Supervisor Safety Series
Hazard Recognition & Control

Presented By BHHC Loss Control

July 2025

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“It takes leadership to improve safety.” — Jackie Stewart

Jackie Stewart, a legendary Formula One driver, vocal advocate for safety in motorsports. His leadership helped transform the sport’s approach to safety.

Why You (Supervisors)?

- **Frontline Influence:** You interact directly with workers daily, making you the most influential figures in shaping safety behaviors. You ensure that safety rules are followed consistently and fairly.
- **Role Modeling:** Your actions set the tone—when supervisors prioritize safety, employees are more likely to follow suit.
- **Communication Bridge:** You serve as the link between upper management and frontline workers, ensuring safety policies are understood and implemented.
- **Hazard Identification:** Being on the ground, you are well-positioned to spot and address safety risks in real time.
- **Training and Coaching:** You provide hands-on guidance and reinforce safe work practices.
- **Culture Builders:** Your leadership style can foster a culture where safety is seen as a shared value, not just a rule.

AGENDA

Hazard Recognition & Control

1. Review General Accident Causation
2. Compare Unsafe Acts and Conditions
3. Discuss Acceptable Risk
4. Conducting Quality Inspections
5. Completing Impactful Observations
6. Walkthrough Process for Preventing Accidents
   - A. Identify Activities
   - B. Reduce Activities
   - C. Identify Unsafe Acts and Conditions
   - D. Controls for Unsafe Acts and Conditions
   - E. Implement
   - F. Train & Reinforce

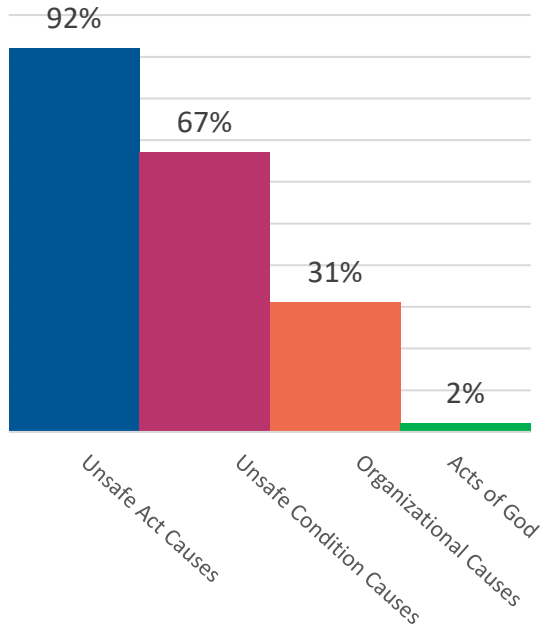
Accident Causation Myths

- Accidents result from a single source
- Employees are the cause of most accidents
- Minor incidents always predict major incidents
- Most accidents are unavoidable
- Safety is solely the responsibility of the safety person
- You can prevent most accidents focusing on unsafe acts
- Safety is Common Sense

Multiple Causation Theories

Accidents are rarely the result of a single cause. They occur due to a combination of factors.

- Domino Theory
- Multiple Causation Theory
- Human Factors Theory
- Systems Theory
- Epidemiological Theory



