

January Contractor Safety Meeting

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Jan 2020



**PROVEN ASSETS.
FUNDAMENTAL VALUE.**

First and Foremost



To Begin

- **Bathrooms – To the front of the room**
- **Emergency Exits to the side**
- **Cellphones on silent please**
- **Safety Share anyone?**
- **Focus this month:**
 - **Environmental Share**
 - **Excavation and Trenching**
 - **RCA Basics**
 - **Parking**
 - **Work Place Examinations**
 - **Hard Hat in Truck Changes**
 - **OSHA training class**
 - **FMI Contractor Public Portal**

What is the Backflow Prevention Device Program?

Devices/units that are installed on water service lines or at plumbing fixtures to prevent contaminants from entering the potable (drinking) water systems.



What to know about Backflow Prevention...

- Program covers all potable (drinking) water systems at both the mine & townsite.
- Arizona Department of Environmental Quality requires Backflow Prevention Devices to be tested annually.

What you can do.....

- Notify Environmental Services and Contractor Management when:
 - a new or replacement of a defective Backflow Prevention Device/Unit is needed.
 - an existing Backflow Prevention Device/Unit will need to be moved or eliminated.
- If you see a potential problem with a backflow device (leaking, broken, missing, etc), inform your supervisor and/or call Environmental Services. **NO backflow device can be installed, removed and/or repaired without approval from Environmental Services.**

Additional information....

- Potable/non-potable water signage is **critical** to properly communicate for everyone's safety. If signage is missing, report it to your supervisor.
- **REMEMBER: Potable = Drinking Water,
Non-Potable = Water Unsafe to Drink**



Excavation and Trenching

5.14.1 Excavation Permits

- An excavation permit is required for any excavation (digging, trenching or drilling). Permits must be completed prior to beginning excavation.



Excavation and Trenching

5.14.1 Excavation Permits

- Require that all trenches and excavations over 4 feet deep be sloped, shored, benched, braced, or otherwise supported. Contractors also may use a trench box. When soil conditions are unstable (as determined by the competent person), excavations shallower than 4 feet shall be sloped, supported, or shored.
- Initiate the excavation permit following site-specific requirements and forward the completed form to the project engineer

Excavation and Trenching

5.14.1 Excavation Permits

- Ensure that all approval signatures required on the permit are obtained after the individuals have reviewed the field drawing
- Present the completed excavation permit to the machine operator.
- Identify by name, the on-site Qualified Person for the excavation(s).
 - Can identify all existing hazards during the trenching and excavation process.
 - Is trained in standards and is given authority to inspect excavation and trenching conditions.

Excavation and Trenching

5.14.1 Excavation Permits

- The determination and design of the supporting system shall be based on careful consideration of the following: depth of the cut; anticipated changes in the soil; ground movement caused by vehicle vibration or blasting, and other disturbances

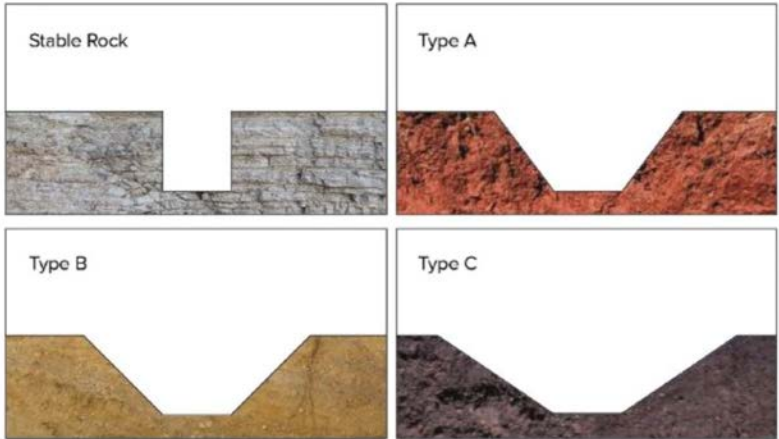
Slope Stability of Excavations and Trenches

5.14.1 Excavation Permits

- The machine or equipment operator will not begin excavation until the permit, signed by all required personnel, is present at the excavation site.
- The qualified person shall classify the soils of an excavation as “A”, “B”, or “C”

and shall determine safety measures and recommendations appropriate for the soil classification.

