JHAs and More

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JHA, JSA, AHA, STA, PTP, etc…

Why is it Important?

One of the best ways to determine and establish proper work procedures is to conduct a job hazard analysis.

A job hazard analysis is one component of the larger commitment of a safety and health management system.

Why is it Important?

Every day workers are injured and killed in the workplace.

You can help prevent workplace injuries and illnesses by looking at your workplace operations, establishing proper job procedures, and ensuring that all employees are trained properly.

Washington Post
January 18, 2017

One by one, 3 utility workers descended into a manhole. One by one, they died.

By Samantha Schmidt

The Regulations…

- 1910.132 – personal protective equipment

  The employer shall assess the workplace to determine if hazards are present, or are likely to be present, which necessitate the use of personal protective equipment (PPE).

- 1910.146 – confined space

- 1910.147 – lockout / tagout

Job Hazard Analysis (JHA)

- A JHA is a technique that focuses on job tasks as a way to identify hazards before they occur.
- It focuses on the relationship between the worker, the task, the tools, and the work environment.

Hazard

- Defined as a condition or activity that, if left uncontrolled, can result in an injury or an illness.
- Simply put, it's a potential for harm.

Prioritizing

Areas/equipment/tasks…

1. With the highest injury / illness rate
2. With the potential to cause severe or disabling injuries / illness
3. Which one simple human error may cause a severe injury
4. That are new or have gone through change in process or procedures

Worker Involvement

Activity Hazard Analysis (AHA)

Activity/Work Task: Field Survey – The Blairs Building F1	Overall Risk Assessment Code (RAC) (Use highest code)	
Project Location: Montgomery County, Eastern Ave + Blairs Hill Rd	**Risk Assessment Code (RAC) Matrix**	
Contract Number: 113409	**Severity**	**Probability**
Date Prepared: 01/19/2015		Frequent / Likely / Occasional / Seldom / Unlikely
Prepared by (Name/Title): Federico Tersoglio / Safety Officer Company: christopher consultants, ltd.	Catastrophic	E / E / H / H / M
	Critical	E / H / H / M / L
Reviewed by (Name/Title):	Marginal	H / M / M / L / L
	Negligible	M / L / L / L / L
Notes: (Field Notes, Review Comments, etc.)	Step 1: Review each **"Hazard"** with identified safety **"Controls"** and determine RAC (See above)	
	"Probability" is the likelihood to cause an incident, near miss, or accident and identified as: Frequent, Likely, Occasional, Seldom or Unlikely.	**RAC Chart**
	"Severity" is the outcome/degree if an incident, near miss, or accident did occur and identified as: Catastrophic, Critical, Marginal, or Negligible	E = Extremely High Risk H = High Risk
	Step 2: Identify the RAC (Probability/Severity) as E, H, M, or L for each "Hazard" on AHA. Annotate the overall highest RAC at the top of AHA.	M = Moderate Risk L = Low Risk

Job Steps	Hazards	Controls	RAC
• Recover, occupy and check existing survey control within proximity to the proposed construction limits	• Walking outside the construction limits and in proximity to traffic along Eastern Avenue and Portal Drive	• Site required PPE will be worn at all times when entering this site until construction completion • Observance of traffic control measures and current traffic patterns and location of excavation equipment operations. • Observance of pedestrian traffic	L
• Stake Site for Construction at ground surface level	• On-site traffic, excavation/pile driving equipment movement/operations and crane movements	• Insure to establish eye contact with nearby traffic. • Observe machinery operating areas prior to commencement of daily work • periodic visual monitoring of on-site movement. • Insure all OSHA requirements are in place.	M
• Stake Utilities Tie-out locations	• Civilian pedestrian and vehicular traffic	• Insure to be at a safe distance from pedestrian traffic and implement any traffic control measures when working within the road. Time stakeout with traffic patterns. • Utilize confined space procedures if entry to tie-in structure is required. Reference ccl's confined space program for mandatory procedures.	M

Appendix B

Job Hazard Analysis Worksheet

Code:	Task/Equipment Location:
Task/Equipment Description: Transferring Liquid Nitrogen	
Analysis By:	Approved By: (Include signature or initials)
Date:	Date:

Sequence of Steps or Activities	**Hazards or Potential for Mishaps** (Examples include physical and chemical hazards, fire, falls, radiation, electric shock, noise, heat and ergonomic)	**Preventive Measures** (Include personal protective equipment and training)
1. Check Oxygen monitor	• Oxygen deficiency due to malfunctioning monitor	• Ensure oxygen monitor is operating properly prior to bringing LN2 cylinder into the lab.
2. Inspect LN2 cylinder at dock	• Oxygen deficiency or frostbite	• Check cylinder for damage, leaky valve, or faulty gauge. • Ensure cylinder is appropriate size. • Use proper cryogenic proof gloves and chemical splash goggles throughout process
3. Cart liquid nitrogen to the room. Place liquid nitrogen tank close enough to the NMR. Place cart outside of the room.	• Improper weight distribution may cause the loss of control of the cylinder cart and cause physical injury. • Injury (strain or sprain) due to improper material handling.	• A good working cylinder cart and an able body to carry the large cylinder on the cart. • Use the freight elevator.
4. Secure LN2 cylinder in lab.	• Blocked egress due to movement in an earthquake.	• Position cylinder in a designated area. • Secure seismic restraints.
5. Connect threaded end of the transfer tube to the "liq" valve of the cylinder.	• The transfer tube needs to be attached smoothly so it does not damage the valve. • Oxygen deficiency due to leaky fitting	• Additional help should be requested to hold up the transfer tube while attaching to the cylinder. • Do a leak check • Do not over tighten. Use designated tools.

Building L.I.F.E.® JHA (Job Hazard Analysis)

Project: _____ **Date:** _____ **Contractor:** _____ **Page** ___ **of** ___

Description of Work: _____ **JHA#** _____

Prepared By: _____

Permits: ___ Hot Work __ Energized Work __ Ladders Last Permit __ Ground Penetration __ Confined Space

__ Roof Access __ Scaffold

Risk Reduction Considerations

Hierarchy of Controls

1. Elimination
2. Substitution
3. Engineering
4. Isolation
5. Administration
6. Personal Protective Equip.

Scan the QR Code for more info.

Systems Approach

Environment (E): Engineering Controls, Working Conditions

Capability (C): Training, Education, Age, Fitness

Behavior (B): Worker Actions, Factors driving motivation

Risk Factors

Risk = Frequency x Likelihood x Severity

Consider ways to:

Reduce the Frequency of exposure to a hazard

Reduce the Likelihood of injury

Reduce the potential Severity if the incident happens

Sequence of Basic Job Steps	Hazards Associated with Each Step	E,C,B	Eliminate or Control the Hazard
Step 1: (Example) Cross the street on foot.	Struck by Car	B	Look both ways before crossing.
		B	Wear reflective vest.
		E	Designate crosswalks
	Slip/Trip on walking surface	B	Look for slip/trip hazards
		C	Receive Training on traffic Awareness
Step 2: (example) Load Groceries into car	Strain or sprain lifting the groceries from the cart to the trunk.	B	Lift one or two lower weight bags at a time.
		B	Try not to over-reach or overextend
	Struck by passing car in parking lot	E/B	Pay attention to surroundings and know where to get
			out of the way.
		C	Complete "Lifting Training"
Erase all examples to complete your PTP			