CONCLUSION ADDS UP TO MORE THAN 100% – ACCIDENTS TYPICALLY HAVE MORE THAN ONE CAUSE

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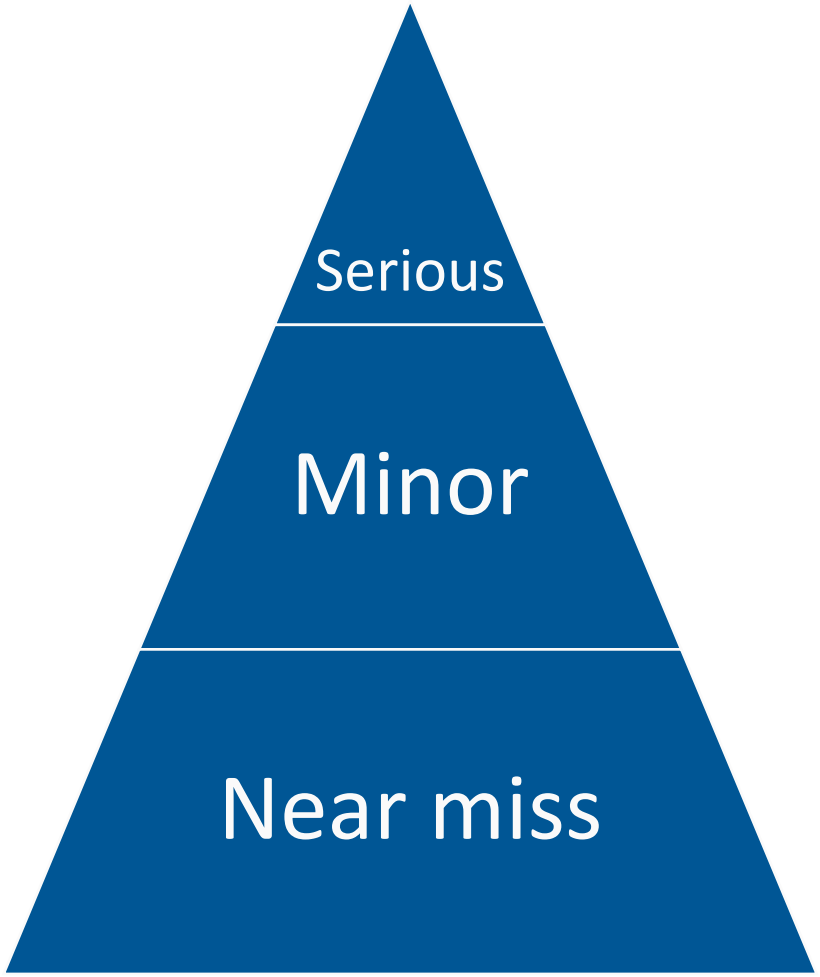
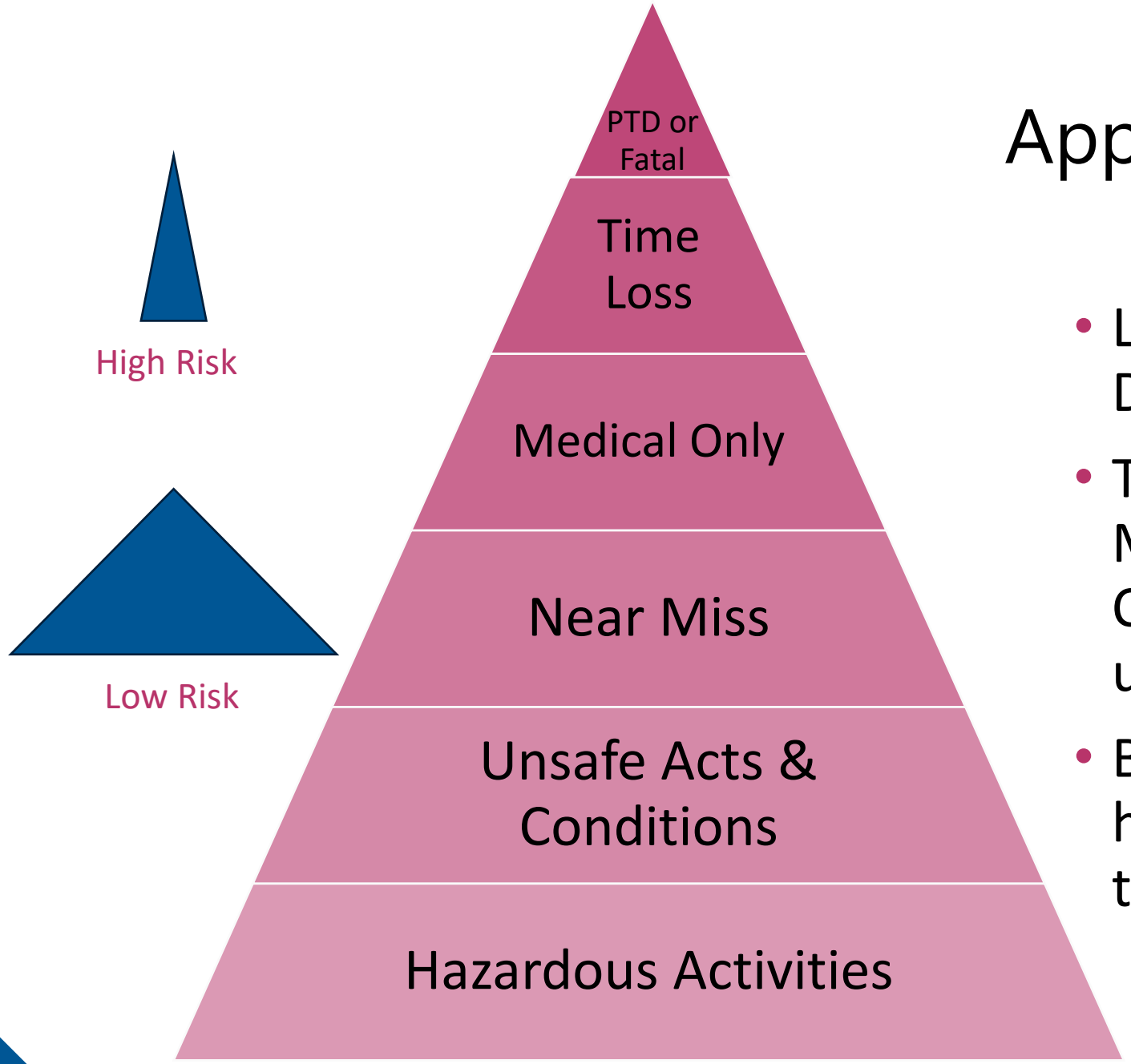
Accident Triangle (adjusted)



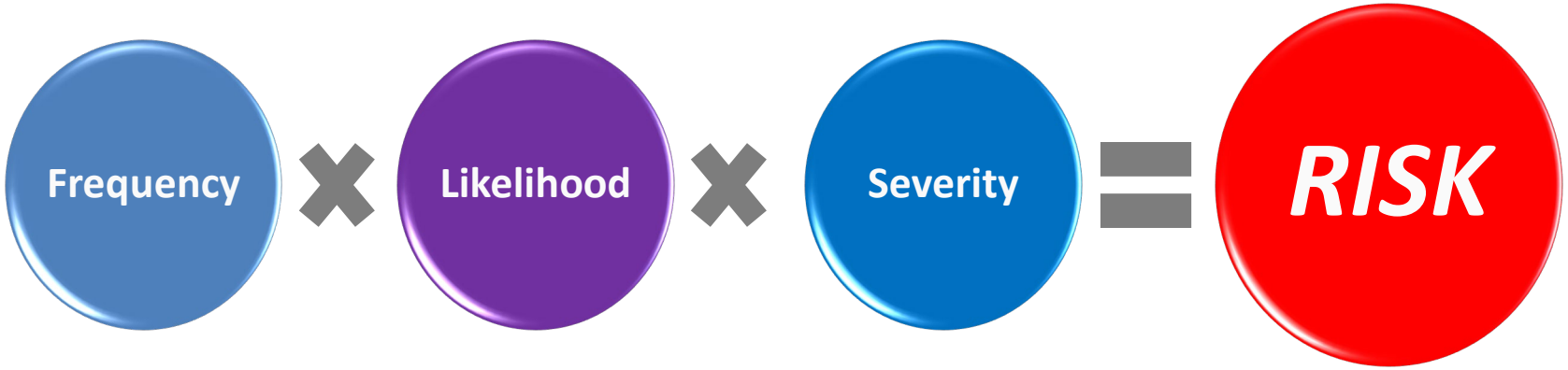
- 1931 Heinrich looked at 75,000 accidents
  - 1 Serious Accident
  - 29 Minor Accidents
  - 300 Near Misses
- 1966 Bird analyzed 1.7 million accidents. Updated Triangle
  - 1 Serious Injury
  - 10 Minor Injury
  - 30 Damage-Causing Accidents
  - 600 Near Misses
- Recent updates to the Accident Triangle have added further layers, such as at-risk behaviors at the base of the triangle



