

DRIVEN BY VALUE



Monthly Contractor Safety Meeting

December 2018

Meeting Agenda

- Facilities
- Emergency Exits/Meeting Point
- Cell Phones
- Safety Share
- This months focus
 - Environmental Share
 - The Cost of Waste Disposal
 - Special Presentation
 - Matt Cohea – H&E Equipment Services
 - Job Risk Assessment
 - New Form and Training

Environmental Share

The Cost of Hazardous Waste Disposal

Types of Hazardous Waste

- Off Spec or Unused Chemicals
- Solvent & Grease Rags
- Aerosol Can Residues & Paint Debris
- Gasoline, Diesel, Flammable Aerosols



In 2017, we purchased approximately 9,700 cans of aerosol paint for use on site.

Specific Disposal Costs:

- One bin of Solvent & Grease Rags (16,000 lbs) \$ 19,000 – Shipped 7 bins in 2017
- One drum of Aerosol Can Residue, Paint Debris \$80 to \$470 – Shipped 17 loads in 2017
- One Lab Pack of Off Spec/Unused Chemicals \$80 to \$600 – Shipped 18 loads in 2017



Hazardous Waste Disposal Costs?

- Monthly cost of Hazardous Waste disposal \$50,000 to \$70,000



What you can do to help?

- Inventory Control - Purchase the amount you need and will use!
- Use up all of the product you purchase.
- Good Housekeeping (Leak Prevention, Waste Segregation)
- Prevent SPILLS
- Training



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2018

Morenci Job Risk Assessment Form User Training

The Importance of Risk Assessment

- Murphy's law is alive and well
- Safety doesn't just happen- it is planned.
- We can't see into the future, but a Job Risk Assessment helps!
- Our job is to manage risk. Our jobs are risky.
- Risk Assessment processes are not consistently identifying and implementing effective critical controls.
- A majority of accident investigations indicate ineffective risk assessment contributed to event.

Agenda

- Risk assessment / What and why
- The Good, the Bad, and the Ugly
- Terms and definitions
- When to perform a risk assessment
- JRA tool
- Close- Urgency!



Job Risk Assessment: Identifying hazards, assessing risk, and implementing controls for all energy sources, (including behaviors) so that injury will not occur.

Was this good risk assessment?



Clifton

Runaway truck on steep grade



Runaway truck

[PFE - Safford Shovel Panels](#)

Discussion: The Good, Bad, Ugly



A summer project identified that 30-40% of risk assessments, employees:

- do not understand
- perform Ineffective assessments
- have low value perception
- check the box

What is the current reality regarding Job Risk Assessment?

TERMS and DEFINITIONS

- Competent Person
- Critical Control
- Risk
- Fatal Risk
- Job Risk Assessment



What's the difference?

- Work place exam
- SOP
- Risk assessment

What does risk assessment provide that SOPs or Work Place Exams do not ?

You need to know:

Risk Assessment is mandatory prior to performing any task.

For simple or routine tasks with low level risks, all employees should be able to answer:

- How can injury occur?
- What are the risks?
- What controls have been applied to mitigate hazards?

For non-routine tasks, high level energy and risk, all employees must be able to answer:

- How can injury occur?
- What are the fatal risks?
- What are the critical controls?
- What controls have been applied to eliminate fatal risks?

Job Risk Assessment Tool -Front Page

Tool divided into 2 basic sections
 Front page – Risks
 Back Page - Controls

Fatal Risk Management Icons

*Reference the Fatal Risk Management
 Operator Reference Guide*

This section evaluates other risks,
 hazards or conditions that may cause
 harm or injury

