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# JOBSITE SAFETY & HEALTH MANUAL

Penn Fencing, Inc.

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TAB 1:

SAFETY & HEALTH  
RESPONSIBILITIES, POLICIES, &  
PROCEDURES

## **1.1 POLICY STATEMENT**

It is Penn Fencing's belief that our employees are our most important asset and the preservation of employee Safety and Health must remain a constant consideration in every phase of our business. We will provide the resources necessary to manage, control, or eliminate all safety and health hazards.

All employees are responsible for working safely and productively, as well as recognition and awareness of hazards in their work areas. Employees are also responsible for following safe work practices, including the use of Personal Protective Equipment (PPE) where necessary.

It is our belief that any safety and health program must have total employee involvement.

Therefore, this program has management's highest priority, support, and participation.

**PRODUCTION IS NOT SO URGENT THAT WE CANNOT TAKE TIME TO PERFORM OUR WORK SAFELY.**

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Chad Galbreath - President

## 1.2 EMPLOYEE RESPONSIBILITIES

Although OSHA does not cite employees for violations of their responsibilities, each employee "shall comply with all occupational safety and health standards and all rules, regulations, and orders issued under the Act" that are applicable. Employee responsibilities and rights in states with their own occupational safety and health programs are generally the same as for workers in states covered by Federal OSHA. An employee should do the following:

- Read the OSHA Poster at the jobsite.
- Comply with all applicable OSHA standards.
- Follow all lawful employer safety and health rules and regulations, and wear or use prescribed protective equipment while working.
- Report hazardous conditions to the foreman.
- Report any job-related injury or illness to the employer, and seek treatment promptly.
- Exercise rights under the Act in a responsible manner.

### ◆ Employee Responsibilities Acknowledgement

I have read and understand my responsibilities under the OSHA standards and Penn Fencing's policies and procedures and agree to abide by them. I have also had the duties of the position which I have accepted explained to me, and I understand the requirements of the position. I understand that any violation of the above policies is reason for disciplinary action up to and including termination.

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Employee Name (Print)

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Employee Signature

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Date

## 1.3 GOAL

Safety begins at the top and progresses downward throughout the company. The primary goal of Penn Fencing is to continue operating a profitable business while protecting employees from workplace-related injuries, illness, or harm. This can be achieved in part by delegating responsibility and accountability to all involved in this company's operation as follows:

- **Responsibility:** Having to answer for activities and results.
- **Accountability:** The actions taken by management to insure the performance of responsibilities.

In other words, to reach our goal of a safe workplace everyone needs to take responsibility and be held accountable.

Benefits of achieving our goals are:

- Minimizing of injuries and accidents
- Minimizing the loss of property and equipment
- Elimination of potential fatalities
- Elimination of potential permanent disabilities
- Elimination of potential OSHA citations and fines
- Reductions in workers' compensation costs
- Reductions in operating costs
- Having the best Safety and Health conditions possible in the workplace.

## **1.4 MANAGEMENT COMMITMENT**

The management of Penn Fencing is committed to the company's safety policy, and providing direction and motivation by:

- Appointing a Safety Coordinator.
- Establishing company safety goals and objectives.
- Developing and implementing written Safety and Health programs.
- Ensuring total commitment to our Safety and Health programs.
- Facilitating employees' safety training.
- Establishing responsibilities for management and employees to follow.
- Ensuring that management and employees are held accountable for performance of their safety responsibilities.
- Establishing and enforcing disciplinary procedures for employees violating safety rules.
- Reviewing the Safety and Health program annually, and revising or updating as needed.

## 1.5 ASSIGNMENT OF RESPONSIBILITY

### SAFETY COORDINATOR

Penn Fencing has designated: Matt Nebel as Safety Coordinator. The Safety Coordinator's office and cell phone numbers are:

**Office: (724) 586-7906      Cell: (724) 612-9374**

It is the duty of the Safety Coordinator to assist the foreman and all other levels of Management in the initiation, education, and execution of an effective safety program including the following:

- Introducing the safety program to new employees.
- Following up on recommendations, suggestions, etc., made at toolbox talks (safety meetings). All topics of safety concerns must be documented accordingly.
- Assisting personnel in the execution of standard policies.
- Conducting safety inspections on a periodic basis.
- Addressing all hazards or potential hazards as needed.
- Performing accident investigations and preparing accident reports.
- Maintaining adequate stock of first aid supplies and other safety equipment to insure their immediate availability.
- Making sure there is an adequate number of qualified first aid certified people on the work site.
- Becoming thoroughly familiar with OSHA regulations and local and state safety codes.
- Defining the responsibilities for safety and health of all subordinates and holding each person accountable for their results through the formal appraisal system and where necessary, disciplinary procedures.
- Emphasizing to employees that accidents create unnecessary personal and financial losses.

### SUPERVISORS

The supervisors are responsible for establishing an operating atmosphere that ensures that safety and health is managed in the same manner and with the same emphasis as production, cost, and quality control.

- Regularly emphasizing that accident and health hazard exposure prevention are not only moral responsibilities, but also a condition of employment.
- Identifying operational oversights that could contribute to accidents which often result in injuries and property damage.
- Participating in safety and health related activities, including routinely attending safety meetings, reviews of the facility, and correcting employee behavior that can result in accidents and injuries.
- Spending time with each person hired to explain the hazards and safety policies relating to his/her particular work.
- Ensuring that initial orientation of "new hires" is carried out by the Safety Coordinator.
- Making sure that, if a "Competent Person" is required, one is present to oversee operations and instruct employees when necessary.

- Never short-cut safety for expediency, nor allow workers to do so.
- Enforcing safety rules consistently, and following company's discipline and enforcement procedures.
- Conducting a daily, jobsite safety inspection and correcting noted safety violations.

## **EMPLOYEES**

It is the duty of each and every employee to know the safety rules, and conduct his work in compliance with these rules. Disregard of the safety and health rules shall be grounds for disciplinary action up to and including termination. It is also the duty of each employee to make full use of the safeguards provided for their protection. Every employee must receive an orientation when hired and receive a copy of the Company Safety and Health Program. Employee responsibilities include the following:

- Reading, understanding and following safety and health rules and procedures.
- Signing the Policies and Procedures Acknowledgement (see form above).
- Wearing Personal Protective Equipment (PPE) at all times when working in areas where there is a possible danger of injury.
- Wearing suitable work clothes as determined by the foreman.
- Performing all tasks safely as directed by their foreman.
- Reporting ALL injuries, no matter how slight to their foreman immediately, and seeking treatment promptly.
- Knowing the location of first aid, firefighting equipment, SDS log, and other safety devices.
- Attending any and all required safety and health meetings.
- Not performing potentially hazardous tasks, or using any hazardous material until properly trained, and following all safety procedures when performing those tasks.
- Stopping and asking questions if ever in doubt about the safety of any operation

## 1.6 PROJECT SAFETY & HEALTH COORDINATION

General/Prime Contractor Responsibilities – The prime or general contractor on a jobsite must ensure that procedures are in place to ensure that all subcontractors and/or other employers provide adequate protection from hazards for their employees. In addition, subcontractors must be monitored in order to determine conformance with the jobsite safety plan.

According to OSHA, factors that affect how frequently and closely a prime or general contractor must inspect the jobsite to meet its standard of reasonable care include the following:

- The scale of the project.
- The nature and pace of the work, including the frequency with which the number or types of hazards change as the work progresses.
- How much the prime or general contractor knows both about the safety history and safety practices of the employer it controls and about that employer's level of expertise.
- More frequent inspections are normally needed if the prime or general contractor knows that the subcontractor has a history of non-compliance. Greater inspection frequency may also be needed, especially at the beginning of the project, if the prime or general contractor had never before worked with this subcontractor and does not know its compliance history.
- Less frequent inspections may be appropriate where the prime or general contractor sees strong indications that the subcontractor has implemented effective safety and health efforts. The most important indicator of an effective safety and health effort by the subcontractor is a consistently high level of compliance.

Other indicators include the use of an effective, graduated system of enforcement for non-compliance with safety and health requirements coupled with regular jobsite safety meetings and safety training.

At a minimum, Penn Fencing may require that other employers under their control identify, provide, and/or implement the following:

- a health & safety program, including written procedures for controlling job-related hazardous operations such as cranes, scaffolding, trenches, confined space, hot work, explosives, hazardous materials, leading edges, etc.
- a Safety Coordinator and Competent Person
- a project safety analysis for the job
- list of work activities requiring planning, design, inspection, or supervision by an engineer, competent person, or other professional
- documentation for required health & safety training
- signed independent contractor agreement
- hazardous chemicals to which jobsite workers may be exposed to while in the workplace along with SDSs, measures to minimize the possibility of exposure, and procedures to follow if workers are exposed
- an emergency response plan
- other documentation such as permits, hazard reports, inspections, uncorrected hazards, accident/incident/near miss reports, etc.

Use the independent contractor agreement on the following page to document subcontractor responsibility for OSHA compliance.

◆ Subcontractor Prequalification Form

<b>Company Information</b>				
Legal Company Name				
Address:				
City, State, Zip				
Federal ID #				
Contact Person				
Telephone				
Fax				
Email				
<b>Safety Performance Statistics</b>				
	Year to Date	Last year _____	2 years ago _____	3 years ago _____
Experience Modification Rating (EMR)				
Average number of employees				
Hours worked				
# of Recordable cases				
(G) # of deaths				
(H) # of cases with days away from work				
(I) # cases with job transfer or restriction				
(J) # other recordable cases				
(K) # of days away from work				
(L) # days on job transfer or restriction				
3-year TRIR		$\frac{(\text{Total \# of cases for all 3 years}) \times 200,000}{\text{Total number of employee hours for all 3 years}}$		

## Safety Questionnaire

Does your company have a written safety program?

Yes  No

If yes, please attach as PDF or .doc file

Does your company perform safety training for all employees?

Yes  No

If yes, is documentation available?

Yes  No

Does your company have a new hire orientation process for all new hires?

Yes  No

Do you hold safety meetings?

Yes  No

If yes, how frequently?

\_\_\_\_\_

## OSHA Inspections

Have you had an OSHA inspection in the past 5 years?

Yes  No

If yes, were citations issued?

Yes  No

Please provide any additional details regarding citations issued, inspection numbers, etc.

## Safety Program Overview

Please provide any additional information that is pertinent to your safety program below or attach additional documentation.

## Certification

Name:

Signature:

Title

Date

## ◆ Subcontractor Agreement

\_\_\_\_\_ (Company Name) \_\_\_\_\_ hereby acknowledges that they are a subcontractor of Penn Fencing, and therefore agrees to comply with all local, state, and federal laws and regulations, along with policies and procedures that have been established by Penn Fencing.

It is further understood that in the event of an OSHA site inspection, as related to the work that is being performed, it is the responsibility of \_\_\_\_\_ (Company Name) \_\_\_\_\_ to immediately correct any safety violations and/or pay any fines that may be levied by OSHA for safety violations.

Agreed by (Print): \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## 1.7 EMERGENCY PLANNING

The purpose of an Emergency Action Plan (EAP) is to facilitate and organize employer and employee actions during workplace emergencies. Before starting a job, site-specific emergency procedures covering the items listed below need to be established and communicated to employees. Please also refer to Penn Fencing's master Emergency Action Plan & Fire Safety program for additional information.

- Evacuation procedures and emergency escape route assignments.
- Procedures to be followed by employees who remain to operate critical operations before they evacuate.
- Procedures to account for all employees after an emergency evacuation have been completed.
- Rescue and medical duties for those employees who are to perform them.
- Means of reporting fires and other emergencies.
- Names or job titles of persons who can be contacted for further information or explanation of duties under the plan.

Before implementing the site EAP, a sufficient number of persons to assist in the safe and orderly emergency evacuation of employees will be designated and trained. The plan will be reviewed with each employee covered by the plan at the following times:

- Initially when the plan is developed or upon initial assignment.
- Whenever the employee's responsibilities or designated actions under the plan change.
- Whenever the plan is changed.
- The plan will be kept at the worksite and made available for employee review

For small jobsites sites, the following plan has been established. A more detailed plain will be established for larger jobsites. Contact the Safety Coordinator for further information or explanation of duties under the plan.

For those employers with 10 or fewer employees the emergency action plan may be communicated orally to employees and the employer need not maintain a written plan. For more information regarding the company's EAP, please refer to the written Fire Safety & Emergency Action Plan program binder, which includes a copy of the OSHA standards.

It is Penn Fencing, Inc.'s responsibility to review their jobsites to address all potential emergency situations.

### **FIRE:**

The person who discovers the fire should immediately:

- Shout "fire, fire, fire" to alert others of the situation.
- If trained and authorized, attempt to extinguish the fire with appropriate equipment if it can be done without personal risk.
- If possible,
- Remain at the meeting area unless instructed otherwise.

### **TORNADO:**

When a warning is issued by sirens or other means, seek shelter inside. Stay away from outside walls and windows, duck to protect head and neck. Consider the following locations:

- Small interior rooms on the lowest floor and without windows,
- Hallways on the lowest floor away from doors and windows, and
- Rooms constructed with reinforced concrete, brick, or block with no windows.
- Do not stay in a mobile job trailer or vehicle during a tornado.

If you are caught outside during a tornado and there is no adequate shelter immediately available--

- Avoid areas with many trees.
- Crouch for protection beside a strong structure or lie flat in a ditch or low-lying area
- Protect your head with an object or with your arms.

If you're in a vehicle, try to drive to the closest sturdy shelter.

- If the tornado is visible, far away, and the traffic is light, you may be able to drive out of its path by moving at right angles to the tornado. Seek shelter in a sturdy building, or underground if possible.
- If flying debris occurs while you are driving, pull over and park.
  - If you can safely get noticeably lower than the level of the roadway, leave your car and lie in that area, covering your head with your hands.
  - Stay in the car with the seat belt on. Put your head down below the windows; cover your head with your hands and a blanket, coat, or another cushion if possible.
- Avoid seeking shelter under bridges, which can create deadly traffic hazards while offering little protection against flying debris.

Remain sheltered until the tornado threat is announced to be over.

### **HURRICANE:**

Once a hurricane watch has been issued:

- Stay calm and await instructions from the Emergency Coordinator or the designated official.
- Moor any boats securely, or move to a safe place if time allows.
- Continue to monitor local TV and radio stations for instructions.
- Move early out of low-lying areas or from the coast, at the request of officials.
- If you are on high ground, away from the coast and plan to stay, secure the building, moving all loose items indoors and boarding up windows and openings.
- Collect drinking water in appropriate containers.

Once a hurricane warning has been issued:

- Be ready to evacuate as directed by the Emergency Coordinator and/or the designated official.
- Leave areas that might be affected by storm tide or stream flooding.

During a hurricane:

- Remain indoors and consider the following:
  - Small interior rooms on the lowest floor and without windows,
  - Hallways on the lowest floor away from doors and windows, and

- Rooms constructed with reinforced concrete, brick, or block with no windows.

**EARTHQUAKE:**

- Stay calm and await instructions from the Emergency Coordinator or the designated official.
- Keep away from overhead fixtures, windows, filing cabinets, and electrical power.
- Assist people with disabilities in finding a safe place.
- Evacuate as instructed by the Emergency Coordinator and/or the designated official.

**FLOOD:**

- Be ready to evacuate as directed designated official.
- Follow the recommended primary or secondary evacuation routes.
- If outdoors:
  - Climb to high ground and stay there.
  - Avoid walking or driving through flood water.
  - If car stalls, abandon it immediately and climb to a higher ground.

**BLIZZARD:**

If indoors:

- Stay calm and await instructions from the Emergency Coordinator or the designated official.
- Stay indoors!
- If there is no heat:
  - Close off unneeded rooms or areas.
  - Stuff towels or rags in cracks under doors.
  - Cover windows at night.
- Eat and drink. Food provides the body with energy and heat. Fluids prevent dehydration.
- Wear layers of loose-fitting, light-weight, warm clothing, if available.

If outdoors:

- Find a dry shelter. Cover all exposed parts of the body.
- If shelter is not available:
  - Prepare a lean-to, wind break, or snow cave for protection from the wind.
  - Build a fire for heat and to attract attention. Place rocks around the fire to absorb and reflect heat.
  - Do not eat snow. It will lower your body temperature. Melt it first.

If stranded in a car or truck:

- Stay in the vehicle!
- Run the motor about ten minutes each hour. Open the windows a little for fresh air to avoid carbon monoxide poisoning. Make sure the exhaust pipe is not blocked.
- Make yourself visible to rescuers.
  - Turn on the dome light at night when running the engine.
  - Tie a colored cloth to your antenna or door.
  - Raise the hood after the snow stops falling.
- Exercise to keep blood circulating and to keep warm.

## **MEDICAL:**

1. Contact the appropriate medical emergency phone number (see Emergency Contact list). Provide the following information:
  - a. Nature of emergency
  - b. Location (address, jobsite, building, etc.)
  - c. Caller's name and phone number
2. Do not move the victim unless absolutely necessary.
3. Alert personnel who have been trained in First Aid (see First Aid section) on the jobsite to provide assistance prior to the arrival of the professional medics.

## **SPILL PREVENTION & RESPONSE**

Chemicals whether liquid, solid, or gas can spill or leak and be harmful to both personnel and the environment. All chemical substances must be stored in proper containers (preferably closed) and not exposed to storm water. Areas where chemicals may be used or stored must be maintained using good housekeeping best management practices. This includes, but is not limited to, clean and organized storage, labeling, and secondary containment where necessary. A proper spill kit will be maintained in an easily accessible area and will contain the appropriate supplies for materials that may be spilled.

In the event of a spill or chemical release, the following procedures will be initiated:

- Once discovered, all employees must leave the area immediately and notify their supervisor.
- Consult the SDS for the spilled or leaking material to identify potential hazards, protective equipment required, and correct procedures for clean-up.
- Shut off ignition sources, flames, spark producing or heat producing equipment, and provide adequate ventilation.
- If the spill or leak is too big to handle with available equipment, an emergency response team should be notified.

## ◆ Emergency Information

**THIS FORM IS TO BE FILLED OUT BEFORE THE START OF EACH NEW JOB.**

<b><i>JOBSITE INFORMATION</i></b>	
Jobsite Name	
Address	
Subdivision (if applicable)	
Directions to Jobsite	
Job Phone Contact	
<b>EMERGENCY CONTACT NUMBERS/DIRECTIONS</b>	
Fire Department	
EMS	
Ambulance Service	
Nearest Hospital	
Address	
Directions to Hospital	

## 1.8 FIRST AID

Before a job starts, Penn Fencing will ensure that arrangements are in place to render prompt first aid treatment for injured employees either by providing for the availability of a trained first aid provider at the worksite or by ensuring that emergency treatment services are within reasonable proximity of the worksite. First aid refers to medical attention that is usually administered immediately after the injury occurs and at the location where it occurred. It often consists of a one-time, short-term treatment and requires little technology or training to administer. First aid can include the following:

- Cleaning minor cuts, scrapes, or scratches
- Treating a minor burn
- Applying bandages and dressings
- The use of non-prescription medicine
- Draining blisters
- Removing debris from the eyes
- Massage
- The use of hot/cold therapy
- Drinking fluids to relieve heat stress

If medical attention is not available within 4 minutes, then a person who holds a valid certificate in first aid training from the American Red Cross or equivalent must be available on the jobsite at all times. The following employees have been designated as having adequate training to render first aid in the event that medical attention is not immediately available:


Proper equipment for prompt transportation of the injured person to a physician or hospital shall be provided. In the event that the victim is not able to be moved safely, contact the local ambulance service. Please refer to the Emergency Information page of this manual for local ambulance services and emergency contact information.

First aid kits on the jobsite will be kept in a weatherproof container with individual sealed packages for each type of item that has been determined to be appropriate for the environment in which they are to be used. First aid kits will be checked weekly by the jobsite foreman to assure that they are properly stocked and are available at the following locations:

jobsite trucks


At minimum, each first aid kit will contain the following:

Item	Size	Minimum Quantity
Absorbent compress	32 in <sup>2</sup>	1
Adhesive bandages	1x3 inches	16
Adhesive tape	5 yards	1 roll
Antiseptic	0.5 g (0.14 fl oz.)	10 packets
Burn treatment	0.5 g (0.14 fl oz)	6 applications
Medical exam gloves	N/A	2 pair
Sterile pads	3x3 inches	4
Triangular bandage	40x40x56 inches	1
Bloodborne pathogens kit		1

Whenever employees may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body will be provided for immediate emergency use.