Applying the Theory

- Layers Permanent Total Disability or Fatality at the top
- Time Loss, Medical, Near Miss, Unsafe Acts and Conditions, and Activities underneath
- Base of the triangle varies by hazard – narrower the base the higher risk

Occupational Safety & Health Risk



- **Frequency** – number of times exposed to hazard – the number of times you climb a ladder
- **Likelihood** – chance that severity will be realized – the chance that you will fall each time you use a ladder
- **Severity** – consequences of hazard being realized – the injuries and costs associated with a fall off the ladder if it occurs
- Risk can't be eliminated
- Can be identified, quantified and reduced

Individual vs. Organizational Risk

- Individual acceptable risk is almost always higher than organizational acceptable risk
- Organizations have far more frequency, as a result must accept less risk or realize the result in severity
- Workers Compensation typically does not disallow payment for an individuals' acceptable risk – we do not follow the *"Volenti no fit injuria"* for WC*

*If **person** knows the consequences of a particular act and voluntarily accepts that risk, they are solely responsible for any resulting injury.*

If organization knows the consequences of a particular act or failure to act and voluntarily accepts that risk, they are responsible for any resulting loss.

Risk of falls when walking high steel without fall protection, 1 fatal fall per 27000 hours worked

Individual Ironworker may not walk 27000 hours of high steel in their whole career – Perception of Risk is Low

Company with 500 Ironworkers walking high steel 10 hours a day will have about 1 fall a week – Perception of Risk is High

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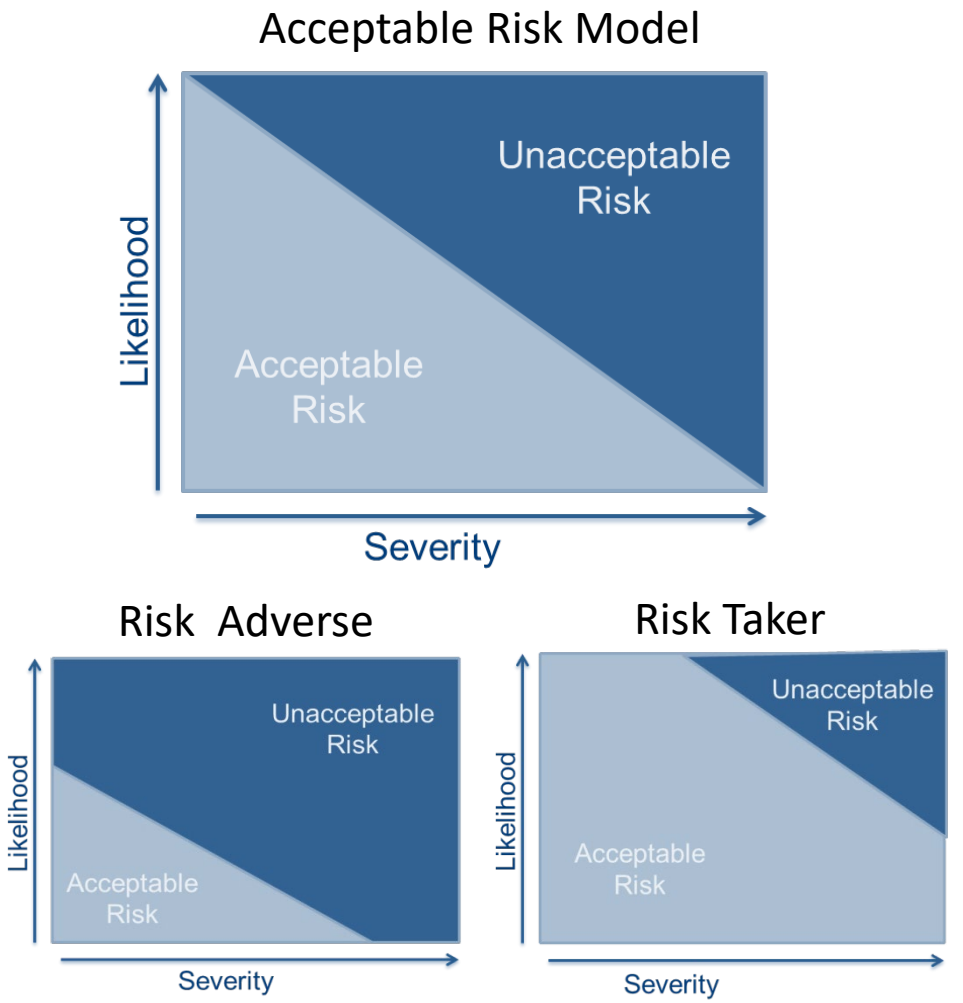
Acceptable Risk

- Every individual and every organization establishes their level of acceptable risk
- Frequency of exposure to activities increases organizational risk
- Many accident repeaters are Risk Takers
- Risk acceptance often correlates to unsafe acts



Unsafe acts are behaviors that increase the likelihood of a risk being realized (accident). Many are not against the rules!

Unsafe Conditions are conditions that increase the likelihood of a risk being realized (accident), most are violations of code.

