

Freeport Monthly Safety Content

The following slides have been provided to aid in compiling content for monthly Health and Safety meetings, tailgates, etc. with Freeport employees and contractors.

- Please keep in mind - some of this information is preliminary and may be pending complete investigations.

Best Practices

- Be familiar with content prior to presenting
- Hide/unhide incidents that are relevant to your team
- Interact with your audience, relate information to your specific work
- Update dashboards to share meaningful data ([Incident Summary - Power BI](#), [FRM - Power BI](#)). Contact your local Health and Safety staff for site-specific dashboards or external access.

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Freeport Safety Updates

March 2024

(Incidents and Communications from February 2024)

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Freeport Safety Incidents, Successes and Alerts February 2024

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Actionable Event: Anode Barrel Fire

Contact with Molten Material



Preliminary Incident Details

Operation	Atlantic Copper
Date / Time	February 3, 2024 / 10:15 p.m.
Event Type	Property Damage
Summary	Copper matte combined with slag oxide during the transfer of materials from the PS Converter to the anode barrel. This resulted in a violent reaction that blew material from the barrel onto nearby platforms, fiberglass panels and plant control wires. A fire started and lasted about 10 minutes before it was extinguished. No employees were in the area per standard of procedure guidelines.
Risk Category	Actionable – Significant (3) Likely (3)
Findings / Missing Controls	<ul style="list-style-type: none"> • Communication failure between crane operators and foreman • Failure to follow Material Transport standard operating procedure
Applicable Policies / Procedures	Material Transport standard operating procedure
Employee Condition	N/A
Contact	Ignacio Romero, Health and Safety Manager

Photos / Links





Falling Objects

Actionable Event: H-Beams Fall from Trailer during Transport

Preliminary Incident Details

Operation	PTFI
Date / Time	February 16, 2024 / 2:15 p.m.
Event Type	Near Miss
Summary	During transportation, two steel H-beams, and six purlins fell from a trailer and slid approximately 320 meters passing two LVs and one Bus. The steel was tied with a cargo strap to the flat track. The truck operator immediately parked and notified a supervisor.
Risk Category	Actionable – Significant (3) Likely (3)
Findings / Missing Controls	<ul style="list-style-type: none"> • Site lacking loadmaster • Maintenance road crews not present
Applicable Policies / Procedures	<ul style="list-style-type: none"> • Material Mobilization Checklist (MOC) • KPI-CTR-011: Truck Operation of Flatbed, Trailer, and Lowboy
Employee Condition	No personnel were injured.
Contact	Harriadi Rasidi, Project Safety Manager Mill Optimization Construction (MOC)

Photos / Links





Vehicle Collision

Actionable Event: Truck Collision

Preliminary Incident Details

Operation	PTFI
Date / Time	February 19, 2024 / 10:55 p.m.
Event Type	Property Damage
Summary	During transport, a trailer truck had brake failure leading to a collision with a second trailer truck. Damage resulted to both vehicles.
Risk Category	Actionable – Significant (3) Likely (3)
Findings / Missing Controls	<ul style="list-style-type: none"> Overuse of brakes caused the truck to continue moving after brakes were applied.
Applicable Policies / Procedures	<ul style="list-style-type: none"> KPI-CTR-011: Truck Operation of Flatbed, Trailer, and Lowboy
Employee Condition	No personnel were injured.
Contact	Lucky Hermawan, VP Maintenance Support

Photos / Links



• Final position of trucks



Geotab Speed Information – 021086

10:09 PM to 10:12 PM

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Potentially Fatal Events

February 2024

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Potential Fatal Event: Feed Box Rollover Onto Contract Worker

Preliminary Incident Details

Operation	Morenci
Date / Time	February 6, 2024 / 12pm
Type	Injury
Summary	A contractor was installing liners on a wet screen feed box that had been placed on the ground for maintenance. As the liners were added, the two-ton box rolled over onto the worker, who was trapped underneath. After unsuccessful attempts to move the box by hand, a forklift was used to free the worker.
Fatal Risk	Uncontrolled Release of Energy
Risk Category	Actionable
Risk Rating	Significant (3) Likely (3)
Findings / Missing Controls	<p>Blocking for maintenance work and energy isolation</p> <ul style="list-style-type: none">• Inadequate risk assessment• Pipe stands were BO and not intended for this use• Pipe stands were used instead of cribbing or engineered cradle• Placement of the stand cradle was not secure to the feed box• Ground was not level/potentially soft
Applicable Policies / Procedures	Control of Hazardous Energy
Employee Condition	Minor injuries resulting in restricted duty
Contact	Chris Seick, Metcalf Mill Manager Jacob Sweet, Health and Safety Manager

Photos / Links



Position of employee, placement of pipe stands and direction the feed box tipped.