FPM FREEPORT-McMoRAN		Job Risk Assessment		Date:	Shift:
Identify & evaluate job risks, exposure, hazards & potential energy, then mitigate them through the hierarchy of control. Complete this form at the job site with all involved employees. If conditions change, STOP work & review with all involved.					
Equipment #:		Work Area:			
Job Description:					
WO #:					
Routine <input type="checkbox"/> Non-Routine <input type="checkbox"/> Is there an SOP for the job? Yes <input type="checkbox"/> No <input type="checkbox"/> Was the SOP reviewed? Yes <input type="checkbox"/> No <input type="checkbox"/>					
Fatal Risk Management <small>Circle those that apply</small>					
	Blasting		Confined Space		Contact with Electricity
	Drowning		Hazardous Substance - Acute		Hazardous Substance - Chronic
	Entanglement and Crushing		Fall from Heights		Falling Objects
	Fire		Ground Failure		Lifting Operations
	Rail Collision		Rail Impact on Person		Uncontrolled release of Energy
	Vehicle Collision or Rollover		Vehicle Impact on Persons		
Additional Hazard Identification <small>Only mark those that apply</small>					
Work Environment			Energy Sources		
Are there any elements or conditions in the work environment that could injure you or others?			Have all potential energy sources that may injure you or others been identified?		
<input type="checkbox"/> Illumination / Visibility <input type="checkbox"/> Noise <input type="checkbox"/> Highwalls / Slopes <input type="checkbox"/> Water <input type="checkbox"/> Atmosphere (H ₂ S, CO ₂ , air, mist etc.) Other: _____			<input type="checkbox"/> Electricity <input type="checkbox"/> Hydraulic <input type="checkbox"/> Pneumatic / Air <input type="checkbox"/> Thermal <input type="checkbox"/> Chemical / Corrosive Other: _____		
<input type="checkbox"/> Engulfment <input type="checkbox"/> Wildlife / Insects <input type="checkbox"/> Weather <input type="checkbox"/> Dust			<input type="checkbox"/> Radiation <input type="checkbox"/> Mechanical <input type="checkbox"/> Gravity <input type="checkbox"/> Stored / Under Pressure <input type="checkbox"/> Explosive		
Line of Fire			Personal / Behavior		
Will any proximity to work, movement, release or change in condition cause you or others injury?			What personal conditions, actions or thoughts like complacency, could result in injury to you or others?		
<input type="checkbox"/> Overhead Work <input type="checkbox"/> Power Lines / Cables <input type="checkbox"/> Material Handling <input type="checkbox"/> Trenching / Excavating <input type="checkbox"/> Tooling Failure <input type="checkbox"/> Constricted Work Area Other: _____			<input type="checkbox"/> Fly Metal <input type="checkbox"/> Arc Flash / Blast <input type="checkbox"/> Objects in Motion <input type="checkbox"/> Pipe Handling <input type="checkbox"/> Mobile Equipment <input type="checkbox"/> Congestion / Traffic <input type="checkbox"/> Slips / Trips / Falls <input type="checkbox"/> Sprain / Strain <input type="checkbox"/> Ascending / Descending <input type="checkbox"/> Pinch Points: Hand, Body <input type="checkbox"/> Footing / Uneven Ground <input type="checkbox"/> Ergonomics Other: _____		
<input type="checkbox"/> Housekeeping <input type="checkbox"/> Training / Competence <input type="checkbox"/> Communication <input type="checkbox"/> Equipment Interaction <input type="checkbox"/> Fatigue <input type="checkbox"/> Hydration					

DRAFT August 30, 2018

Revision 1.