Comparison

Unsafe Acts

- Operating Equipment Without Authorization
- Failure to Use Personal Protective Equipment (PPE)
- Bypassing Safety Devices
- Using Defective Equipment
- Improper Lifting Techniques
- Horseplay or Reckless Behavior
- Working at Unsafe Speeds
- Failure to Follow Procedures
- Improper Use of Tools or Equipment
- Taking Unsafe Positions or Postures
- Failure to Warn or Signal
- Disabling Alarms or Warnings
- Working Under the Influence
- Inattention or Distraction
- Improper Housekeeping

Unsafe Conditions

- Poor Housekeeping
- Inadequate Lighting
- Defective Tools or Equipment
- Unguarded Machinery
- Exposed Electrical Wiring
- Improper Ventilation
- Blocked Emergency Exits
- Slippery or Uneven Surfaces
- Inadequate Warning Signs
- Excessive Noise
- Poor Ergonomics
- Inadequate Fire Protection
- Extreme Temperatures
- Improper Storage
- Inadequate Personal Protective Equipment (PPE) Availability

Inspection vs. Observation

- Inspections
  - Systematic and Structured
  - Thorough and Detailed
  - Regular and Scheduled
  - Unbiased and Objective
  - Documented
  - Corrective Action Oriented
  - Inclusive
  - Focused on Prevention & Compliance
- Observations
  - Focused and Purposeful
  - Respectful and Non-Intrusive
  - Behavior Based
  - Objective & Fact Based
  - Timely and Real Time Feedback
  - Engaging and Collaborative
  - Constructive Feedback
  - Documented & Actionable
  - Used for Learning not Blame

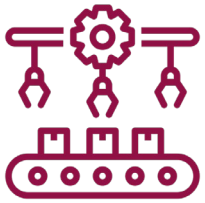
Conducting Quality Inspections

Conducting Quality Inspections

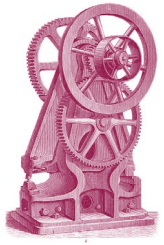
- Systematic and Structured
- Thorough and Detailed
- Regular and Scheduled
- Unbiased and Objective
- Documented
- Corrective Action Oriented
- Inclusive
- Focused on Prevention & Compliance

Easier with Custom Inspection Checklists

Creating an Inspection Checklist



IDENTIFY THE AREA TO BE INSPECTED (Press Room)



IDENTIFY THE ITEMS WITHIN THE AREA THAT NEED TO BE INSPECTED (Punch Press)

IDENTIFY THE ITEM PARTS ON THE ITEM THAT NEED INSPECTION (Point of Operation)

IDENTIFY THE CONDITION THE INSPECTOR IS LOOKING FOR

- Presence of Safeguards
- Guard Functionality
- Die Setup & aligned
- Operator Visibility

Items – Items Parts - Conditions

Lathe

- Headstock - Check for unusual noise, vibration, and secure mounting. Inspect gears and spindle for wear or damage.
- Chuck - Ensure jaws are clean, undamaged, and grip securely. Check for proper alignment and smooth operation.
- Tailstock - Verify alignment with the headstock. Inspect locking mechanism and quill movement.
- Bed - Look for cracks, warping, or excessive wear. Ensure it's clean and free of chips or debris.
- Carriage - Check for smooth travel along the bed. Inspect handwheels, cross-slide, and compound rest for play or stiffness.
- Lead Screw & Feed Rod- Ensure they are clean, lubricated, and free of damage. Check for proper engagement with the carriage.
- Tool Post - Verify secure clamping and correct positioning. Inspect for wear or damage to tool holders.
- Apron - Check controls for smooth operation. Inspect gears and levers for wear or malfunction.
- Electrical Controls - Test emergency stop and power switches. Inspect wiring for damage or loose connections.
- Guarding and Shields - Ensure all guards are in place and functional. Check for visibility and ease of access.
- Lubrication System - Confirm oil levels and proper distribution. Look for leaks or clogged lines

Items – Items Parts - Conditions

Electrical Panel

- Main Disconnect Switch - Check for proper labeling, secure mounting, and smooth operation. Ensure it shuts off power completely.
- Circuit Breakers - Signs of overheating, corrosion, or tripped breakers. Verify correct labeling and amperage ratings.
- Panel Cover and Dead Front - Verify the cover is intact, secure, and free of missing screws. Ensure the dead front (interior cover) is in place to prevent contact with live parts.
- Labels and Identification - Clear, legible circuit labels & panel identification. Warning signs & voltage ratings visible.
- Clearance and Accessibility - Confirm the panel has proper working space (typically 3 feet clearance). Ensure the panel is not blocked or used for storage.
- Signs of Moisture or Contamination - Look for rust, water stains, or debris inside the panel.
- Arc Flash Labeling - Ensure arc flash hazard labels are present and up to date.
- *Bus Bars - Inspect for discoloration (overheating), corrosion, or loose connections.*
- *Wiring and Terminals - Check for frayed, exposed, or improperly secured wires. Ensure tight, clean connections - no signs of arcing.*
- *Grounding and Bonding - Confirm proper grounding conductors are present and securely connected. Look for continuity and bonding between panel and system ground.*
- *Neutral Bar - Ensure all neutral wires are properly terminated and not overloaded.*

Weekly Area Inspection Checklist – Chrome Plating Shop

Weekly inspections are completed in the Chrome Plating Shop. Ownership: Department and Area Supervisors.