Potential Fatal Event: 26-ton Boom Truck Tipped Over

Preliminary Incident Details

Operation	Safford
Date / Time	February 15, 2024 / 11:55 a.m.
Event Type	First Aid
Summary	Two mechanics and an apprentice were using a 26-ton boom truck to offload a bangboard (feed plate distributor) at the C4 laydown. As the load swung to the driver's side, the truck tipped over. The mechanic operating the boom and another mechanic standing on the bed of the truck jumped out of the way to avoid being in the line of fire. The apprentice was standing on the ground and out of the line of fire.
Risk Category	Actionable – Significant (3) Likely (3)
Findings / Missing Controls	<ul style="list-style-type: none"> • Only the rear stabilizers had been deployed • No footpads were placed under the rear stabilizers • The main outriggers were not used
Applicable Policies / Procedures	<ul style="list-style-type: none"> • Lifting Operations • Mobile Crane/Boom Truck Training
Employee Condition	The mechanic who jumped from the bed of the truck experienced first-aid level injuries to the ankle, wrist and neck (sprains/strains).
Contact	Drew Borcharding, Manager-Health and Safety; Richard Sanchez, Manager Crush/Convey

Photos / Links



The boom truck tipped onto the driver's side when the load swung.



Falling Objects

Potential Fatal Event: Falling Grating

Preliminary Incident Details

Operation	Manyar Smelter Project
Date / Time	February 22, 2024 / 8:42 PM
Event Type	Injury- Restricted Duty
Summary	While moving steel, a crane's cable contacted a piece of scaffold grating weighing 20 kilograms. The grating fell 10 meters and struck one of two employees performing structural steel work from a man basket at a height of 15 meters.
Risk Category	Falling Objects – Significant (3) Possible (2)
Findings / Missing Controls	<ul style="list-style-type: none"> • Failure to identify unsecured grating during installation and inspection • Falling objects were identified as a fatal risk on completed FRM verification but did not distinguish grating as potential risk • Failure to prevent crane cable contact with structure
Applicable Policies / Procedures	<ul style="list-style-type: none"> • Chiyoda Grating Installation Method Statement • Chiyoda Permit to Work Procedure
Employee Condition	Employee sustained a sprained shoulder.
Contact	Zach Scrivner, Manager-Corporate Project Engineering Safety Chris McCoy, Project Director

Photos / Links



Scaffold grating weighing 20 kilograms fell 10 meters, striking an employee in a man basket.

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Agency Shares

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MSHA Safety Alert – Operating Equipment Near Water

From 2010 through 2023, there were 19 drowning accidents. Eleven of these fatal accidents occurred when mobile equipment, operating near water, became submerged. When working near water mine operators should:

- Conduct workplace examinations and eliminate hazardous conditions.
- Keep mobile equipment a safe distance from the water’s edge.
- Ensure miners wear a seatbelt when operating mobile equipment.



Emergency Egress Breathing Device



Personal Flotation Device (PFD)

Emergency underwater breathing devices are commercially available, and they come in all different shapes and sizes. If made available and miners are properly trained, these devices can potentially increase miners’ chances of survival if they fall into water.

- Provide emergency underwater breathing devices to miners with risk of falling into water.
- Train miners in the use of underwater breathing devices in case of an emergency.
- Keep water rescue equipment easily accessible.
- To assist miners in exiting a submerged cab, develop an underwater emergency egress kit which may include a nose clip, mask, underwater breathing device, PFD, and glass breaking device.
- Provide and ensure miners wear a Coast Guard approved Type I or Type V personal flotation device (PFD).

[PDF LINK](#)

MSHA Safety Alert – Rotating Conveyor Rollers

Three miners have been permanently disabled since the beginning of 2024

Serious and fatal injuries occur when miners clean or adjust conveyor rollers, pulleys and idlers while the belt is in motion. Injuries vary from broken bones to loss of fingers, hands, and arms. Some accidents have resulted in fatal injuries. Injuries result from unsafe actions like:

- Using aerial lifts to access elevated bend, snub, and take-up pulleys, or removing or reaching around guards to work on moving conveyor components.
- