site-specific safety orientations are used to communicate safety rules, regulations and procedures specific to individual companies/sites to assure a safe workplace for contractor employees and paperworkers.

Contractor employees will know:

1. A safety orientation will be presented prior to commencing work, and
2. The nature or type of information to be provided.

Keys to Site-Specific Safety Orientation

- Why and when site-specific safety orientation are presented.
- Type of information communicated in an orientation session.

Why and When Site-Specific Safety Orientations Are Presented

Uniform safety rules, regulations and procedures are created to reduce or mitigate common workplace risks and hazards. But, because every workplace is different, it is imperative for contractor workers to receive site-specific safety orientations every time they commence a new project at a paper installation.

Orientations are necessary for all contractor employees regardless of previous experience or level of training. For example, some contractor employees may be familiar with one or more paper industry facilities – likely because they have worked there previously.

But, in many instances, they enter an industrial environment in which they are unfamiliar with pulp and paper manufacturing equipment and processes, the facility's physical layout, routine workplace practices and emergency procedures.

Even if once familiar with a facility, contractor employees may return to an installation where some rules, procedures, conditions, or the physical layout, have changed.

Site-specific safety orientations are essential in assuring a safe environment for contractor employees whether they will be on-site for part of a day or engaged in a long-term (multi-day, multi-week) project.

Additionally, site-specific safety orientations for contractor employees are important to assure a safe workplace for papermakers working in the proximity of or adjacent to contractor projects.

Type of Information Communicated in an Orientation Session

Essential, useful information is presented in site-specific orientation sessions.

While presentations are as varied as the individual companies and their different facilities and conditions, a list of potential topics that contractor employees may commonly expect includes:

Emergency Evacuation/Shelter Routes & Procedures

- Exits, evacuation routes, areas for assembly.
- Shelters and routes to them.
- Evacuation/shelter policies and procedures.

Emergency Notification

Audible (i.e., sirens, bells, horns, PA announcements) and / or visible (i.e., illuminated or flashing lights, message boards) devices used by paper companies to rapidly communicate safety-related information to all on-site personnel.

Emergency Equipment and Response

- Availability and location of first aid and medical care and related policies.
- Availability and location of:
 - ❑ phones and emergency numbers
 - ❑ fire alarm report systems or boxes
 - ❑ fire extinguishers
 - ❑ respirators
 - ❑ portable defibrillators
 - ❑ emergency eyewash and shower facilities
- Access points and in-bound / out-bound routes designated for fire fighters, hazmat teams, ambulances, EMTs and police.

Permits, Certifications, Written Programs and Operational Policies

Paper company's rules and policies regarding the need for permits, certification and / or written programs addressing topics and activities including, but not limited to:

- | | |
|--------------------------------------|---------------------------------|
| • Confined space entry | • Cranes |
| • Demolitions | • Electrical safety |
| • Excavations | • Eye wash locations |
| • Fire extinguisher locations | • Floor load limits |
| • Hazard communication | • Heavy lifts |
| • Hot work | • Jackhammers |
| • Line breaking & equipment openings | • Lockout/Tagout |
| • Man lifts & elevators | • MSDS compliance |
| • Mobile equipment | • Personal protective equipment |
| • Personnel / lift baskets | • Power lines |
| • Process safety management | • Radiation sources |
| • Radiography | • Scaffolds |
| • Substance spills & reporting | |

General Operational Guidance

Addresses information and policies regarding:

- Accident / injury reporting
- Borrowing of equipment
- Code of conduct
- Eating/vending/break areas
- Parking sites, permits & restrictions
- Restricted areas
- Signs, signals & barricades
- Worksite cleanliness/neatness
- Bathroom locations
- Cameras / camcorders
- Contractor equipment access
- IDs (badges, hard hat logos)
- Medical & first aid provision
- Safety-related signage
- Smoking restrictions
- Worksite waste disposal

General operational guidance presented during the orientation may include other miscellaneous information and instruction helpful in assuring a safe workplace for contractor and paper industry employees.