Hierarchy of Control		Controls Stop work if controls are insufficient or missing	
Elimination		<input type="checkbox"/> LOTOTO	<input type="checkbox"/> Vehicle Safety Devices <input type="checkbox"/> Rest / Breaks
Substitution		<input type="checkbox"/> Access Control / Barriers	<input type="checkbox"/> Process / SOP <input type="checkbox"/> Spotter / Signal Person
Engineering		<input type="checkbox"/> Flagging / Signage	<input type="checkbox"/> Blocking / Isolation <input type="checkbox"/> Fire Watch / Fire Watch /
Administrative		<input type="checkbox"/> Equipment / Tooling	<input type="checkbox"/> Fire Suppression System <input type="checkbox"/> Lights / Signals
Behavior		Other: _____	
PPE		*If a control causes more of a hazard, apply for a variance	
Permits / Forms Proper execution of a permit is the control, not the paper			
<input type="checkbox"/> Hot Work	<input type="checkbox"/> Critical Lifting	<input type="checkbox"/> High Wall	<input type="checkbox"/> Blasting
<input type="checkbox"/> Blue Stake	<input type="checkbox"/> Confined Space	<input type="checkbox"/> Dump	<input type="checkbox"/> HDPE
Other: _____			
Behavior Individual willingness & focus on safety			
<input type="checkbox"/> Inspect Equipment / Tools	<input type="checkbox"/> Consequence Thinking	<input type="checkbox"/> Pre/Post Job Housekeeping	<input type="checkbox"/> Fit for Duty
<input type="checkbox"/> Work Place Examination	<input type="checkbox"/> Hand / Body Placement	<input type="checkbox"/> 3 Points of Contact	<input type="checkbox"/> Communication
Other: _____			
PPE Beyond minimum required			
<input type="checkbox"/> Fall Protection	Skin Protection: Bugs, <input type="checkbox"/> Sun <input type="checkbox"/> Rubber Suits: Acid, Rain, Boots, etc.		
<input type="checkbox"/> Arc Flash Clothing	<input type="checkbox"/> Face Shields / Goggles <input type="checkbox"/> Monitor: Gas, Chemical, Radiation, etc.		
<input type="checkbox"/> Welding Gear	<input type="checkbox"/> Respirator / Supplied Air <input type="checkbox"/> Hearing Protection: Plugs, Double		
<input type="checkbox"/> Flotation Device	<input type="checkbox"/> Clothing for Weather <input type="checkbox"/> Gloves Suitable for Job: Leather, Rubber, Kevlar		
Other: _____			
Fatal Risk Hazards List the main fatal risks / hazards		Critical Controls : List the main control for the hazard	
_____		_____	
_____		_____	
_____		_____	
_____		_____	
_____		_____	
Main Lockout Points/ Station/ Box		In case of Emergency	
1. _____	Phone: dial 865-6600		
2. _____	Radio: press the ORANGE button or call out "May Day, May Day, May Day"		
3. _____	Evacuation point: _____		
4. _____	<input type="checkbox"/> Fire extinguisher inspected & in area		
5. _____	<input type="checkbox"/> Shower / eye wash station in area Spill Hotline: 865-SPIL (7745)		
Acknowledgement & Commitment to Safety			
I am responsible for my safety & my coworkers safety.			
I am obligated to stop unsafe work & I will stop unsafe work.			
Payroll # _____	(& Contractor Company) _____	Initials _____	Payroll # _____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Job Lead Name: _____		Payroll # - _____	Date: _____
Supervisor: _____		Contact Info: _____	Time: _____

Back of Form is for identification of controls needed

Transfer fatal risks identified and list critical controls identified on front page

Job lead / Supervisor – see comment boxes on JRA worksheet

Formal - Informal?

- **Formal – Effective risk assessment using the JRA form**

A Job Risk Assessment form should be performed for any task with a potential hazard such as:

- a. New or Non-routine tasks which do not have established procedures to control risks.
- b. Tasks which generate exposure hazards to multiple work groups.
- c. Tasks with fatal risks.
- d. As deemed necessary by supervision

- **Informal- Consequence Thinking**

- a. In some cases, formal risk assessments are not practical.
- b. Example: repetitive operational work such as haul truck operations.
- c. Consequence thinking identifies “Hazards in the moment”. The expectation is to assess hazards and take appropriate action as necessary.... while performing work.
- d. Also called situational awareness.

The image shows a 'Job Risk Assessment' form from Freeport-McMoRan. The form is designed to be filled out by a worker and a supervisor. It includes sections for 'Hazard Identification', 'Risk Assessment', 'Control Measures', and 'Signatures'. The 'Hazard Identification' section has a grid for identifying hazards, with columns for 'Hazard', 'Frequency', 'Severity', and 'Risk'. The 'Risk Assessment' section has a grid for assessing the risk, with columns for 'Risk Level', 'Control Measures', and 'Residual Risk'. The 'Control Measures' section has a grid for identifying control measures, with columns for 'Control Measure', 'Residual Risk', and 'Residual Risk Level'. The 'Signatures' section has lines for the worker and supervisor to sign. The form is dated August 15, 2018.