## 1.9 STOP WORK AUTHORITY

As part of our health & safety policy, it is the responsibility of every employee performing work for Penn Fencing to exercise this Stop Work Authority Policy whenever any person in the work area is at risk of injury. Penn Fencing strives to provide a culture where this Stop Work Authority program is exercised freely.

Key elements of this program include:

- Employees will receive Stop Work Authority training before initial assignment. Training will be documented including the employee's name, the dates of training, and the subject.
- Employees have the authority and obligation to stop any task or operation where concerns or questions regarding the control of health & safety may exist.
- Employees are responsible to initiate a Stop Work intervention when warranted and management is responsible to create a culture where Stop Work Authority is exercised freely
- Employees will not face any form of retribution or intimidation directed at any individual or company for exercising their right to issue a stop work authority.
- This Stop Work Authority program will be executed in a positive manner.

The following procedure must be initiated whenever an unsafe condition is identified:

- The Stop Work Intervention will be initiated and coordinated through the supervisor
- All affected personnel and supervision will be notified of the Stop Work Issue
- Once work has been stopped, no work may resume until all stop work issues and concerns have been adequately addressed.
- Work may resume only when it has been deemed safe to continue
- After the Stop Work Intervention has been initiated and closed, a follow-up will be completed to assess the effectiveness of the program.

Stop Work Issuance Documentation

- A Stop Work Issuance document will be completed to document the circumstances leading to the Stop Work Intervention.
- Stop Work reports will be reviewed by supervision in order to measure participation, determine quality of interventions and follow-up, trend common issues, identify opportunities for improvement, and facilitate sharing of learning

## ◆ Stop Work Report

<b>Section 1: Stop Work Issuance</b>			
Location of operation		Date / time	
Supervisor		Phone	
Individual initiating stop work			
Individual performing work			
Work operation or condition (include names of individuals performing work)			
Hazard (as stated by individual initiating stop work)			
Additional observations			
<b>Section 2: Date / Time Informed</b>			
Supervisor		Directorate ESH coordinator	
Building / area manager		Associate laboratory director	
Division / department head		Chief safety officer	
Facility manager			
<b>Section 3: Follow-up Action</b>			
<b>Section 4: Restart Concurrence</b>			
Supervisor		Date	
Owner Client		Date	
<b>Section 5: Restart Authorization</b>			
General		Date	
<b>Section 6: Restart Release</b>			
Owner Client		Date	

## 1.10 OSHA MULTI-EMPLOYER WORKSITE POLICY

On multi-employer worksites, more than one employer may be citable for a hazardous condition that violates an OSHA standard. The following explains how OSHA views multi-employer worksites.

- **THE CREATING EMPLOYER:** The employer that caused the hazardous condition that violates an OSHA standard. Employers must not create conditions that violate OSHA standards. Any employer that does so is citable, even if the only employees exposed are those of other employers at the site.
- **THE EXPOSING EMPLOYER:** The employer whose own employees are exposed to the hazard. Exposure could be observed by an inspector or unobserved (but determined through witness statements or other evidence). In addition, citations may be issued when the possibility exists that an employee could be exposed to a hazard because of work patterns, past circumstances, or anticipated work requirements.
- **THE CORRECTING EMPLOYER:** An employer who is engaged in a common undertaking as the exposing employer, and is responsible for correcting the hazard. This usually occurs where an employer is given the responsibility of installing and/or maintaining particular safety/health equipment or devices. The correcting employer must exercise reasonable care in preventing and discovering violations and meet its obligations of correcting the hazard
- **THE CONTROLLING EMPLOYER:** An employer who has general supervisory authority over the worksite, and has the power to correct safety and health violations or require others to correct them. Control can be established by contract or, in the absence of explicit contractual provisions, by the exercise of control in practice. A controlling employer must exercise reasonable care to prevent and detect violations on the site. The extent of the measures that a controlling employer must implement to satisfy this duty of reasonable care is less than what is required of an employer with respect to protecting its own employees. This means that the controlling employer is not normally required to inspect for hazards as frequently or to have the same level of knowledge of the applicable standards or of trade expertise as the employer it has hired.

If the employer falls into one of these categories, they have obligations with respect to OSHA requirements. OSHA inspectors must determine if employer actions are sufficient to meet those obligations. The extent of the actions required of employers varies based on which category applies. Note that the extent of the measures that a controlling employer must take to satisfy its duty to exercise reasonable care to prevent and detect violations is less than what is required of an employer with respect to protecting their own employees.

## 1.11 OSHA INSPECTION GUIDELINES

### SUPERVISOR:

- Ask to see the OSHA inspector(s) official government identification
- Contact the appropriate Company official immediately
- Name of the authorized Company official: \_\_\_\_\_
  - Office phone: \_\_\_\_\_ Extension: \_\_\_\_\_
  - Cell phone: \_\_\_\_\_
- Ask the OSHA inspector(s) to wait until the representative above has been reached.
- **Note:** “The inspection shall not be delayed unreasonably to await the arrival of the employer representative. This delay should not exceed one hour.” (*OSHA Field Inspection Reference Manual*, Section 6, Chapter II, A 2.b. (2))

### COMPANY REPRESENTATIVE:

- Contact Lancaster Safety Consulting Inc. at (888) 403-6026 if you desire. A Lancaster Safety consultant can speak with the OSHA official(s) by phone for the purpose of providing an overview of your occupational health and safety program.
- After meeting the OSHA official(s), an opening conference (sit-down meeting) shall be held. The OSHA official(s) should explain the basis of the inspection, (Accident investigation, complaint, referral, follow-up, or planned local/national emphasis program). You should be advised if the inspection is partial or complete. The opening conference is an important opportunity for the employer to demonstrate the company’s “Good Faith” efforts to provide a safe workplace. Discuss safety policies and practices with the compliance officer(s). Present the safety manuals. Emphasize the worker training verification logs, and your new hire training procedures. You should also present OSHA 300 logs, safety committee paperwork, and any other written materials that demonstrate your company’s “Good Faith” efforts to comply with the applicable OSHA standards.
- Upon completion of the opening conference, accompany the OSHA inspector(s) on a walk-through inspection of your facility. (Advise the inspector(s) on any areas of your facility that have been predetermined as “trade secret” areas, if applicable). During this walk-through, the inspector(s) will advise you of potential health and safety violations. If possible, take immediate, corrective action to correct hazards while the inspector(s) are present. NOTE: The inspector(s) have the right to interview workers.
- After the walk-through, a closing conference shall be held. The inspector(s) will provide an overview of their findings, and advise you if citations are likely to be issued. (No citations are issued on the same day of an OSHA inspection. OSHA has up to 6-months to issue citations.) The closing conference provides the employer with another opportunity to demonstrate “good faith”. Take notes on the inspector(s) closing comments.
- Contact Lancaster Safety Consulting, Inc. at **(888) 403-6026** upon conclusion of the inspection.

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TAB 2:

## JOBSITE HAZARD PREVENTION

## 2.1 HAZARD IDENTIFICATION

A critical element of any effective safety and health program is a comprehensive worksite analysis that identifies current and potential hazards. This includes a thorough baseline survey to identify unsafe acts and conditions; a job hazard analysis; a self-inspection program, including a system for reporting identified hazards; accident and incident investigation; and analysis of injuries and illnesses.

In addition, OSHA requires that all employers must instruct each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to their work environment to control or eliminate any hazards or other exposure to illness or injury. It is important that Penn Fencing review each jobsite scope to identify all hazards associated with the work to be performed. This should be completed prior to starting each job.

It is necessary to consider certain general guidelines for assessing the foot, head, eye and face, and hand hazard situations that exist in an occupational or educational operation or process, and to match the protective devices to the particular hazard. It should be the responsibility of the Safety Coordinator to exercise common sense and appropriate expertise to accomplish these tasks. In order to assess the need for PPE and other controls, a survey of the jobsite should be performed. The purpose of the survey is to identify sources of hazards to workers and co-workers. At a minimum, consideration should be given to the following basic hazard categories.

- Impact
- Penetration
- Compression (roll-over)
- Chemical
- Heat
- Harmful dust
- Light (optical) radiation

During the survey the Safety Coordinator should observe:

- sources of motion; i.e., machinery or processes where any movement of tools, machine elements or particles could exist, or movement of personnel that could result in collision with stationary objects;
- sources of high temperatures that could result in burns, eye injury or ignition of protective equipment, etc.;
- types of chemical exposures;
- sources of harmful dust;
- sources of light radiation, i.e., welding, brazing, cutting, furnaces, heat treating, high intensity lights, etc.;
- sources of falling objects or potential for dropping objects;
- sources of sharp objects which might pierce the feet or cut the hands;
- sources of rolling or pinching objects which could crush the feet;
- layout of workplace and location of co-workers; and (j) any electrical hazards.

In addition, injury/accident data should be reviewed to help identify problem areas.

## ◆ Jobsite Inspection Checklist

<b>Project Name:</b>	<b>Inspected by:</b>	
<b>Project Location:</b>	<b>Date of Inspection:</b>	
<b>Manual Material Handling</b>	<b>Yes</b>	<b>No</b>
Are mechanical devices being used in place of manual handling of material?		
Are ropes, slings, chains, hook, cables, and chokers in good condition?		
Proper staging of materials to minimize lifting and carrying?		
Rigging equipment inspected regularly and in good condition?		
Is the handling of bagged material limited to 50 lbs?		
Are carrying handles being used when a single worker is carrying sheeted materials?		
<b>Housekeeping: Slips, Trips and Falls</b>	<b>Yes</b>	<b>No</b>
Are walking and working surfaces clear and free of debris?		
Are waste and trash containers provided, and used?		
Is there regular removal of waste and trash from the containers?		
Does each worker clean up after themselves?		
Is adequate temporary lighting provided?		
<b>Fire Protection and Prevention</b>	<b>Yes</b>	<b>No</b>
Are all flammable liquid containers clearly identified?		
Are all flammable liquid containers UL or FM listed?		
Have proper storage practices for flammables been observed?		
Are extinguishers readily accessible and serviced regularly?		
Are hydrants clear and accessible for fire department personnel?		
Have gas cylinders been chained upright with valve caps securely fastened?		
Has there been proper segregation between flammable gasses?		
Proper labeling of full and empty cylinders?		
Are temporary heaters located at a safe distance from combustibles?		
Is ventilation adequate for temporary heaters?		
<b>Electrical</b>	<b>Yes</b>	<b>No</b>
Are all switch gear, panels, and devices that are energized marked and/or guarded?		
Lockout devices available/used on circuits that could become energized while being worked?		
Are all temporary circuits properly guarded and grounded?		
Are extension cords in continuous lengths without splice?		
Are GFCI's and/or Assured Equipment Grounding Conductor Program being used?		
If temporary lighting is provided, are bulbs protected against accidental breakage?		
Are working surfaces clear of cords so as not to create a tripping hazard?		
Are there a sufficient number of temporary outlets on the job site?		
Any visual signs of outlet overloading?		
<b>Hazard Communication</b>	<b>Yes</b>	<b>No</b>
Are safety data sheets available on the jobsite?		
Are all containers appropriately labeled with their contents and hazard warnings?		
Have all employees been trained on the specific chemicals in the workplace?		

<b>Barricading</b>	<b>Yes</b>	<b>No</b>
Are floor openings planked and secured or barricaded?		
Are direction signs used to inform the public of upcoming construction work?		
Is the sidewalk protection effective?		
Is a flag person provided to direct traffic when needed?		
Has the person been trained on how to direct traffic and the public?		
Are open excavations, road drop offs, manholes, uneven surfaces barricaded?		
<b>Ladders</b>	<b>Yes</b>	<b>No</b>
Is the proper ladder for the job being used?		
Are ladders in good condition (no missing or broken rungs)?		
Are there safety shoes/cleats on the bottom of ladders? Are they needed?		
Are non-conductive ladders available for use around live wiring?		
Are ladders tied-off at top or otherwise secured?		
Do side rails extend 36 inches above top of landing?		
Rungs or cleats uniformly spaced 10 - 14 inches apart?		
Are step ladders fully open when in use?		
<b>Personal Protective Equipment</b>	<b>Yes</b>	<b>No</b>
Is hearing protection available for personnel that may be exposed to noisy conditions?		
Is respiratory protection available to personnel and being used when conditions require them?		
Are safety harnesses, lifelines and shock absorbing lanyards available and being used?		
Are personnel using gloves when handling sharp or rough material?		
Where required, rubber gloves with protectors-insulators being used.		
Is lifesaving equipment available for work over or near water?		
<b>Medical</b>	<b>Yes</b>	<b>No</b>
Are first-aid kits available and properly stocked?		
Are all emergency phone numbers posted?		
Are employees aware of the address of the site/ capable of giving directions to emergency crew?		
Is anyone trained in first aid and CPR?		
<b>Tools: Hand and Power</b>	<b>Yes</b>	<b>No</b>
Are tools free of any obvious physical damage?		
Are tools inspected for frayed or damaged cords?		
Are tools and cords properly grounded (ground pins are in good condition)?		
Are double insulated tools in use and in good condition?		
Are the handles on all tools in good condition (not bent, splintered or broken)?		
Are all hoses on air or hydraulic tools in good condition?		
Are all shields and guards in place on the tools and in good condition?		
Operator qualified and instructed to use powder actuated tools?		
<b>Welding and Cutting</b>	<b>Yes</b>	<b>No</b>
Are non-combustible enclosures, (screens/shields) provided and used when welding?		
Welding goggles, gloves, and clothing being used by welder?		
Inspection for fire hazards after welding stops?		
Are gas cylinder, hoses, regulators, torches, torch tips and welding carts, in good condition?		

## 2.2 CONTROL OF HAZARDS

Where feasible, workplace hazards are prevented by effective design of the jobsite and/or supervision of the job. Where it is not feasible to eliminate such hazards, they must be controlled to prevent unsafe and unhealthy exposure. Once a potential hazard is recognized, the elimination or control must be done in a timely manner. These procedures include measures such as the following:

- Maintaining all extension cords and equipment in good working order.
- Ensuring all guards and safety devices are in place and working.
- Periodically inspecting the worksite for safety hazards.
- Establishing a medical program that provides applicable first aid to the site, as well as nearby physician and emergency phone numbers.
- Addressing any and all safety hazards with employees.
- In addition, Penn Fencing must address the hazards noted in the jobsite specific hazard assessment (see above)

**Pinch Points** - To avoid these pinch point injuries, appropriate attire should be worn while at work.

- Pants and sleeves should not be too long or too loose.
- Shirts should be fitted or tucked in.
- Avoid wearing loose and dangling jewelry.
- Tie back long hair and tuck braids and ponytails behind you or into your clothing.
- Wear the appropriate, well-fitting gloves for your job.

Before starting a task, take the time to plan out your actions and decide on the necessary steps to work safely. Give your work your full attention. Don't joke around, daydream, or try to multi-task on the job – most accidents occur when workers are distracted. Read and follow warning signs posted on equipment.

**Moving Parts** - Machinery can pose a hazard with moving parts, conveyors, rollers and rotating shafts. NEVER reach into a moving machine. Properly maintain and always use the machine and tool guards provided with your equipment; they act as barriers between the moving parts and your body. Don't reach around, under or through a guard and always report missing or broken barriers to your supervisor. Turn equipment off and use lockout/tag out procedures before adjusting, clearing a jam, repairing, or servicing a machine.

**Caught/crush hazards** are not limited to machinery. Vehicles, powered doors, and forklifts can pose a crush hazard unless they have been blocked or tagged out. Never place your body under or between powered equipment unless it is de-energized. Doors, file drawers, and heavy crates can pinch fingers and toes. Take care where you place your fingers. Test the weight before lifting, carrying, and placing boxes; an awkward or heavy load can slip and pinch your hands or feet. Get help or use tools to move large and/or heavy items.

**Struck-by** - Other workers can avoid danger from moving equipment by staying alert, out of the way, and by never walking under, alongside moving equipment or near power take offs.

## **2.3 PERSONAL PROTECTIVE EQUIPMENT**

PPE for eyes, face, head, and extremities, protective clothing, respiratory devices, and protective shields and barriers, shall be provided, used, and maintained in a sanitary and reliable condition wherever it is necessary by reason of hazards of processes or environment, chemical hazards, radiological hazards, or mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact.”

Workers must use personal protective equipment (PPE) where necessary. However, personal protective equipment is not a substitute for taking all other safety measures. Workers still need to avoid hazards using administrative and engineering controls. Provided below is a summary of jobsite PPE requirements. For further details, see the company’s written personal protective equipment program. This program includes a copy of the OSHA Personal Protective Equipment standards (29 CFR 1926 Subpart E).

Refer to the PPE Hazard Assessment

### **HEAD PROTECTION**

- Workers must wear hard hats when overhead, falling, or flying hazards exist or when danger of electrical shock is present.
- Inspect hard hats routinely for dents, cracks, or deterioration.
- If a hard hat has taken a heavy blow or electrical shock, you must replace it even when you detect no visible damage.
- Maintain hard hats in good condition, do not drill, clean with strong detergents or solvents, paint, or store them in extreme temperatures.

### **EYE AND FACE PROTECTION**

- Workers must wear safety glasses or face shields for welding, cutting, nailing (including pneumatic), or when working with concrete and/or harmful chemicals.
- Eye and face protectors are designed for particular hazards so be sure to select the type to match the hazard.
- Replace poorly fitting or damaged safety glasses.

### **FOOT PROTECTION**

- Shoes or boots with slip-resistant and puncture-resistant soles should be worn while on jobsites (to prevent slipping and puncture wounds).
- Safety-toed shoes are recommended to prevent crushed toes when working with heavy rolling equipment or falling objects.

### **HAND PROTECTION**

- High-quality gloves can prevent injury.
- Gloves should fit snugly.
- Glove gauntlets should be taped for working with fiberglass materials.
- Workers should always wear the right gloves for the job (for example, heavy-duty rubber for concrete work, welding gloves for welding).

### **FALL PROTECTION**

- Use a safety harness system for fall protection.
- Use body belts only as positioning devices—not for fall protection.

### **SAFETY VESTS**

- Hi-visibility safety vests must be used when in high-traffic areas or when working around heavy equipment.

## 2.4 FIRE PREVENTION

Fire prevention is an important part of protecting employees and company assets. Fire hazards must be controlled to prevent unsafe conditions. Once a potential hazard is recognized, it must be eliminated or controlled in a timely manner. At a minimum, the following fire prevention requirements must be met for each site:

- One conspicuously located 2A fire extinguisher (or equivalent) for every floor.
- One 2A conspicuously located fire extinguisher (or equivalent) for every 3000 ft<sup>2</sup>.
- No obstructions or combustible materials piled in the exits.

The objective of Penn Fencing, Inc.'s fire prevention plan is to prevent a fire from occurring in a workplace. It describes the fuel sources (hazardous or other materials) on-site that could initiate or contribute to the spread of a fire, as well as the building systems, such as fixed fire extinguishing systems and alarm systems in place to control the ignition or spread of a fire.

For further details, see the company's written personal Fire Safety program. This program includes a copy of the OSHA standards covering standards covering fire protection and prevention.

- Keep jobsites free from accumulation of combustible materials or weeds.
- Locate generators and internal combustion engines located away from combustible materials.
- Store no more than 25-gallons of combustible liquids on site at any one time.
- Provide fire extinguishers near all welding, soldering, or other sources of ignition.
- Keep fire extinguishers easy to see and reach in case of an emergency.
- Maintain a conspicuously located Class B fire extinguisher for each location more than 5-gallons of flammable liquids or gas are stored.
- Provide a minimum of one fire extinguisher per floor. Fire extinguishers should be located within 100 feet of employees for each 3,000 square feet of floor space.
- Don't store flammable or combustible materials in areas used for stairways or exits.
- Avoid spraying of paint, solvents, or other types of flammable materials in rooms with poor ventilation. Build-up of fumes and vapors can cause explosions or fires.
- Store gasoline and other flammable liquids in a safety can outdoors or in an approved storage facility.
- Don't store LP gas tanks inside buildings or enclosed spaces.
- Keep temporary heaters at least 6 feet away from any LP gas container.
- Ensure that leaks or spills of flammable or combustible materials are cleaned up promptly.
- Secure all LP & other gas containers to prevent tip-over.

### Classes of Fire

Fires are classified based on the types of fuel (combustibles) that are involved in the fire. The type of fire extinguisher that can be used to fight a fire is dependent on the types of combustibles involved.

**CLASS A** - combustibles include common combustible materials (wood, paper, cloth, rubber, and plastics) that can act as fuel and are found in non-specialized areas such as offices. Water, multi-purpose dry chemical (ABC), and halon 1211 are approved fire extinguishing agents for Class A combustibles.