Inspector Name: _____ **Date of Inspection:** _____

Area	Item	Part	Condition	Status (Yes/No/N/A)	Comments
Preparation & Inspection	Visual inspection tools	Magnifying glass, flashlight	Functional; lenses clean		
	Chemical stripper	Tank, spray nozzles	No leaks; corrosion free		
	Media blasting cabinet	Door seal, blast media	Seal intact; media uncontaminated		
	PPE	Gloves, goggles, respirator	Fit; not torn; cartridges in date (CCR 5144)		
	Housekeeping	Benches, tools, floor	No debris; aisles clear		
	Fire extinguisher	Portable unit	Pressure in green; tag current; accessible (CCR 6151)		
Cleaning	Ultrasonic/soak tank	Solution level, pH	Within target range per SOP		
	Acid dip tank	Tank integrity, concentration	No leaks; acid conc. per spec		
	Ventilation system	Hoods, ducts	Airflow ≥ required (CCR 5192)		
	Rinse tanks	Water clarity	Clear; no sediment		
	Spill kit	Absorbents, PPE	Stocked; seals intact		
	Fire extinguisher	Portable unit	Pressure in green; tag current		

Formalize the process

- Schedule
- Inspector and Qualifications
- Process for correcting hazards
- Create Custom Inspection Checklist
  - Area
  - Item
  - Item Part
  - Condition
  - Yes No Not Applicable
  - Comments

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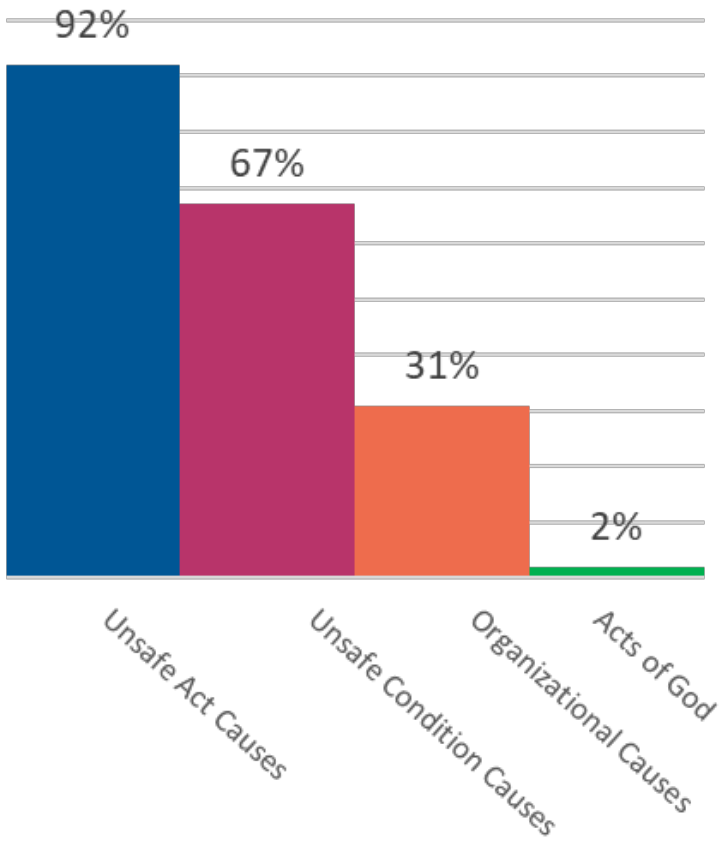
Addressing Unsafe Conditions

- Hazard Correction Procedures
  - A clear process for prioritizing, assigning, and tracking corrective actions.
  - Includes timelines, responsible persons, and verification steps.
- Preventative Maintenance
  - Regular servicing of equipment and systems to prevent failures that could lead to hazards.
  - Helps catch issues before they become safety risks.
- Engineering Controls
  - Physical changes to the workplace (e.g., machine guards, ventilation, noise dampening) to eliminate or reduce hazards at the source.
  - Process for funding and implementing

Conducting Impactful Observations

Why Perform Observations

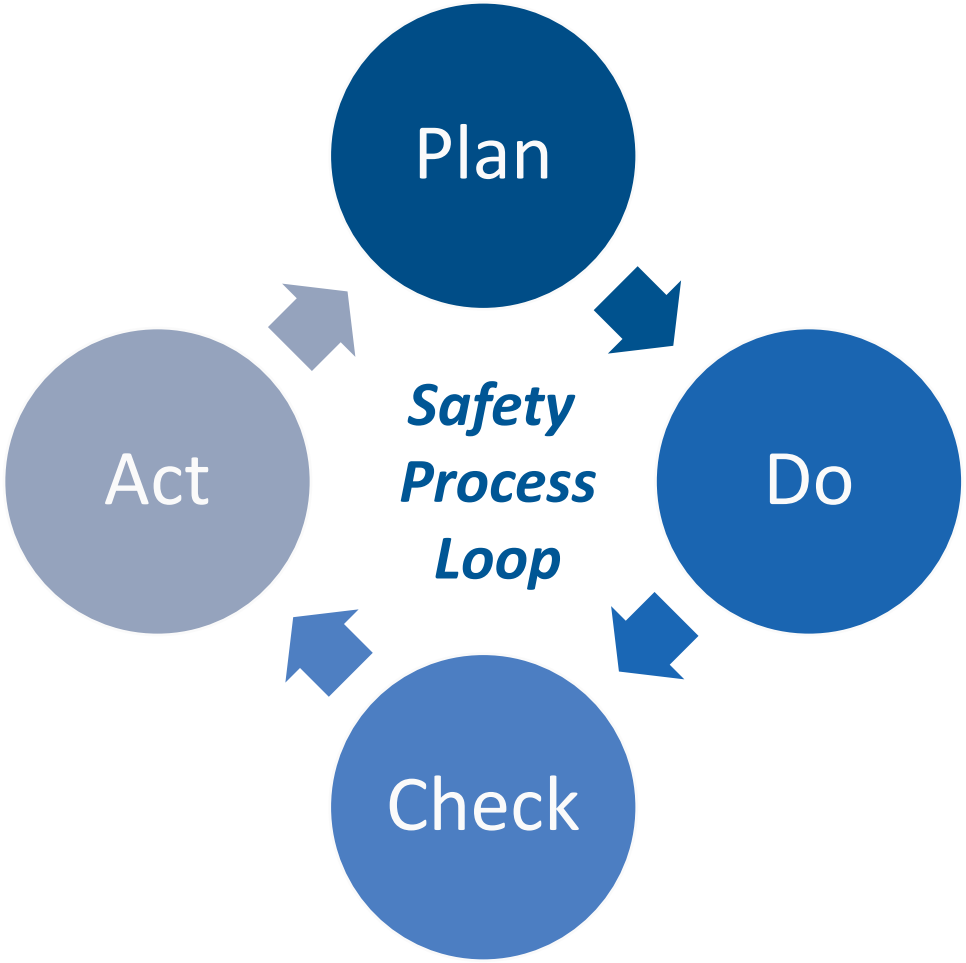


- Traditional safety efforts focus on the conditions – machine guarding, water on floor, and similar conditions
- 90% plus of all accidents have a critical behavior cause somewhere in the chain of events.
- Most accidents have multiple causes – behavior, condition or organizational