TOOLS – HAND & POWER

Introduction

The use of common and specialized hand and power tools occurs throughout construction sites whether at paper industry installations or other locations. It is easy to forget that all types of tools can cause injuries if they are not properly used and maintained – from those that are painful and irritating to those that are disabling and even fatal.

Common hazards include lack of guards on tools and grinders, improper care around rotating parts, wheels or blades spinning or speeding too fast, and poorly maintained tools.

Contractor employees will be aware of the rules and practices pertaining to hand and power tools that assure a safe workplace by eliminating or controlling hazards.

Keys to Tools – Hand & Power

- Hand tool safety.
- Power tool safety.

Hand Tool Safety

Contractor employees will be aware of these issues assuring hand tool safety.

Improper Use – Contractor employees will be aware that one of the two most common reasons for accidents with hand tools is their improper use. Individuals should be aware of the proper procedures needed with all hand tools they use.

Maintenance – The other most common reason for hand tool accidents is poor maintenance. Contractor employees will be aware of the need to properly maintain their hand tools and to routinely and periodically inspect them to detect signs of wear, deterioration or defects.

Unsafe conditions often include hammers and similar devices with broken, splintered or defective handles or loose heads, wrenches with sprung jaws, and chisels with “mushroomed” heads.

Personal Protective Equipment – Contractor employees will be aware of the personal protective equipment required for the safe use of hand tools.

Power Tool Safety

Contractor employees will be aware of these issues assuring safe use of power tools, including those that are:

- Electric-powered.
- Pneumatic-powered.
- Fuel-powered.
- Hydraulic-powered.

Guarding - Contractor employees will be aware that equipment guards must be installed and must remain in-place to protect the operator and construction and paper industry personnel in the vicinity.

Individuals will understand that effective guards are needed in at least three key points on equipment, including:

- Nip points.
- Point of operation.
- Any point where there is potential for air-borne or spraying particles, debris or sparks.

Contractor employees will be aware that a variety of machine parts require guards, including:

- Belts
- Chains
- Gears
- Fly wheels
- Pulleys
- Rotating devices
- Shafts
- Sprockets
- Spindles

Personal Protective Equipment (PPE)

Contractor employees will be aware of the types of personal protective equipment needed to assure the safe use of various power tools.

Switches

Contractor employees will be aware of ON / OFF and other safety switches and their operation to assure safe working conditions.

Powder-Actuated Tools

Contractor employees will be aware of the unique safety rules and procedures to assure the safe operation of powder-actuated tools. Use of powder-actuated tools requires advance, specialized training and instruction.

Grinders

Contractor employees will be aware of safety rules, ratings and procedures needed when using or working in the vicinity of various types of grinders, including:

- Portable.
- Air-powered.
- Electric-powered.
- Fuel-powered.
- Abrasive wheels
- Abrasive tools.

Saws

Contractor employees will be aware of the safety rules, ratings and procedures needed when using or working in the vicinity of saws, including:

- Chain saws.
- Concrete saws.
- "Cut off" and special tip saws.
- Gasoline-powered saws.
- Hand-fed saws.
- Crosscut table saws.
- Ripsaws.
- Radial saws.

Jacks

Contractor employees will be aware of the safety rules and procedures needed when using or working in the vicinity of mechanical and pneumatic jacks.

Workers will understand that safe operating limits for jacks must never be exceeded.

WALKING & WORKING SURFACES

Introduction

Accidents relating to walking and working surfaces – often referred to as “slips, trips and falls” – too frequently are not considered as seriously as other accidents and potential workplace hazards. Unfortunately, they can result in lost time, serious injuries and fatalities. OSHA reports that falls cause an average of 8½ work days lost per accident and represent about one-third of all construction worker fatalities.

Contractor employees need to be aware of the potential dangers of walking and working surfaces in pulp and paper installations, and the rules, procedures and equipment used to eliminate or control the dangers.