**CLASS B** - Class B combustibles include flammable and combustible liquids (oils, greases, tars, oil-based paints, and lacquers), flammable gases, and flammable aerosols.



Water should *not be* used to extinguish Class B fires caused by flammable liquids. Water can cause the burning liquid to spread, making the fire worse. To extinguish a fire caused by flammable liquids, exclude the air around the burning liquid. The following fire-extinguishing agents can be used on for Class B combustibles: carbon dioxide & multi-purpose dry chemical (ABC).

**CLASS C** - Class C fires involve electrical equipment, such as appliances, wiring, circuit breakers and outlets. Never use water to extinguish class C fires since the risk of electrical shock is far too great!



**Class D** - Class D fires involve combustible metals, such as magnesium, titanium, potassium, and sodium.



## Fire Extinguishers

**DO NOT** attempt to fight a fire in the following situations:

- You have *ANY DOUBT* that you can extinguish the fire safely
- The fire is spreading beyond the place where it started
- The fire could spread between you and the nearest fire exit (*ALWAYS* keep your back to the nearest fire exit!)
- You do not have an adequate number of fire extinguishers
- A flammable liquid is burning and not physically contained

When using a fire extinguisher to facilitate safe exit, use the P-A-S-S Method:

1. **PULL...** Pull the pin. This will also break the tamper seal.
2. **AIM...** Aim low, pointing the extinguisher nozzle (or its horn or hose) at the base of the fire. Note: Do not touch the plastic discharge horn on CO2 extinguishers, it gets very cold and may damage skin.
3. **SQUEEZE...** Squeeze the handle to release the extinguishing agent.
4. **SWEEP...** Sweep from side to side at the base of the fire until it appears to be out. Watch the area. If the fire re-ignites, repeat steps 2 - 4.



## 2.5 HOUSEKEEPING & SITE ACCESS

Good housekeeping in the workplace is more than an attempt to keep things looking presentable. It's also an important safety issue. OSHA requires that housekeeping for all jobsites during the course of construction, alteration, or repairs. A messy workplace is not only annoying and inefficient; it creates a number of potential safety hazards:

- Tripping and falling over equipment that doesn't belong on the floor, such as machines, tools, cords, hoses, scrap, and boxes.
- Getting hit by or bumping into objects: For instance, tools left perched on the edge of a roof, shelf or table, or a drawer that's left open.
- Punctures and splinters from sharp tools left lying around, or from rough pieces of wood or other sharp objects.
- Serious electrical hazards such as cords left near heat or water.
- Fire hazards, including flammable liquids or scrap left near ignition sources; dust or lint on machinery; or materials blocking fire exits or equipment.
- Chemical exposure or spills when chemical containers are left open.
- Chemical reactions from open chemical container contents exposed to other chemicals, water, or air.
- Potential fatalities if obstacles inhibit an emergency evacuation
- Potential injuries from falling objects.

The best way to prevent these dangers is assign a specific storage place for each item, and then insist that every item be kept in its assigned place whenever it is not in use.

Some basic housekeeping requirements include the following:

- Assign a specific storage place for each item, and then insist that every item be kept in its assigned place whenever it is not in use.
- Form and scrap lumber with protruding nails, and all other debris must be kept cleared from work areas, passageways, and stairs, in and around buildings or other structures.
- Keep all walkways and stairways clear of trash/debris and other materials such as tools and supplies to prevent tripping.
- Keep boxes, scrap lumber and other materials picked up. Put them in a dumpster or trash/debris area to prevent fire and tripping hazards.
- Provide enough light for workers to see and to prevent accidents.
- Containers should be provided for the collection and separation of waste, trash, oily and used rags, and other refuse.
- Containers used for garbage and other oily, flammable, or hazardous wastes, such as caustics, acids, harmful dusts, etc. must be equipped with covers.
- All garbage and other waste should be disposed of at frequent and regular intervals.

## **WASTE MANAGEMENT**

Before starting work on a job, all project wastes, trash, and/or scrap must be taken into consideration. The waste that will be generated must be estimated and the need for containers and waste removal, if necessary, can be determined.

Waste materials must be properly stored and handled to minimize the potential for an accident or injury due to excessive clutter, the potential for a spill, or impact to the environment. During outdoor activities, receptacles must be covered to prevent dispersion of waste materials and to control potential runoff.

Before a job, employees must be instructed on the proper disposal method for wastes, including general instruction on disposal of non-hazardous wastes, trash or scrap metals. If wastes generated are classified as hazardous, employees must be trained to ensure proper disposal.

To minimize environmental impact, recycling is encouraged. All recyclable wastes should be segregated to ensure opportunities for reuse or recycling.

## 2.6 STAIRWAYS AND LADDERS

Stairways and ladders are pretty uncomplicated devices. But, unfortunately, they cause more than their share of accidents. These accidents happen when people select the wrong ladder for the job, don't inspect it before using it, or get careless about how they use it. The basics of stairway and ladder safety are a combination of a little bit of knowledge and a lot of common sense.

OSHA is quite specific about design, inspection, and use of stairways and ladders. Regulations covering these areas are covered under 29 CFR 1926 Subpart X. These regulations describe everything from how far apart ladder rungs should be (1 foot) to specific "do's and don'ts" when you're working on stairways and ladders. You don't have to be concerned about design, but you should know what to look for to determine if stairways and ladders are safe to use.

Provided below is a summary of safety items covering safe stairway and ladder use.

- Install permanent or temporary guardrails on stairs before stairs are used for general access between levels to prevent someone from falling or stepping off edges.
- Do not store materials on stairways that are used for general access between levels.
- Keep hazardous projections such as protruding nails, large splinters, etc. out of the stairs, treads or handrails
- Report and correct any slippery conditions on stairways before they are used.
- Keep manufactured and job-made ladders in good condition and free of defects.
- Inspect ladders before use for broken rungs or other defects so falls don't happen. Discard or repair defective ladders.
- Secure ladders near the top or at the bottom to prevent them from slipping and causing falls.
- When you can't tie the ladder off, be sure the ladder is on a stable and level surface so it cannot be knocked over or the bottom of it kicked out.
- Place ladders at the proper angle (1 foot out from the base for every 4 feet of vertical rise).
- Extend ladders at least 3 feet (3 rungs) above the landing to provide a handhold or for balance when getting on and off the ladder from other surfaces.
- Do not set up a ladder near passageways or high traffic areas where it could be knocked over.
- Use ladders only for what they were made and not as a platform, runway, or as scaffold planks.
- Always face the ladder and maintain 3 points of contact when climbing a ladder.

## **2.7 FALL PROTECTION IN CONSTRUCTION**

Though it's obvious that anyone who works high above the ground runs the risk of falling, a surprising number of workers seem to think it can't happen to them. This is a particular problem in construction, where several workers die each day from falls and many more are injured.

The workers at a specific site may change from day to day, and each site may have workers and equipment from more than one company. In addition, construction work often takes place outdoors, where weather can add to the hazards.

### **FLOOR AND WALL OPENINGS**

- Install guardrails around openings in floors and across openings in walls when the fall distance is 6 feet or more. Be sure the top rails can withstand a 200-lb load.
- Construct guardrails with a top rail approximately 42 inches high with a mid-rail about half that high at 21 inches.
- Install toe boards when other workers are to be below the work area.
- Cover floor openings larger than 2x2 inches with material to safely support the working load.

### **ALTERNATIVES**

- Use other fall protection systems such as slide guards, roof anchors or alternative safe work practices when a guardrail system cannot be used.
- Wear proper slip-resistant shoes or footwear to lessen slipping hazards.
- Train workers in safe work practices before performing work on foundation walls, roofs, trusses or before they perform exterior wall erections and floor installations.

### **REINFORCING STEEL (REBAR)**

- All protruding reinforcing steel, onto and into which employees could fall, shall be guarded to eliminate the hazard of impalement.
  - Guard all protruding ends of steel rebar with rebar caps or wooden troughs, or
  - Bend rebar so exposed ends are no longer upright.
  - When employees are working at any height above exposed rebar, fall protection/prevention is the first line of defense against impalement.

### **AERIAL LIFTS**

- Only trained persons are permitted to operate an aerial lift.
- Lift controls must be tested daily before using the lift, to ensure that they are in good working condition.
- Never belt-off to an adjacent pole, structure or equipment while working from an aerial lift.
- Always stand firmly on the floor of the basket, do not sit or climb on the edge of the basket, or use planks, ladders or other devices for a work position.
- Fall protection equipment must be worn and attached to the boom or basket when working from an aerial lift.
- Boom and basket load limits specified by the manufacturer must not be exceeded.
- Brakes and positioning outriggers, when used, must be set on pads or a solid surface.
- Install wheel chocks before using an aerial lift on an incline.
- Control functions must be plainly marked.

## WORKING ABOVE OR ADJACENT TO WATER

When working over or adjacent to water, all jobsites shall adhere to the following guidelines:

- Employees working over or near water, where the danger of drowning exists, shall be provided with U.S. Coast Guard-approved life jackets or buoyant work vests.
  - When continuous fall protection is used (without exception) to prevent employees from falling into the water, the drowning hazard has effectively been removed, and life jackets or buoyant work vest are not needed.
  - Prior to and after each use, the buoyant work vests or life preservers shall be inspected for defects which would alter their strength or buoyancy. Defective units shall not be used.
- Ring buoys with at least 90 feet of line shall be provided and readily available for emergency rescue operations. The distance between ring buoys shall not exceed 200 feet.
- At least one lifesaving skiff shall be immediately available at locations where employees are working over or adjacent to water.
  - The lifesaving skiff needs to be located on the side of the river that is nearest to the construction being performed.
  - Those who are to operate the lifesaving skiff must have an understanding as to how the boat operates. Allen Rose will communicate this to the employees.
  - The lifesaving skiff shall be inspected regularly to assure proper function of the lifesaving skiff in the event the lifesaving skiff is needed.
- The use of safety nets as fall protection during marine construction activities usually will not eliminate the drowning hazard. In many cases (such as in bridge construction) there is a risk that materials heavy enough to damage the nets may fall. In such cases the personal flotation device, ring buoys, and lifesaving skiffs are still required.
- Employees working over or near water must be adequately trained in their responsibilities and the safe work practices associated with this task. Training will be provided prior to performing job duties requiring work near water, conducted annually, and maintained in a centralized location.
- A pre-task plan is required to be completed and signed by all members of the crew that may be working over or near water before the work may begin.
- Employees who will be performing work over or near water, where the danger of drowning exists, are not permitted to work alone at any time.
- Working under the influence of alcohol or illegal drugs may impair an employee's ability to make good judgment, therefore the use of these substances are strictly prohibited
- Personal weapons such as firearms, pocket knives, tasers, etc. are strictly prohibited from the job site.