Safety Observations - Focusing on the Bottom

- Check the effectiveness of training programs.
- Promote on-the-spot correction of unsafe acts.
- Provide opportunities to compliment and/or reward safe behaviors.
- Develop cooperative safety attitudes
- Promote more learning about employees
- Suggest and identify better job methods.

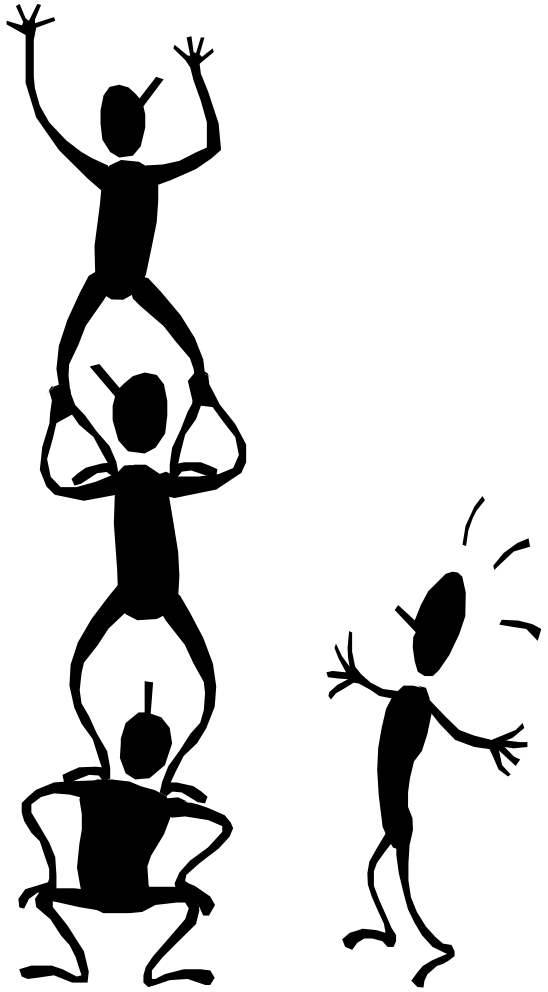
Preparing for the Observation



- Identify ***who*** needs an observation – New Hires, Change in Position, Outside Influences, Hazardous Operations, Other
- Decide what you are looking for including job steps, hazards, and proper controls – Job Specifications, Job Hazard Analysis, Care Plan are all sources of Data
- Look at a scheduling of tasks in the workday and ensure observation coincides to task.
- Decide if you should tell the employee prior to completion of the observation.

To Tell or Not To Tell

- Evaluate whether the employee knows **HOW** to do the job complete an informed safety observation.
- Evaluate how the employee **PERFORMS** their work, do not inform them prior to completing the observation.
- In all cases – Always Provide **FEEDBACK**



Performing the Safety Observations

- **Incidental Observations**
  - Part of other work activities.
  - Short observations and feedback sessions.
- **Deliberate Observations**
  - More planning and foresight
  - Separate time is set aside to perform the deliberate observation
- **Determining Frequency for Observations**
  - New Hire; 3 in first month
  - Existing employee; 1 per month

Performing the Safety Observations

- **Tell Them First** – explain to the worker what you will be doing and for how long.
- For **uninformed observations**, stand out of the way and observe the employee.
- After **All Observations**, approach the employee, explain that you have just performed an observation and proceed with the coaching session.

Feedback – A ***BIT*** of Information

- Focus on **B**ehavior
  - Describe **I**mpact on Employee, Work Unit & Company
    - Reinforce expectations for **T**omorrow

FEEDBACK – a BIT of information

- BEHAVIOR - Make sure employee understands the positive or negative behavior that was observed.
- IMPACT – Link the impact to a personal level, unit level, plant level and corporate level
- TOMORROW – What action's do you expect the employee to complete tomorrow and on.

FEEDBACK – Coaching Employees

- When unsafe behaviors are observed, employees must be coached in the correct method.
- Tell them ***HOW*** to do the task
- ***SHOW*** them how to do the task
- Have them ***DEMONSTRATE*** the task correctly
- Make ***CORRECTIONS*** or ***REINFORCE*** good performance

Feedback

- Coaching Feedback instead of Negative Feedback
- Motivating Feedback instead of generic positive Feedback
- Differences in how people like to be recognized – respect them!

Positive Feedback

- Can be seen as disingenuous
- Often Vague
- May Cultivate Mistrust

Negative Feedback

- Can lead to conflict – feels personal
- Results in defensiveness
- Creates Anxiety & Stress

Coaching Feedback

- Guides someone back on track
- Corrects and explains past behavior
- Suggests areas for Improvement

Motivating Feedback

- Reinforces strengths
- Identifies area for growth
- Shows gratitude for previous work

4:1 Rule

- Give positive feedback at least 4 times out of 5
- Reinforcement Effect – Behavior positively reinforced tends to increase or continue
- Extinction Effect – Behavior not positively reinforced tends to decrease over time
- Punishment Effect – Behavior “de-motivated” by negative reinforcement tends to decrease.