Soil Type	Max. Slope (H:V)	Slope Angle (degrees)
Stable Rock	Vertical	90
Type A	3/4 : 1	53
Type B	1 : 1	45
Type C	1-1/2 : 1	34



The diagrams illustrate the required slope stability for different soil types. Stable Rock shows a vertical excavation. Type A shows a 3/4:1 slope. Type B shows a 1:1 slope. Type C shows a 1-1/2:1 slope. Each diagram includes a color-coded soil sample image and a corresponding cross-section diagram.

Soil Classification

- Soil Type A - Most stable soil type. Includes clay, silty clay, and hardpan. No soil is Type A if it is damaged/disturbed, or has seeping water. No soil that has been previously disturbed will be considered Type A.
- Soil Type B - Medium stability. This includes silt, sandy loam, medium clay and unstable dry rock; previously disturbed soils unless classified as Type C.
- Soil Type C - Least stable. This includes gravel, loamy sand, soft clay, submerged soil, or dense, heavy, unstable rock, and soil from which any water is seeping.

Excavation and Trenching

5.14.1 Excavation Permits

- The excavation permit will remain at the site of the excavation during the entire time the excavation is being accomplished.
- When the excavation operation has been completed, the excavation permit will be filed by the contractor.



Blue Stake

5.14.2 Underground Utility Location (Blue Stake)

The contractor shall identify and locate all underground utility/process or product lines prior to making any cut into the ground. This shall be coordinated through both the utility owner and the on-site resources.



Excavation and Trenching Protection Design

5.14.3 Designing Adequate Protection

- Some of the considerations the contractor must take into account in the design of adequate protection are:
 - Soil structure
 - Depth of cut
 - Water content of soil
 - Changes due to weather and climate
 - Superimposed loads
 - Vibrations
 - Other operations in the vicinity
 - Overhead power lines

Excavation and Trenching Protection Design

5.14.3 Designing Adequate Protection (Cont.)

- Underground obstructions
- The presence of underground utilities, product or process lines
- The presence of “disturbed” soils (either fill material or due to previous excavation activity)
- Air quality

Blue Stake Precautions

5.14.4 Special Precautions

- Underground utilities (gas lines, electric lines, communication lines, process lines, etc.) shall be located and identified prior to any excavation.
- Manual means of excavation shall be used to determine the final, actual location of the utility. Finding the **location of the lines may be through FMI's Blue Stake experts, or contact with the utility owning the lines.**
- Any penetration of a wall or floor must follow a similar process in terms of locating and approaching the hidden utility.

Blue Stake Precautions Continued

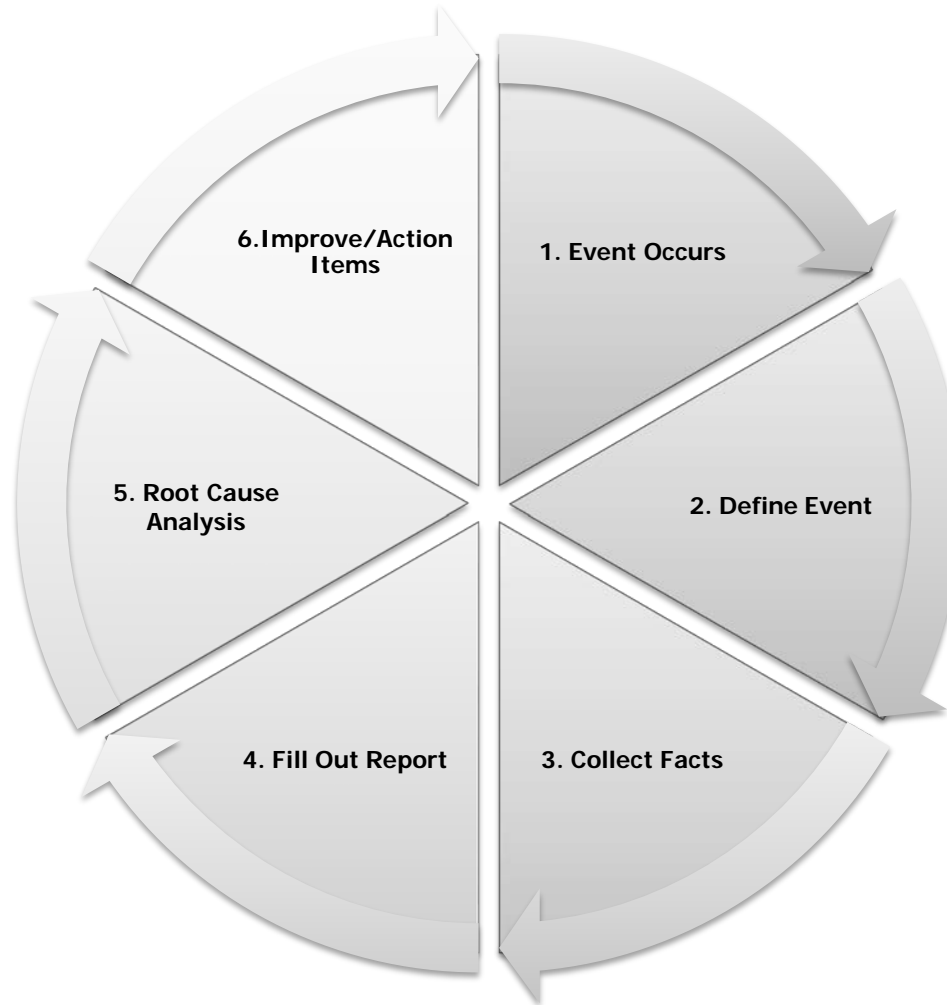
5.14.4 Special Precautions

- All excavations, when unattended, shall be demarcated to prevent unintentional or unauthorized access.
- If walking across the opening of the excavation is necessary, a properly secured and guarded walking surface shall be installed.
- No persons shall be allowed to be beneath any live load while the load is being placed into or removed from the excavation.

RCAs: Who Shall be in the Process

- Witnesses
- Project leads
- Supervisors/superintendents
- Employees who were directly affected
- Health and Safety
 - Note: For RCAs being done via contractors, Health and Safety will facilitate the RCA to ensure that it goes in the right direction, but the RCA will be written by the contracting group itself.