Keys to Walking & Working Surfaces

- Basics of slips, trips and falls.
- Wet, humid and moist conditions.
- Seasonal considerations.
- Paper industry specific hazards.
- Work platforms.
- Other cautions and safety practices.

Basics of Slips, Trips & Falls

Contractor employees will understand the role that physical factors play in causing slips, trips and falls, including:

- Friction
- Gravity
- Momentum

Wet, Humid & Moist Conditions

Contractor employees will be aware of the potential for wet, humid and moist conditions on walking and working surfaces in pulp and paper installations.

Seasonal Considerations

Contractor employees will be aware of the seasonal need for extra caution and to apply sand and/or salt to assure safe walking and working surfaces.

Work Platforms

If work platforms will be used during the course of work, contractor employees will be aware of the hazards presented by their use; requirements regarding their use, size, placement and weight-bearing capabilities; and rules and regulations designed to mitigate any hazards.

Paper Industry Hazards

Contractor employees will be aware of the potential hazards that pulp and chemicals pose to safe walking and working surfaces in pulp and paper installations.

Other Cautions and Protective Practices

Contractor employees will be aware of other potential hazards and methods to address them, including:

Floor Holes & Covers - Contractor employees will be aware of the potential danger presented by floor holes and the proper use of hole covers.

Housekeeping - Contractor employees will be aware of the need to practice good housekeeping to maintain safe walking and working surfaces.

Tripping Hazards - Contractor employees will be aware of the types of hazards that have potential to cause trips and stumbles, including temporary and permanent hazardous conditions.

Depressions - Contractor employees will be aware of the potential dangers presented by depressions in walking and working surfaces.

**PAPER INDUSTRY
SAFETY BMPs (BEST MANAGEMENT PRACTICES)
FOR CONTRACTORS, CONTRACTORS' EMPLOYEES
AND PAPER COMPANIES**

Assuring a safe workplace requires paper companies, contractors and contractors' employees to participate in a partnership that is dedicated to continual improvement.

These safety BMPs are tools paper companies and contractors can utilize to help assure safer workplaces. They are grouped in three categories reflecting general responsibility for implementation:

- I. Primarily the responsibility of owners and contractors.
- II. Primarily the responsibility of owners.
- III. Primarily the responsibility of contractors and their employees.

I.

**Contractor Safety BMPs
Pertaining to Owners and Contractors**

- A. Each owner, general contractor and sub-contractor will designate an on-site representative (i.e., competent person) specifically responsible for workplace safety. Close, effective coordination of communications among these personnel, and with the workers for which they are responsible, is required to facilitate a safe working environment for all employees.
- B. Owners and contractors will generally prohibit the borrowing of equipment by their employees. Owners will generally prohibit their employees from borrowing equipment from contractors.

In limited circumstances the non-routine use of paper company equipment by contractors may be permitted by the owner's designated representative. Contractors must indicate in writing that they have inspected the equipment, determined it is safe for use, and agreed to use it consistent with all regulations.

Clarifying Note: For all scheduled project work, contractors are expected to provide all work and safety equipment needed on-site. Any borrowing by owner's' employees or contractors' employees is discouraged and should be a rare, exceptional event. Exceptions include owners' equipment agreed upon in advance (pre-project), or after work have begun, if approved in writing by the owner's designated representative. This should be limited to

equipment that is essential to project efficiency, deadlines, facilitation of multi-contractor operations, or which could not reasonably be anticipated in advance. A potential list of such equipment includes, but is not limited to, scaffolding, heavy equipment, material handling equipment and overhead cranes. The list does not include routinely required equipment.

II.

Contractor Safety BMPs Pertaining Primarily to Paper Companies (Owners)

- A. Owners will develop and utilize pre-qualification standards that assess a contractor's safety history and current accident avoidance / minimization programs in order to select those with a demonstrably effective safety program (e.g.: experience modification rates, incident rates, citation history, references, contractor's safety instruction program).

Quantitative data to be requested by owners typically will include information from the three preceding years that report project hours and incidents on an annual basis.