## 2.8 FALL PROTECTION SYSTEMS WHEN WORKING FROM HEIGHTS

All fall protection equipment and systems will meet the requirements of applicable ANSI, ASTM, or OSHA requirements. The requirements for specific fall protection systems are outlined below.

### GUARDRAIL SYSTEMS

- Top rail 42 inches above the walking/working level.
- Mid-rail (or suitable alternative) 21 inches above walking/working level.
- Ability to withstand a force of at least 200 pounds in any outward or downward direction.
- Surfaced as to prevent injury from puncture, laceration, or snagging of clothing.
- Designed so as not to constitute a projection hazard.
- Inspected at regular intervals.

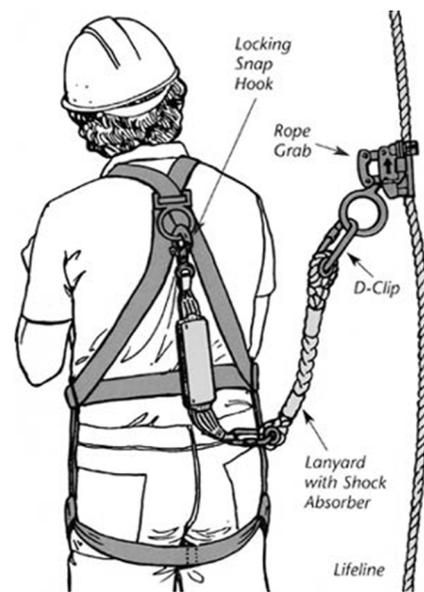
### SAFETY NET SYSTEMS

- Installed as close as practicable under the walking/working surface, but in not more than 30 feet (9.1 meters) below such level.
- Extend outward from outermost projection of the work surface.
- Installed with sufficient clearance under them to prevent contact with the surface due to impact on the net.
- Capable of absorbing an impact force equal to that produced by the drop test specified in OSHA's fall protection standard.
- Inspected at least weekly for wear, damage, and/or deterioration defective components removed.
- Mesh opening not to exceed 36 square inches (230 square centimeters) nor be longer than 6 inches (15 centimeters) on any side.

### PERSONAL FALL ARREST SYSTEMS

A personal fall arrest system is one option of protection that OSHA requires for workers on construction sites who are exposed to vertical drops of 6 feet or more.

- Connectors, D-rings, snap-hooks, lanyards, lifelines and anchorage are designed, constructed and installed according to specifications addressed in OSHA's fall protection standard.
- Limit maximum arresting force on an employee to 900 pounds when used with a body belt (as a positioning device), 1,800 pounds when used with a body harness.
- Rigged such that employees can neither free fall more than 6 feet (1.8 meters) nor contact any lower level.
- Bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3.5 feet (1.07 meters); and



- Have sufficient strength to withstand twice the potential impact energy of a person who is free falling a distance of 6 feet (1.8 meters) or the free fall distance permitted by the system, whichever is less.
- The anchorage connector must be attached to a suitable and strong attachment point
- Body belts and related components may be used only for employee positioning and not for fall protection.
- Personal fall arrest systems and components subject to impact loading shall be removed from service until inspected and approved for use by the Competent Person.
- In the event of a fall, employees will be promptly rescued.
- Personal fall arrest systems and their components must be inspected prior to each use for wear, damage and/or deterioration with defective components removed.
- Never attach to a guardrail systems.
- Components of a fall arrest system must be used only for employee fall protection or positioning and not to hoist materials.

### **HARNES INSPECTION**

- Belts and rings:
  - For harness inspections begin at one end, hold the body side of the belt toward you, grasping the belt with your hands six to eight inches apart. Bend the belt in an inverted "U." Watch for frayed edges, broken fibers, pulled stitches, cuts or chemical damage. Check D-rings and D-ring metal wear pads for distortion, cracks, breaks, and rough or sharp edges. The D-ring bar should be at a 90 degree angle with the long axis of the belt and should pivot freely.
  - Attachments of buckles and D-rings should be given special attention. Note any unusual wear, frayed or cut fibers, or distortion of the buckles. Rivets should be tight and unremovable with fingers. Body side rivet base and outside rivets should be flat against the material. Bent rivets will fail under stress.
  - Inspect frayed or broken strands. Broken webbing strands generally appear as tufts on the webbing surface. Any broken, cut or burnt stitches will be readily seen.
- Tongue Buckle:
  - Buckle tongues should be free of distortion in shape and motion. They should overlap the buckle frame and move freely back and forth in their socket. Rollers should turn freely on the frame. Check for distortion or sharp edges.
- Friction Buckle:
  - Inspect the buckle for distortion. The outer bar or center bars must be straight. Pay special attention to corners and attachment points of the center bar.

### **LANYARD INSPECTION**

When inspecting lanyards, begin at one end and work to the opposite end. Slowly rotate the lanyard so that the entire circumference is checked. Spliced ends require particular attention. Hardware should be examined under procedures detailed below.

- **HARDWARE**
  - *Snaps*: Inspect closely for hook and eye distortion, cracks, corrosion, or pitted surfaces. The keeper or latch should seat into the nose without binding and should not be distorted or obstructed. The keeper spring should exert sufficient force to firmly close the keeper. Keeper rocks must provide the keeper from opening when the keeper closes.
  - *Thimbles*: The thimble (protective plastic sleeve) must be firmly seated in the eye of the splice, and the splice should have no loose or cut strands. The edges of the thimble should be free of sharp edges, distortion, or cracks.
- Lanyards
  - *Steel Lanyards*: While rotating a steel lanyard, watch for cuts, frayed areas, or unusual wear patterns on the wire. The use of steel lanyards for fall protection without a shock-absorbing device is not recommended.
  - *Web Lanyard*: While bending webbing over a piece of pipe, observe each side of the webbed lanyard. This will reveal any cuts or breaks. Due to the limited elasticity of the web lanyard, fall protection without the use of a shock absorber is not recommended.
  - *Rope Lanyard*: Rotation of the rope lanyard while inspecting from end to end will bring to light any fuzzy, worn, broken or cut fibers. Weakened areas from extreme loads will appear as a noticeable change in original diameter. The rope diameter should be uniform throughout, following a short break-in period. When a rope lanyard is used for fall protection, a shock-absorbing system should be included.
- Shock-Absorbing Packs
  - The outer portion of the shock-absorbing pack should be examined for burn holes and tears. Stitching on areas where the pack is sewn to the D-ring, belt or lanyard should be examined for loose strands, rips and deterioration.

#### **VISUAL INDICATION OF DAMAGE TO WEBBING AND ROPE LANYARDS**

- **HEAT** - In excessive heat, nylon becomes brittle and has a shriveled brownish appearance. Fibers will break when flexed and should not be used above 180 degrees Fahrenheit.
- **CHEMICAL** - Change in color usually appears as a brownish smear or smudge. Transverse cracks appear when belt is bent over tight. This causes a loss of elasticity in the belt.
- **ULTRAVIOLET RAYS** - Do not store webbing and rope lanyards in direct sunlight, because ultraviolet rays can reduce the strength of some material.
- **MOLTEN METAL OR FLAME** - Webbing and rope strands may be fused together by molten metal or flame. Watch for hard, shiny spots or a hard and brittle feel. Webbing will not support combustion, nylon will.
- **PAINT AND SOLVENTS** - Paint will penetrate and dry, restricting movements of fibers. Drying agents and solvents in some paints will appear as chemical damage.

#### **CLEANING OF EQUIPMENT**

Basic care for fall protection safety equipment will prolong and endure the life of the equipment and contribute toward the performance of its vital safety function. Proper storage and maintenance after

use is as important as cleaning the equipment of dirt, corrosives or contaminants. The storage area should be clean, dry and free of exposure to fumes or corrosive elements.

- **NYLON AND POLYESTER** - Wipe off all surface dirt with a sponge dampened in plain water. Squeeze the sponge dry. Dip the sponge in a mild solution of water and commercial soap or detergent. Work up a thick lather with a vigorous back and forth motion. Then wipe the belt dry with a clean cloth. Hang freely to dry but away from excessive heat.
- **DRYING** - Harness, belts and other equipment should be dried thoroughly without exposure to heat, steam or long periods of sunlight. System consists of:
  - Anchorage Connector
  - Shock Absorbing Lanyard
  - Full Body Harness

### POSITIONING DEVICE SYSTEMS

- Rigged such that an employee cannot fall more than 2 feet (.9 meters).
- Secured to an anchorage capable of supporting at least twice the potential impact load of an employee's fall or 3,000 pounds, whichever is greater.
- Connectors, D-rings, and snap-hooks are designed, constructed, and installed according to specifications addressed in OSHA's fall protection standard.
- Inspected prior to each use to wear, damage and/or deterioration with defective components removed.

### WARNING LINE SYSTEMS

- Erected around all sides of the roof work area.
- Erected not less than 6 feet (1.8 meters) from roof edge when mechanical equipment is not being used.
- Points of access, materials handling areas, storage areas and hoisting areas shall be connected to work area by an access path formed by two warning lines.
- Consist of ropes, wires or chains and supporting stanchions erected according to OSHA's fall protection standard.
- No employee allowed in area between roof edge and warning line without fall protection or dedicated safety monitor.
- Mechanical equipment on roofs used or stored only in areas where employees are protected by a warning line system, guardrail system or personal fall arrest system.

### CONTROLLED ACCESS ZONES

- Defined by a control line or other means that restricts access and flagged at 6-foot intervals for visibility.
- Control line to have a minimum breaking strength of 200 pounds.
- All employees working in a CAZ must comply promptly with fall hazard warnings from safety monitors.