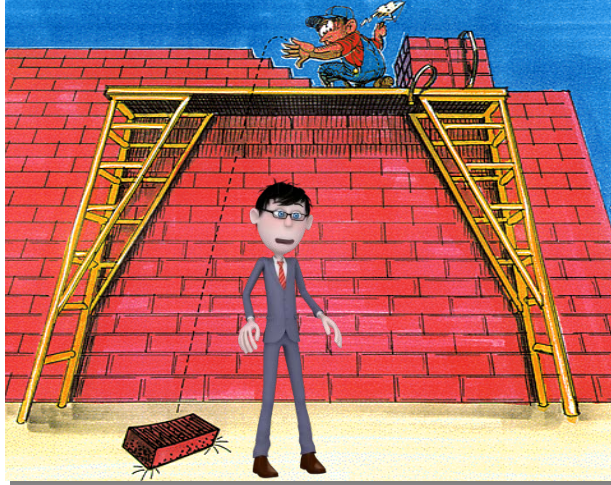
The Root Cause Analysis Process



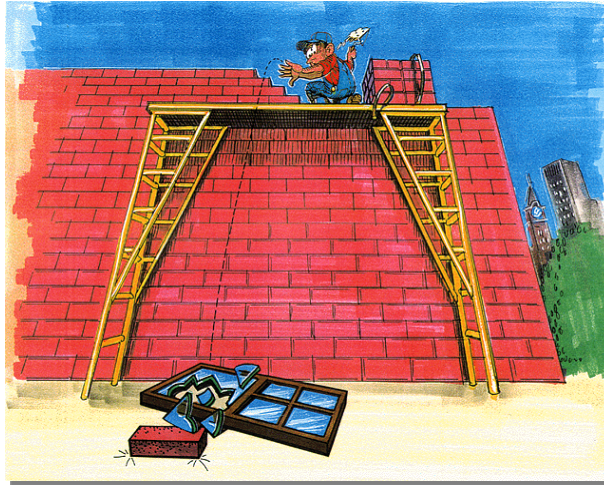
Event Occurs

- Provide proper care for people involved.
- Maintain the event scene and preserve evidence.
- Ensure we do not create other victims or events
 - Is there equipment that could move?
 - Are there other hazards?

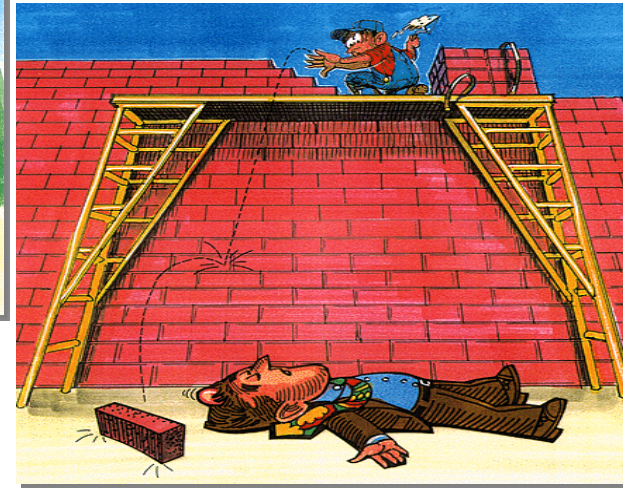
Define the Event



Near miss?



Property damage?



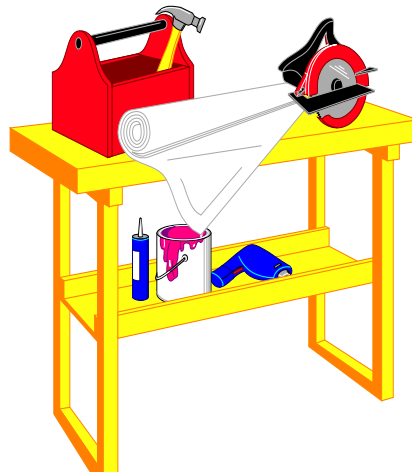
Serious injury?

Categories of Evidence

People

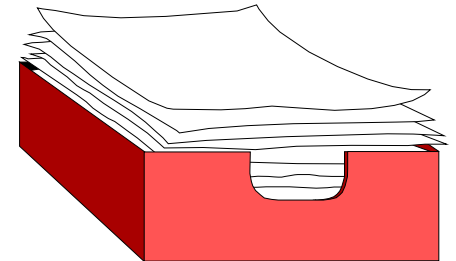


Parts



Positions

Paper



Photographing an event scene

- Take a picture of the entire scene. Step far enough from the scene that you can fit the entire area in the camera frame.