The data from all participating members is to be provided to the Wisconsin Paper Council for compilation as a single report.

- B. Owners will require contractors to individually identify, prior to the start of a project, all employees assigned to the project and certify that each has received safety awareness instruction and that the certification is current. Personnel updates are to be provided as necessary over the project's course.
- C. Owners will develop a means to assure accurate identification, on a daily basis, of all contractor employees arriving at their facilities (e.g.: controlled access, checkpoints, work period security checks, ID's, hard hat stickers).
- D. Owners will implement a program to assure the integrity of the ID program (e.g.: cross-referencing ID's with contractor safety instruction records).
- E. Owners will provide site-specific information, such as alarms, warning signals and related information (e.g., unique safety conditions / circumstances, evacuation routes and procedures, evacuation gathering-marshalling areas, shelters) to all contractor employees prior to the start of a project and as necessary during the project.

III.**Contractor Safety BMPs
Pertaining Primarily to Contractors and
Contractors' Employees**

- A. Contractors will have a system in-place to investigate and report all injuries. OSHA-recordable incidents will be reported by the next business day. A summary of incidents is required at the conclusion of the project.
- B. Firearms will not be accessible or removed from secured storage in any vehicle on paper industry property as consistent with state and local regulations.
- C. Possession of illegal drugs and the consumption of alcohol on paper industry property are prohibited.
- D. All contractor employees will be aware of ground fault circuit interrupter (GFCI) use and assured grounding programs, in addition to the proper routing of electrical cords specific to the job site, and quarterly maintenance-replacement requirements.
- E. All contractor employees must wear ANSI-approved hardhats. They must prominently display lettering, symbols and/or colors that provide clear, easy identification of their employing contractor.
- F. All contractor employees must wear ANSI-approved safety glasses with side shields.

Individuals may be required to wear additional, or secondary, eye protection in designated areas or when performing certain tasks.
- G. All contractor employees must wear hearing protection in designated areas.
- H. All contractor employees must wear ANSI-approved footwear.
- I. Contractors must obtain advance permission to bring any chemicals on-site. Proper labels must be displayed on all chemical containers.

Material safety data sheets (MSDS) must be available from the contractor.

Contractors and owners may develop a standardized list of routinely used, pre-approved chemicals; it must be reviewed by the owner prior to the start of each new project.

**PAPER INDUSTRY CONTRACTOR SAFETY
ACCOUNTABILITY POLICY**

- A Assuring that contractor employees are adequately trained in safety rules, regulations and procedures is the responsibility of contractors in cooperation with the workforce and related interests.
- B The Wisconsin Paper Council will provide, and update as necessary, a document explaining "awareness level" safety training for contractor employees. Contractor employees will be expected to demonstrate their knowledge of safety policies and procedures at an awareness level prior to commencing work at paper industry facilities and at regular intervals after the initial demonstration.
- C OSHA and all applicable state and local safety rules, regulations and codes are the minimum compliance level permissible at paper industry facilities.
- D Owners shall develop a reasonable policy of consistent, progressive steps, including record keeping, which assures compliance with safety rules and regulations by contractor employees.
- E The policy shall include consideration of retraining or supplemental training.
- F Enforcement steps shall be consistent with the nature of the violation and the risk it presents to individual and workplace safety.

**PAPER INDUSTRY CONTRACTOR SAFETY
CODE OF CONDUCT**

- A All contractor employees are required to demonstrate proficiency at the “awareness level” in safety topics and procedures identified by the paper industry prior to commencing work at paper industry facilities. Follow-up proficiency demonstrations are required at regular intervals.
- B All contractor personnel are expected to conduct themselves in a professional and business-like manner on paper industry job sites.
- C Inappropriate behavior (including harassment of any kind), horseplay, practical jokes, and physical threats will not be tolerated.
- D All contractor employees are expected to stay within their authorized work area on paper industry job sites.
- E No contractor employees will be allowed to wander onto or go on any other company property, for any purpose, without the specific permission of the project supervisor or other authorized personnel on paper industry job sites.