## SAFETY MONITORING SYSTEMS

- Before using a safety monitoring system, a company official must be notified.
- A Competent Person will be designated to monitor the safety of other employees.
- The Competent Person must not have any other responsibilities that could draw attention away from the safety monitoring duties. Duties include:
  - Recognizing fall hazards
  - Warn employees working under unsafe conditions or performing unsafe acts
  - Remain on same working surface and within visual sighting distance of employees
  - Remain close enough to employees communicate orally
  - Shall not have other responsibilities that could draw attention away from safety monitoring duties

## COVERS

- Secured when installed so as to prevent accidental displacement by wind, equipment, or employees
- Capable of supporting at least twice the maximum load to which it is exposed (i.e., vehicles, equipment, workers)

Color-coded or marked with the work "HOLE" or "COVER" to provide warning of the hazard

## ◆ Fall Protection Checklist

### Construction work six or more feet high requires:

- Walking/working surfaces approved to hold workers safely
- Employees trained to recognize fall hazards and use protective systems
- Fall protection systems for workers
- Procedures to prevent objects from falling.

### Standard fall protection systems:

#### 1. Guardrails:

- Constructed at least 42 inches in height
- Mid-rails and screens are located where there is no wall higher than 21 inches
- Able to withstand force of at least 200 pounds
- Construction materials that can't puncture skin or snag clothes
- No steel or plastic bands for top or middle rails.

#### 2. Safety nets:

- 30 feet or less below elevated walking/working surface
- Strong rope border, with mesh openings smaller than 36 inches-square or 6 inches per side
- Strength certified or tested by dropping a 400 pound, 30-inch diameter bag of sand
- Inspected weekly for wear, damage, and deterioration
- Removed from use if not in top condition.

#### 3. Personal fall arrest system:

- Body harness or belt connected to fixed anchor by lanyard, lifeline, or deceleration device.
- Prevent contact with lower level and more than six feet of free fall.
- Positioning device style used on elevated vertical surface work.
- Not used to hoist materials.
- Inspected before use. Not used if inspection reveals:
  - Cuts, tears, abrasions, deterioration, undue stretching
  - Mold
  - Distorted hooks, faulty hook springs
  - Nonfunctioning parts
  - Loose or damaged mountings
  - Tongues that don't fit shoulder of buckles
  - Contact with fire, acid, or other corrosives
  - Alterations or additions that limit effectiveness.
- Self-locking, self-closing connectors preferred
- Anchor can support at least 5,000 pounds per attached employee
- Can't connect to platform supports or suspension points, guardrails, or hoists
- Avoid connecting to rough or sharp edge; tie off to "H" or "I" beam only with webbing lanyard or lifeline with wire core
- Must not connect with one-and-one sliding hitch knot; avoid any hitch knot
- Use only when rescue system is in place.

**Acceptable fall protection for special defined situations:**

**1. Warning line system:**

- Lines placed at least six feet from and all around roof edge
- Used only with guardrail, safety net, and/or personal fall arrest systems or safety monitoring system.

**2. Controlled access zone:**

- Area with unprotected edge set off by rope, wire, or tape lines
- Entry by authorized personnel only
- Lines run length of unprotected edge, at least 6 feet in (10 feet for overhand bricklaying) and connected to guardrail or wall at ends.

**3. Safety monitoring system:**

- Used when the three standard protections are not feasible or would create greater hazard and/or with warning line system
- Places monitor on elevated surface with workers, close enough to be heard
- Monitor identifies hazards and warns workers.

**4. Hole covers:**

- Identified by name or color.
- Secure enough not to move accidentally.
- Strong enough for twice the weight they might have to hold.

**5. Fall protection plan:**

- Site-specific, written by competent employer-authorized person
- Last-resort option for leading edges, precast concrete erection, or residential construction
- Explains why the three standard protections are not feasible or could create greater hazard
- Explains procedures/equipment to reduce or eliminate fall hazard
- Creates controlled access zones; names employees who can enter
- Explains when and how safety monitoring system will be used.

**6. Roof work**

- Safe access and egress paths have been established.
- Ladders are tied off and properly secured
- The risk for falling objects has been assessed.
- Any overhead obstructions have been identified.
- Existing overhead services crossing or adjacent to the work area have been considered.
- Ducts or air outlets on the roof have been considered and any hazards from fumes have been mitigated.
- Barriers/ edge protection are in place to prevent people/materials from falling.
- If necessary, guard rails & toe boards/anchorage points are provided for safety harnesses to prevent falls over the edge of the roof.
- Necessary PPE is available and is being worn by employees.

Note PPE in use:

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**General fall prevention precautions:**

- Wear sturdy shoes with nonskid soles and buckles, snaps, or short laces.
- Avoid long, loose pants.
- Walk slowly, don't run.
- Watch where you're going
- Clean up all spills promptly.
- Take special care on wet or icy surfaces.
- Carry no more materials than you can see over.
- Keep only needed materials on aboveground work areas.
- Keep materials as far away from the edge as possible.
- Dispose of trash regularly and properly.
- Stay away from edges.
- Obey all verbal warnings, signs, and barriers.
- All protruding reinforcing steel, onto and into which employees could fall, shall be guarded to eliminate the hazard of impalement.
- Weather conditions are appropriate (no rain, snow, ice, etc.)

**Protection from falling objects:**

- Wear hard hat when objects might fall from above.
- Install guardrails, screens, or toeboards at least 3 1/2 inches high, plus screen or panel if nearby materials are taller than toeboard, OR
- Install canopy that will not collapse or be penetrated by falling objects, and place objects where they can't accidentally go over edge, OR
- Install barricades in area where objects could fall, keep employees out of barricaded area, and place overhead objects where they can't accidentally go over edge.
- Place only stable and self-supporting objects near roof edge.
- Store mortar and masonry equipment at least four feet from edge.
- Remove mortar scrap regularly.
- Keep roofing materials at least six feet from edge if there are no guardrails.

## 2.10 JOB HAZARD ANALYSIS

Hazards analysis can get pretty sophisticated and go into much detail. Where the potential hazards are significant and the possibility for trouble is quite real, such detail may well be essential. However, for many processes and operations — both real and proposed — a solid look at the operation or plans by a variety of affected people may be sufficient. The easiest and possibly most effective method is using the step-by-step process of the Job Hazard Analysis (JHA), which is sometimes referred to as a Job Safety Analysis (JSA).

Job Hazard Analysis (JHA) is based on the following ideas:

- A specific job or work assignment can be separated into a series of relatively simple steps.
- Hazards associated with each step can be identified.
- Solutions can be developed to control each hazard.

Job Hazard Analysis is a relatively simple process that involves the following four basic steps:

- Select the job to be analyzed. In performing JSA, the term "job" is used to describe a single task or operation workers do as part of their occupation; it is a definite sequence of steps or separate activities that lead to the completion of a work goal.
- Separate the job into its basic steps.
- Identify the hazards associated with each step.
- Control each hazard.

Through this process, responsible officials can determine the safest, most efficient manner of performing a given job. JHA systematically carries out the basic strategy of accident prevention: The recognition, evaluation, and control of hazards.

Once a JHA has been developed, it is prepared in chart form, listing the basic job steps and the corresponding hazards and safe procedures for each step. A completed JHA chart can then be used as a training guide for employees; it provides a logical introduction to the work, its associated hazards, and the proper and safe procedures to be followed.

For experienced workers, a JHA chart is reviewed periodically to maintain a safety-awareness on the job and to keep abreast of current safety procedures. Review is also useful for employees who have been assigned new or infrequent tasks.



## ◆ Risk Analysis Form

Project #:	Client Name:	Project Location:
Date of JSA:	Contractor:	Sub-Contractor:
Date of Work:	Project JSA Name:	

### HAZARD RISK RATING

What are the consequences of this hazard occurring? Consider what the most probable consequence is (below) with respect to this work hazard.		What is the likelihood (below) of the hazard consequence in Step 1 occurring.		1. Take Step 1 rating and select the correct column. 2. Take Step 2 rating and select the correct line. 3. Use the risk score where the two ratings cross on the matrix below. <b>H = High, S = Serious, M = Medium, L = Low</b>						
<b>Extreme</b>	Multiple fatalities or permanent injuries	<b>Almost Certain</b>	Is expected to occur in most circumstances	Likelihood						
<b>Critical</b>	Single fatality or permanent injury	<b>Likely</b>	Will probably occur at least once		Insignificant	Minor	Major	Critical	Extreme	
<b>Major</b>	Medical treatment or lost time injury	<b>Possible</b>	Event might occur at some time		<b>Almost Certain</b>	<b>M</b>	<b>S</b>	<b>H</b>	<b>H</b>	<b>H</b>
<b>Minor</b>	First aid treatment	<b>Unlikely/Rare</b>	Event not expected to occur or only in exceptional circumstances		<b>Likely</b>	<b>M</b>	<b>M</b>	<b>S</b>	<b>H</b>	<b>H</b>
<b>Insignificant</b>	Incident or near miss –no treatment			<b>Possible</b>	<b>L</b>	<b>M</b>	<b>M</b>	<b>S</b>	<b>S</b>	
				<b>Unlikely/ Rare</b>	<b>L</b>	<b>L</b>	<b>M</b>	<b>M</b>	<b>S</b>	

Process/Activity	Job/Task Hazard Sub Category	Hazardous Element (List the hazards relating to the work)	Hazard Risk Rating (prior to control)	Controls (List the controls to manage each of the hazards)	Hazard Risk Rating (After Controls)	Comments and/or Assigned to

## **2.11 HAZARD COMMUNICATION**

Chemicals pose a wide range of health hazards (such as irritation, sensitization, and carcinogenicity) and physical hazards (such as flammability, corrosion, and reactivity). In order to ensure that the hazards associated with chemicals are conveyed to employers and employees, OSHA requires chemical manufacturers and importers to evaluate the hazards of the chemicals they produce or import and to provide information about them through labels on shipped containers and detailed safety data sheets.

### **Written Program**

Construction processes and other operations performed at the various Penn Fencing jobsites sometimes require the use of hazardous materials and/or chemicals. Penn Fencing has developed a written Hazard Communication Program that describes how the criteria for labels and other forms of warning, safety data sheets, and employee information and training are addressed. A copy of this program will be kept in the main office and will be made available for review by any employee, upon request.

### **Safety Data Sheets (SDS)**

SDSs must be retained for each hazardous chemical used in the workplace. The SDS log will be maintained in an organized fashion and will be readily available to employees and is maintained in the jobsite trucks at the jobsite. If a new chemical is used at the jobsite, the site foreman will ensure that the SDS is received from the distributor and appropriately filed.