The “5” Why’s

The following example demonstrates the basic process:

The vehicle will not start. (The Incident)

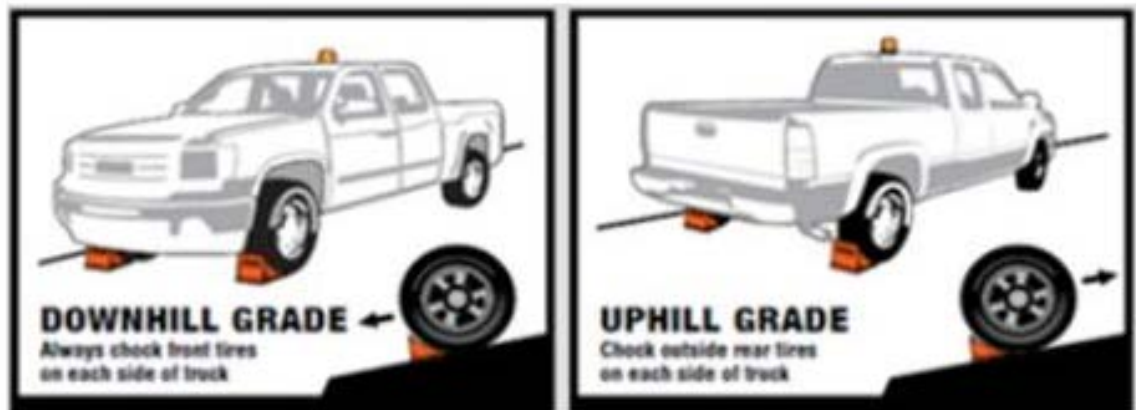


- *Why?*- The battery is dead. (Critical Factor)
- *Why?*- The alternator is not functioning. (Immediate cause)
- *Why?*- The alternator belt has broken. (Immediate cause)
- *Why?*- The alternator belt was well beyond its useful service life and not replaced. (Basic/Root Cause)
- *Why?*- The vehicle was not maintained according to the recommended service schedule. (Basic/Root Cause) (Process)

Aftermath:

- **Action Plan and Effectiveness Check:**
 - SMART – Specific, Measurable, Attainable, Realistic, Timely
 - Action items are assignments which will ensure the root cause is corrected and recurrence will not be an issue.
 - Provide specific details around the action item when making assignments.
 - Assign the effectiveness check in a proper time frame to properly evaluate the effectiveness of the implemented actions.

Parking According to Grade



Please note:
Equipment over 240
tons must use chock
on ALL 4 TIRES.

New Work Place Examinations



Rev. 002 – January 6, 2020

WORK PLACE EXAMINATION – Field

COMPETENT PERSON: _____ DATE: _____ SHIFT: _____

Area(s) Examined: _____

Some Area Hazards To Look For – Also Consider Other Adverse Conditions

Substantial berms	Downed overhead electrical lines	Energy trough - berms
Unsafe travel ways	Safe access – switch gear or pumps	Shovel pits
Cracks - roads or stockpiles	Inadequate lighting	Open high wall
Road conditions	Raveling or unstable high walls	Stockpile lighting
Ice, snow or slick roads	Drill corral	Stockpile berms or cracks or bellying

DESCRIPTION OF EACH ADVERSE SAFETY CONDITION	AIT or Work Order #	DATE CORRECTED

Work areas to be examined:

Places work will be performed during shift; Areas employees travel during the shift

Work Order Instructions: Work Orders will be created in SAP for each adverse condition not promptly corrected. In order to tie the work order back to the WPE, please include the following: Short description: WPE (Description of Adverse Condition); Long description: name of Competent Person, Date and Shift; PmActType: SAF; Notfctn: WPE1 (under 80 Regulatory)

AIT Instructions: Action Items will be created in AIT for each adverse condition not promptly corrected prior to the end of shift in which the WPE was done. In order to tie the action item back to the WPE, please include the following: Summary: WPE (Description of Adverse Condition); Description: name of Competent Person, Date and Shift; Category: "Division Name"; Item Affected: Audit; Type: Work Place Examination

Adverse Conditions: Adverse conditions promptly repaired prior to employee exposure need to be noted on form.

Adverse conditions not promptly corrected will be controlled with flagging, barricade or berms and tags/signs detailing adverse condition until corrected. Once corrected, this original WPE must have date of correction added.