Activity



Formal vs Informal Risk Assessment?

- Haul trucks are operating on a blind corner where there is spillage. Informal
- Samplers retrieving drill clippings in a drill coral Formal
- Several crafts are involved replacing a conveyor belt. Formal
- Operating stripping machine Informal
- New employees are required to clean around a conveyor. Formal
- Experienced employees cleaning under conveyors Formal
- Same jobs, same risks, same controls, different crews and bays Formal
- Installation of HDPE next to a high wall Formal
- Opening an inspection door on a conveying system to check a chute. Informal

Activity



Same JRA - New JRA?

- Same job, same risks, same controls, in 3 different bays and crews **New**
- Crew A is piping north side of SWMFL, Crew B is piping south side **New**
- A mechanic joins an existing task on 531 haul truck **Same**
- A mechanic begins a new task on 531 haul truck **Same**
- Mechanics, electricians, and contractors are working on 41 shovel **Same**
- A crew resumes the same task that was not completed yesterday **New**
- Use a single JRA for all activities related to task listed
- Use existing JRA if workers or activities are added to same task listed
- When approaching an area where a task is being performed and a JRA has been created, perform a separate JRA if task:
 - ✓ The task is non related to existing JRA
 - ✓ Presents different hazards and controls from an existing JRA
 - ✓ Coordinate work as necessary with those in area

The Form: Checking for quality.....

1. Writing is legible and information is accurate: Date, Area, Supervisor
2. “Job Description” is clearly understood
3. Permits listed match the task and are available to audit
4. Critical controls and hazards are listed and match task
5. It has been reviewed by team
6. Controls verified in place
7. Crew can explain hazards and controls
8. JRA demonstrates effective thought process



Must haves for success.....

For a JRA to be effective long term, what is needed relation to :

The Organization?

- Training Support Expectations Metrics Accountability

The team?

You?

RESPONSIBILITIES

Employees: Understand the purpose of Job Risk Assessment forms and how to use them. If more than one person is involved with task, use team approach. Understand job steps, task coordination, hazards and control implementation. Use Stop Work responsibility for deviations from JRA plan. File quality /established JRA's for future reference. Own the JRA for the task being performed. Share learnings with team. Read to understand existing JRAs when entering an area where work is in progress.

Supervision: Train employees on purpose and use of tool. Make available the resources and time necessary for employees to formally analyze tasks. Participate with employees performing JRAs, with a minimum daily review.. Ensure compliance with performance expectations: are they being performed as expected? Frequently audit quality to mentor, intervene, and coach employees. Verify quality by reviewing hazards and controls, in alignment with Fatal Risk Management. Share learnings with division.

Management: Ensure:

- Infrastructure is defined to support JRA process: Training, time, expectations of employees and supervision
- Metrics for JRA processes established for division
- Compliance with JRA's processes
- JRA's are completed and stored in accordance with FMMO document control requirements.
- A plan for compliance : Expectations, metrics and monitoring.
- Learnings are shared with company.

Health and Safety Department: Ensure FMMO has its own Safe Production Standard to regulate the development and use of Job Risk Assessment methods. Audit the JRA processes to identify gaps within the process. Participate in JRA development for High Risk activities or as requested by employees. Assist division in evaluation of division effectiveness.



One more time.....Why do we do this?

[PFE - Morenci Haul Truck Wishbone](#)

You make the difference!

3 Prioritized Safety Goals

- 1.Prevent Fatalities*
- 2.Reduce Incident Severity*
- 3.Improve Continuously*

What has been noticed this lately?

Not wearing safety glasses



POWERED
BY COPPER



**Make
Safety
Personal...**