Using Hazard Recognition to Prevent Loss

Preventing the Accidents

The following steps can be followed to prevent accidents:

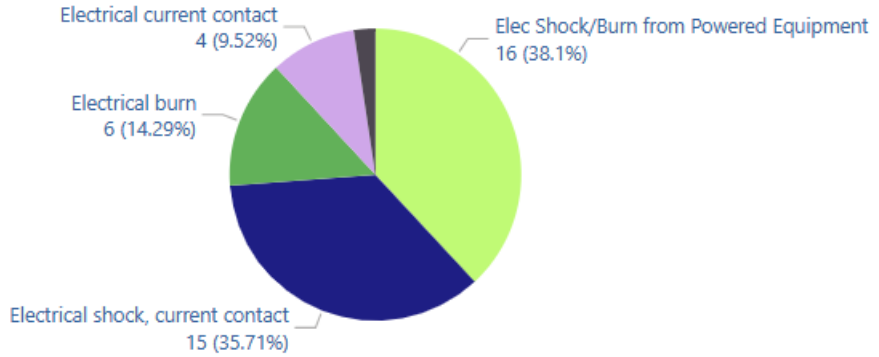
1. Identify the activities that your staff are engaged in when they are injured or working unsafely
2. Identify the unsafe acts and conditions that occur when engaged in the activity (and their contributors)
3. Identify opportunities to reduce the high-risk activities
4. Identify ways to control unsafe acts and unsafe conditions associated with those activities that must be completed
5. Implement the controls
6. Train and educate your staff

Understand Your Workplace – Reducing a MLS

1

What Activities are Individuals doing when they have electrical accidents, electrical unsafe conditions or electrical unsafe acts?

Electrical Losses



Related Activities

1. Plugging and Unplugging Equipment
2. Inspecting a broken piece of equipment
3. Cleaning Machines
4. Working around electrical panels
5. Maintenance
6. Extension Cords

Related Observations

- Unauthorized Access
- Working on Energized Equipment
- Failure to Wear Assigned PPE
- Failure to maintain proper clearance
- Others

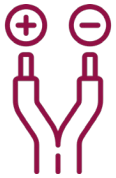
Related Inspections

- Lack of warnings and labels
- Damaged Cords and Plugs
- Temporary Wiring (Lack of Conduit)
- Overloaded Circuits
- Loose Connections
- Others

2

Identify the Unsafe Acts and Conditions

Use of Damaging Cords



Lack of Permanent Wiring (Temporary Wiring)

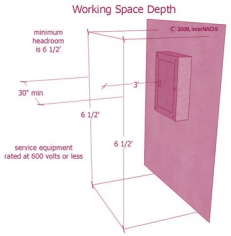
Lack of Ground Fault Circuit Interrupters

Overloaded Circuits

Poor Housekeeping – having to reach over items or around items

Access Challenges

Lack of Proper PPE



Clearance Distances

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Surface Conduit Wiring

Concealed Conduit wiring

Reducing the Activity

3

- Reduce Temporary Wiring - Conduit
- Plugging and Unplugging Equipment – Permanent Wiring
- Inspecting a broken piece of equipment – Preventative Maintenance
- Cleaning Machines – Auto Clean
- Working around electrical panels – Controlled Access

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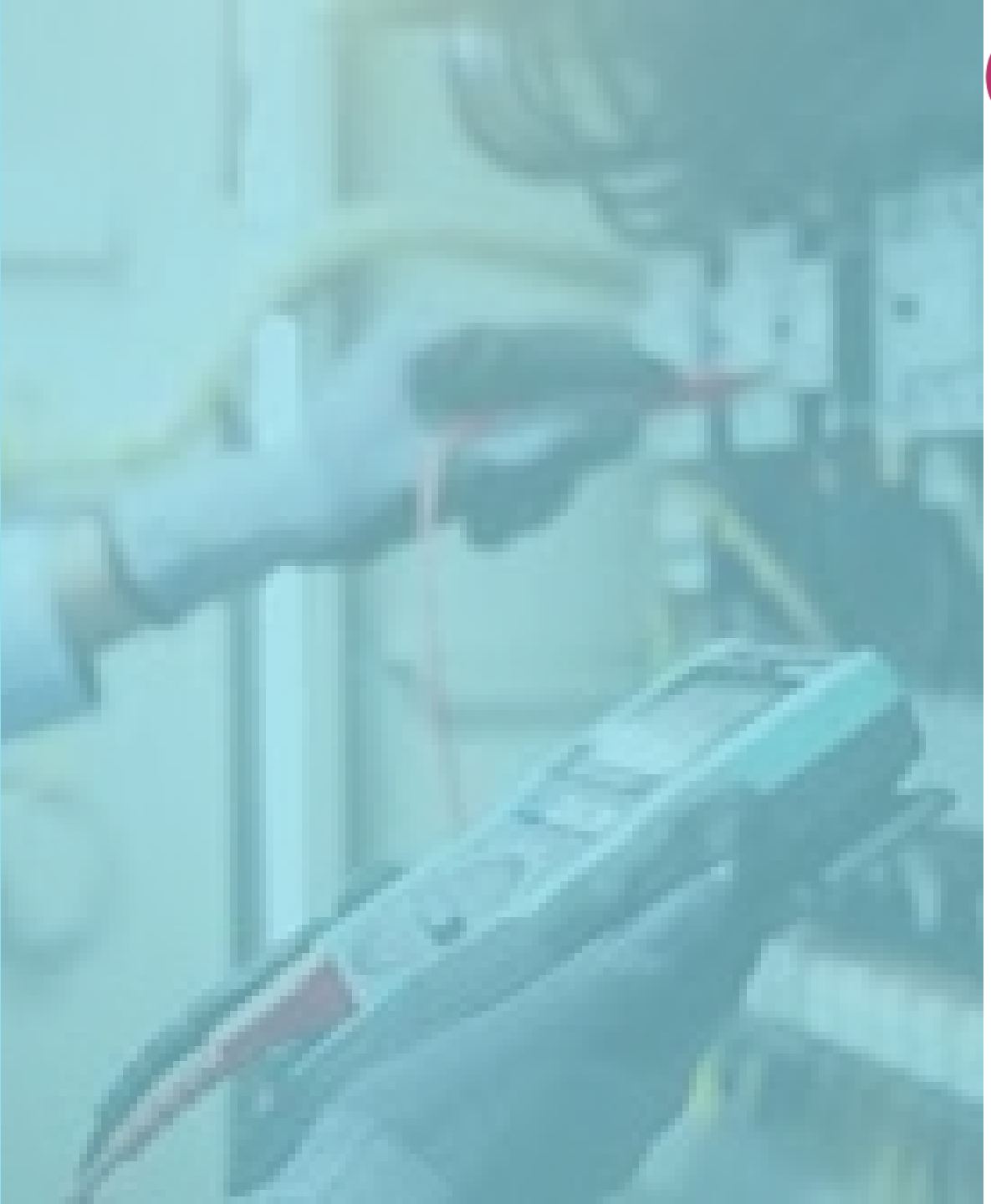