The site foreman must provide other contractors, temporary workers, and/or employees of other employers on the jobsite who may be exposed to hazardous chemicals used by Penn Fencing with the following information:

- Location of onsite SDS for each hazardous chemical that they may be exposed to while working
- Precautionary measures that need to be taken to protect employees during normal operating conditions in foreseeable emergencies
- The labeling system used
- Procedures to follow if they are exposed

In addition, each contractor or sub-contractor must provide any information concerning chemical hazards the sub-contractor is bringing into the workplace, and vice versa.

### **Chemical Labeling**

Each container of a hazardous chemical that is used in or around the work area must be properly labeled, tagged, or marked with a product identifier; signal word; hazard statement(s); pictogram(s); precautionary statement(s); and the name, address, and telephone number of the chemical manufacturer, importer, or other responsible party. The labels must be prominently displayed, and in English, although other languages may also be included, if necessary.

It is the responsibility of the site foreman to verify that each container of hazardous chemicals in the workplace is appropriately labeled. Worn and torn labels must be replaced. It is the responsibility of employees to report inappropriate labels or the need to replace them to the foreman. Labels are not to be defaced or removed.

## **Alternative Labeling Systems**

For hazardous chemical containers that have no labels from the manufacturer (usually secondary containers that are used when contents from a manufacturer's container are poured into another container), the site foreman will assure that labels that provide the required information are affixed to the container.

Alternative labeling systems such as the National Fire Protection Association (NFPA) 704 Hazard Rating and the Hazardous Material Information System (HMIS III) may be used to convey the hazards associated with chemicals in workplace containers. After June 1, 2016, the information supplied on these labels must be consistent with the revised HCS, e.g., no conflicting hazard warnings or pictograms.

## **Emergency Response to Hazardous Substances**

For construction companies not normally involved in hazardous waste cleanups:

If any substance of unknown origin is found, company policy is to LEAVE IT ALONE!

Immediately evacuate the area, and contact the nearest hazardous material response team.

Do not allow employees on site until declared safe by the response team.

## **Hazardous Material Identification System and Labeling System**

The Hazardous Material Identification System (HMIS III) provides a format for hazard determinations, complies with the OSHA Hazard Communication Standard, and simplifies the employee training and information process. This system was developed by the paint manufacturers (National Paint and Coatings Association) to address situations more common to their environment than those encountered by firefighters.

The HMIS provides clear, recognizable information to employees by standardizing the presentation of chemical information. This is accomplished by using color codes corresponding to the hazards of a product, assigning numeric ratings to indicate the degree of severity of health effects, flammability, and stability/reactivity hazards, along with providing alphabetical codes to designate appropriate personal protective equipment (PPE) employees should use while handling the material.

Hazard severity is indicated by a numerical rating that ranges from zero (0), indicating a minimal hazard, to four (4), indicating a severe hazard. The information is arranged using a color bar system as follows. A blue bar at the top provides health information, a red bar at second from the top indicates flammability, a yellow or orange bar second from the bottom physical properties or instability/reactivity, and a white bar at the bottom addresses personal protective equipment.

With this system, the white section is used to indicate what level of protective equipment is required. Instead of a hazard ranking, a level of protection is indicated by a letter, with each letter specifying a different level of protection. A wide variety of icons include the physical hazards, target organs, as well as the continued use of icons for PPE.

All alternative labeling must meet the GHS labeling standards.

A sample HCS label is located below:

<p><b>HEALTH HAZARD</b> </p> <ol style="list-style-type: none"> <li>1 Carcinogen</li> <li>2 Mutagenicity</li> <li>3 Reproductive Toxicity</li> <li>4 Respiratory Sensitizer</li> <li>5 Target Organ Toxicity</li> <li>6 Aspiration Toxicity</li> </ol>	<p><b>FLAME</b> </p> <ol style="list-style-type: none"> <li>1 Flammables</li> <li>2 Pyrophorics</li> <li>3 Self-Heating</li> <li>4 Emits Flammable Gas</li> <li>5 Self-Reactives</li> <li>6 Organic Peroxides</li> </ol>	<p><b>EXCLAMATION MARK</b> </p> <ol style="list-style-type: none"> <li>1 Irritant (skin and eye)</li> <li>2 Skin Sensitizer</li> <li>3 Acute Toxicity</li> <li>4 Narcotic Effects</li> <li>5 Respiratory Tract Irritant</li> <li>6 Hazardous to Ozone Layer (Non-Mandatory)</li> </ol>
<p><b>GAS CYLINDER</b> </p> <p>Gases Under Pressure</p>	<p><b>CORROSION</b> </p> <ol style="list-style-type: none"> <li>1 Skin Corrosion/Burns</li> <li>2 Eye Damage</li> <li>3 Corrosive to Metals</li> </ol>	<p><b>EXPLODING BOMB</b> </p> <ol style="list-style-type: none"> <li>1 Explosives</li> <li>2 Self-Reactives</li> <li>3 Organic Peroxides</li> </ol>
<p><b>FLAME OVER CIRCLE</b> </p> <ol style="list-style-type: none"> <li>1. Oxidizers</li> </ol>	<p><b>ENVIRONMENT</b> (Non-Mandatory) </p> <ol style="list-style-type: none"> <li>1 Aquatic Toxicity</li> </ol>	<p><b>SKULL &amp; CROSSBONES</b> </p> <ol style="list-style-type: none"> <li>1 Acute Toxicity (fatal or toxic)</li> </ol>

• **HMIS LABEL & KEY**

<b><u>CHEMICAL NAME:</u></b>	
<b>HEALTH</b>	<input type="text"/> <input type="text"/>
<b>FLAMMABILITY</b>	<input type="text"/>
<b>PHYSICAL HAZARD</b>	<input type="text"/>
<b><u>PPE:</u></b>	

## HMIS Label - Health

The health section conveys the health hazards of the material. In the latest version of the HMIS label, the blue health bar has two spaces, one for an asterisk and one for a numeric rating.

If present the asterisk signifies a chronic health hazard, meaning that long term exposure to the material could cause a health problem such as emphysema or kidney damage.

The numeric ratings for the HMIS system are as follows.

- 4** - Life Threatening – Major or permanent damage may result from single or repeated overexposures.
- 3** - Major injury likely unless prompt action is taken and medical treatment is given.
- 2** - Temporary or minor injury may occur.
- 1** - Irritation or minor reversible injury may occur.
- 0** - No significant risk to health.

## HMIS Label - Flammability

OSHA defines a flammable liquid as "any liquid having a flash point below 100 °F. (37.8 °C.), except any mixture having components with flash points of 100 °F. (37.8 °C.) or higher, the total of which make up 99 percent or more of the total volume of the mixture. Flammable liquids shall be known as Class I liquids." A flammable material can be a solid, liquid or gas.

The numeric ratings for the HMIS system are as follows.

- 4** - Flammable gases or very volatile flammable liquids with flash points below 73 °F, and boiling points below 100 °F. Materials may ignite spontaneously with air. (Class IA).
- 3** - Materials capable of ignition under almost all normal temperature conditions. Includes flammable liquids with flash points below 73 °F and boiling points above 100° F, as well as liquids with flash points between 73° F and 100° F. (Classes IB & IC).
- 2** - Materials which must be moderately heated or exposed to high ambient temperatures before ignition will occur. Includes liquids having a flash point at or above 100° F but below 200° F. (Classes II & IIIA).
- 1** - Materials that must be preheated before ignition will occur. Includes liquids, solids, and semi-solids having a flash point above 200° F. (Class IIIB).
- 0** - Materials that will not burn.

## HMIS Label - Physical Hazard (HMIS® III)

These hazards are assessed using the OSHA criterion of physical hazard. Seven such hazard classes are recognized:

- Water Reactive
- Explosives
- Pyrophoric materials
- Oxidizers
- Organic Peroxides
- Compressed gases
- Unstable Reactives

The numeric ratings for the HMIS system are as follows.

- 4** - Materials which are readily capable of explosive water reaction, detonation or explosive decomposition, polymerization, or self-reaction at normal temperature and pressure.
- 3** - Materials that may form explosive mixtures with water and are capable of detonation or explosive reaction in the presence of a strong initiating source. Materials may polymerize, decompose, self-react, or undergo other chemical change at normal temperature and pressure with moderate risk of explosion.
- 2** - Materials that are unstable and may undergo violent chemical changes at normal temperature and pressure with low risk for explosion. Materials may react violently with water or form peroxides upon exposure to air.
- 1** - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.
- 0** - Materials that are normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosives.

### HMIS Label - Reactivity or Stability (HMIS 1 & 2 - Now Obsolete)

"Reactive or Unstable" means a chemical which in the pure state, or as produced or transported, will vigorously polymerize, decompose, condense, or will become self-reactive under conditions of shocks, pressure or temperature. The numeric ratings for the HMIS system are as follows.

- 4** - Materials which in themselves are readily capable of detonation or of explosive decomposition or explosive reaction at normal temperatures and pressures. This degree should include materials that are sensitive to mechanical or localized thermal shock at normal temperatures and pressures.
- 3** - Materials which in themselves are capable of detonation or of explosive reaction but which require a strong initiating source or which must be heated under confinement before initiation. This degree should include materials which are sensitive to thermal or mechanical shock at elevated temperatures and pressures or which react explosively with water without requiring heat or confinement.
- 2** - Materials which in themselves are normally unstable and readily undergo violent chemical change but do not detonate. This degree should include materials which can undergo chemical change with rapid release of energy at normal temperatures and pressures or which can undergo violent chemical change at elevated temperatures and pressures. It should also include those materials which may react violently with water or which may form potentially explosive mixtures with water.
- 1** - Materials which in themselves are normally stable, but which can become unstable at elevated temperatures and pressures or which may react with water with some release of energy but not violently.
- 0** - Materials which in themselves are normally stable, even under fire exposure conditions, and which are not reactive with water.

### HMIS Label – Personal Protection

A	=	Safety glasses
B	=	Safety glasses, gloves
C	=	Safety glasses, gloves, chemical apron
D	=	Face shield, gloves, chemical apron
E	=	Safety glasses, gloves, dust respirator
F	=	Safety glasses, gloves, chemical apron, dust respirator
G	=	Safety glasses, gloves, vapor respirator
H	=	Splash goggles, gloves, chemical apron, vapor respirator
I	=	Safety glasses, gloves, dust and vapor respirator
J	=	Splash goggles, gloves, chemical apron, dust and vapor respirator
K	=	Air line hood or mask, gloves, full chemical suit, boots
X	=	Ask foreman

Note: before using any respirator contact EH&S for assistance.