Line of Fire Hazards Meeting Kit

A simple definition of "**line of fire**" is being in harm's way. Line of fire injuries occur when the path of a moving object or the release of hazardous energy intersects with an individual's body.

Three major categories of line of fire incidents are **caught-in or between incidents, struck-by incidents, and released energy incidents.**

- Caught-in or between- A construction worker is standing between a wall and an excavator. When the excavator spins around the counter weight pins the worker against the wall. Another example would be a worker placing his hand too close to a rotating gear and gets it pulled into the gear.
- Struck-by- A pedestrian struck-by a moving vehicle or an object falling from a higher level striking a worker below are examples of struck-by incidents.
- Released energy- A pipe releasing hot steam from a valve that is being removed or a flame shooting out of a malfunctioning engine are examples of released energy.

OTHER "LINE OF FIRE HAZARDS"

- Never walk under suspended loads.
- Cut away from your body.
- Never pull equipment or tools towards yourself. Position yourself so if the tool or equipment slips it will not hit you.
- Never work directly under other employees. If you must work at an elevated height, barricade the area below and use means to secure your tools.
- If you are hoisting materials, barricade the area.
- If you must use force when pushing or pulling, always look at where you would go if you slipped or equipment gave way.
- When working around equipment that could potentially start

up, always lock and tag it out.
- When working around mobile equipment make sure the operator knows you are there.

LINE OF FIRE HAZARDS

Line of Fire hazards are the most deadly hazards found in the construction and manufacturing sectors, second only to Slip, Trips/Falls.

Target Areas:

- Heavy Equipment
- Machinery
- Hand and Power Tools
- Material handling
- Mobile Equipment
- Excavations
- Unsafe Behaviors

BEST PRACTICES TO AVOID LINE OF FIRE INCIDENTS/HIERARCHY OF CONTROLS

The best way to avoid the mentioned incident types is to **eliminate the related hazards** whenever possible. By totally eliminating the hazards there is no chance that you or anyone else in the work area can be injured by that hazard.

When elimination is not possible, engineering controls are the next best choice in protecting yourself from injury. Some engineering controls that could protect you from line of fire incidents include physical barriers, guarding around moving parts, and toe boards on elevated work platforms to prevent objects from falling to the area below.

Total elimination of hazards is not always possible and engineering controls may not be feasible or they can fail. Because of this reality, it is important to decrease your chance of being a victim of line of fire injuries by not putting yourself in

harm's way in the first place. Understand the work tasks that are going on around you and the associated hazards. Ask yourself what is the worst that can happen or what will happen if a certain safeguard fails.

HAZARDS AND SOLUTIONS

Hazard: Excavation work. Excavation workers are more than twice as likely to be killed than workers in any other type of construction work, according to OSHA. A cave-in can occur when the soil is unstable; too much weight is too close to the sides of the excavation; water is in the excavation site; or conditions change because of weather, including heavy rain, freezing and melting.

Solutions: OSHA requires a competent person to be onsite during excavations. This person must be trained in recognizing hazards that exist and could occur, and must have the authority to take corrective action if necessary. He or she must inspect the worksite and any protective systems every day before work begins.

Hazard: Unguarded machinery. Workers can have parts of their bodies or clothing pulled into machinery, resulting in severed/lost limbs or even death.

Solutions: Workers should never use a piece of machinery that is not properly guarded, and should be trained to recognize and avoid unsafe machinery conditions.

Hazard: Caught in a piece of equipment or machinery.

Solutions: Workers should be trained on proper lockout/tagout procedures, including turning off vehicles and equipment before beginning repair or maintenance work. Vehicles should be stopped with wheels blocked to prevent movement, and bulldozers and other similar equipment should have their blades lowered before making repairs or when not in use.

FINAL WORD

The golden – rule of self – preservation in the workplace is to recognize and then avoid situations where safety is endangered. Unfortunately, statistics show that workers do not practice the golden-rule all the time.