4

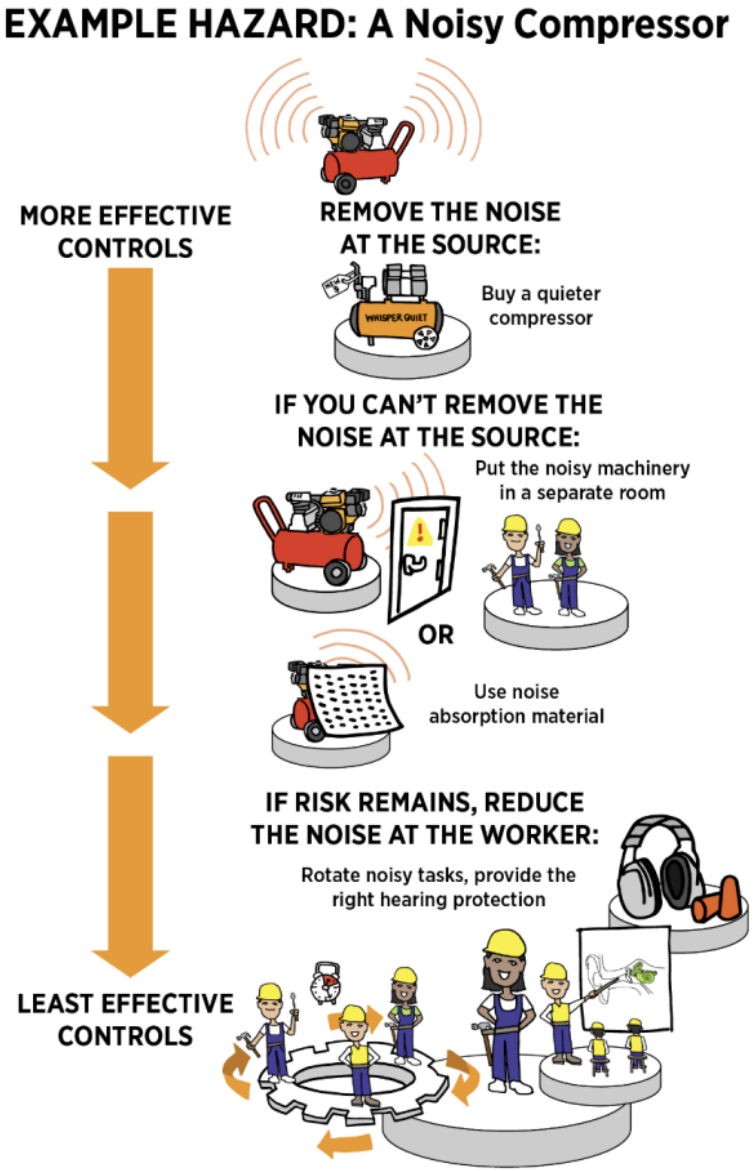
Increase Control

- Strive to follow lockout procedures
  - Cleaning
  - Maintenance
  - Repair and Unjamming
- Use Ground Fault Circuit Interrupters
- Label all panels and mark clearance areas with clear floor markings
- Lock electrical rooms and prevent unauthorized Access
- Assured Grounding Program for temporary Wiring and Portable Power Tools

Control Hierarchy

Effective Controls Make a Difference

- Training rarely makes a significant impact unless training about a change in status quo
- PPE is very dependent on employee adherence
- Engineering controls are much more positive to control loss
- Substitution and Elimination of the hazard are the most effective controls



From:
OSHA IDENTIFYING HAZARD CONTROL OPTIONS: The Hierarchy of Control

Implementing Controls

All employees must be involved in implementing controls!

- Involve Workers: Engage employees in the process as they often have valuable insights into potential hazards and practical solutions
- Use the Hierarchy of Controls: Prioritize control measures by eliminating hazards first, then using engineering controls, administrative controls, and personal protective equipment (PPE) as needed
- Develop a Hazard Control Plan: Create a detailed plan that outlines the selected control measures and the steps for their implementation
- Provide Training and Communication: Ensure all employees are trained on new safety procedures and understand the importance of the controls
- Regularly Review and Update Controls: Continuously evaluate the effectiveness of the controls and make necessary adjustments based on feedback and new information
- Document Everything: Keep thorough records of all safety measures

From:
OSHA IDENTIFYING HAZARD CONTROL OPTIONS: The Hierarchy of Control

Implementing Controls

- ***Employee Training***
  - Job Instruction Training ideally JHA Based
  - Crisis De-escalation
  - Material Handling
  - Slip Trip and Fall Prevention
  - Motor Vehicle Safety
  - Compliance Training - OSHA

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