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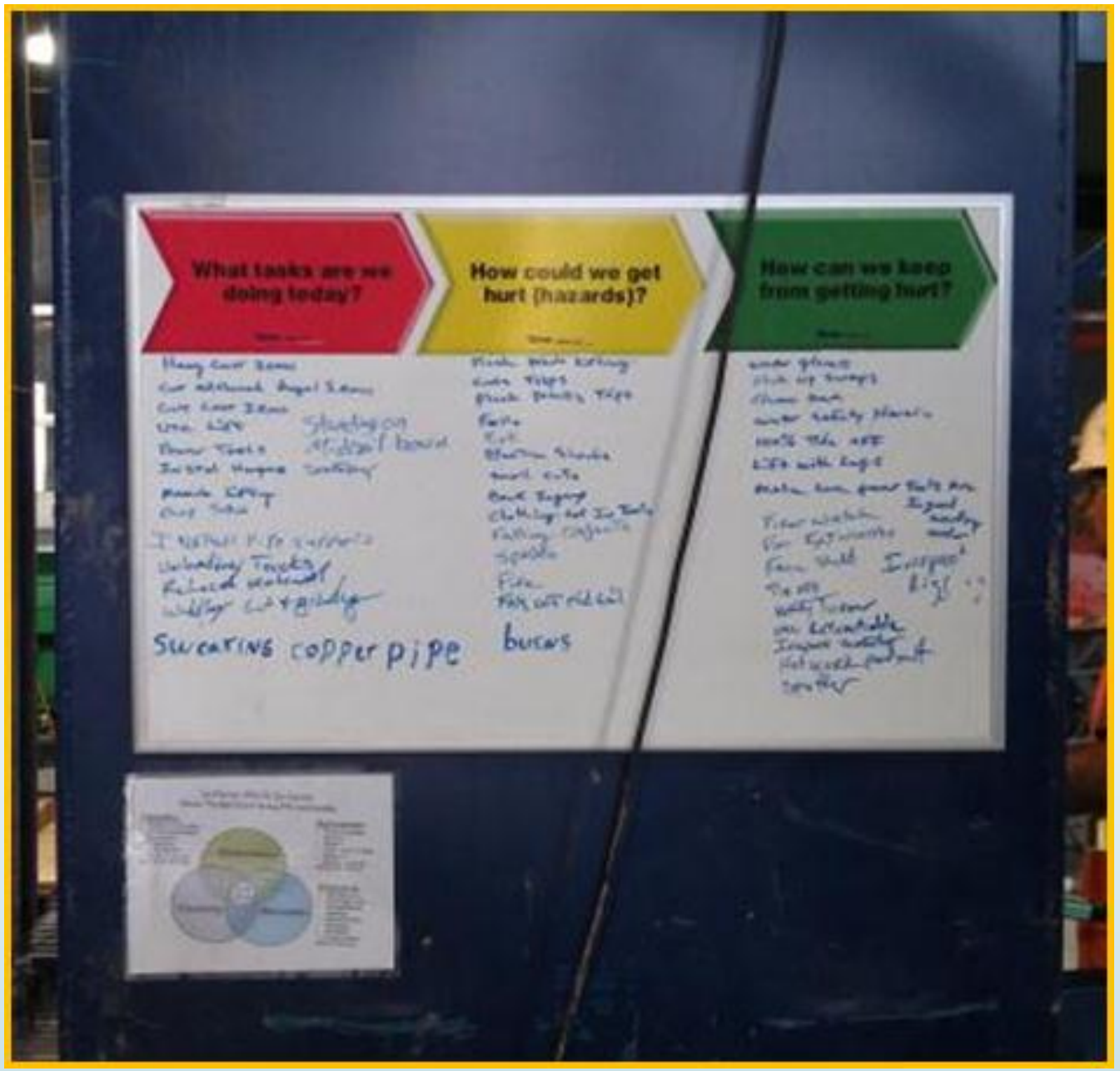
What tasks are we doing today?
How could we get hurt (hazards)?
How can we keep from getting hurt?
Sweating copper pipe
burns

Q5 to Stay Alive

1. What can go wrong?
2. What are the consequences?
3. How could it happen?
4. What are the contributing factors?
5. How likely is it the hazard will occur?

Hierarchy of Controls

1. Engineering
2. Administrative
3. PPE

Should I Get Help?

- If your employees are involved in many different or complex operations you should seek outside help

- Remain involved in the process

Who Can Help?

- Insurance company
- Private safety consultant
- BWC
- OSHA

Thank You!

Questions?