Communication: Adverse conditions not promptly corrected must be communicated to employees prior to work beginning in the affected area. Example of required communication may include: tailgate safety meetings, radio notification, flagging & tagging, barricades with signs, etc.



Rev. 002 January 6, 2020

WORK PLACE EXAMINATION – Fixed Plant

COMPETENT PERSON: _____ DATE: _____ SHIFT: _____

AREA(s) Examined: _____

Some Area Hazards To Look For – Also Consider Other Adverse Conditions

Inadequate berms, road conditions	Exposed electrical conductors	Damaged/missing machine guarding
Unsafe travel ways	Obstructed electrical enclosures	Raveling or unstable high walls
Spills/muddy conditions in walkways	Inadequate lighting	Accumulation of combustibles
Damaged handrails or grating	Damaged e-stops, pull cords	Life rings/floatation vest unavailable
Damaged stairs, steps, ladders or platforms	Damaged chemical/electrical/warning labels or signs	Damaged/inaccessible Eyewash stations

DESCRIPTION OF EACH ADVERSE SAFETY CONDITION	WORK ORDER/AIT #	DATE CORRECTED

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On September 30, 2019, MSHA published a technical amendment, “Examinations of Working Places in Metal and Nonmetal Mines.” The technical amendment recognized the legal effect of the court’s order that MSHA revise 30 CFR 56.18002 and 57.18002 to reinstate the regulatory

- provisions established by the Agency’s 2017 final rule.

A competent person designated by the operator shall examine each working place at least once each shift ***before miners begin work*** in that place, for conditions that may adversely affect safety or health.

WPE Continued

- All adverse conditions must be documented, even if they are corrected.
- All adverse conditions must be communicated prior to starting work.
- Employees are prevented from working in areas where noted conditions present an imminent danger, until the danger is abated.

Hard Hats: Good News!!!!

As of January 1, 2020, Hard Hats will no longer be required while operating an enclosed-cab company vehicle, on or off property.

We understand this is a change that might take some getting used to but is one that we feel best exemplifies the culture that we strive to achieve.

The intent of Hard Hats is prevent injuries from falling/projectile objects; however, over the years we have experienced several injuries resulting from wearing hard hats in vehicles.

- **Hard Hats will still be required once you have exited the vehicle, unless you are in a PPE Exempt Area.**

Need OSHA Training?



Occupational Safety and Health Administration

- MODOC
- January 16th (Thursday this week)
- 7 am
- Room for at least 10 more people
- Training department #: 928 865 7807 (Bill Wiley)



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Morenci

Welcome to the Morenci Contractors Site

[Contractor Onboarding and Required Forms](#)

[Dolphin/MRAP/Sphera/Comply Plus](#)

Contractor Safety Manual

[Contractor Safety Manual](#)
[Contractor Health & Safety Manual Part 1 \(ENGLISH\) \(Updated Feb 2018\)](#)
[Contractor Environmental Occupational Health and Safety Requirements](#)

[Contractor Monthly Safety Meetings](#)

Electrical Policies and Procedures

[09-001 Low Voltage Energized Work Policy Rev 0 \(.doc\)](#)
[98-001 Electrical Personnel Protective Clothing Equipment Policy Rev 6 \(.doc\)](#)
[98-006 Electrical Cord Inspection Policy Rev 4 \(.doc\)](#)
[98-008 Voltage Measurement Policy Rev 1 \(.doc\)](#)
[Energized Electrical Work Permit \(.xls\)](#)
[Non-Routine Lock Removal Form Rev 6 \(.doc\)](#)

[Radiation SOP Contractor Procedure.pdf](#)

[Contractor radiation form.xlsx](#)

[ENVIRONMENTAL Policies and Communications](#)



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Thank you for Watching



PROVEN ASSETS.
FUNDAMENTAL VALUE.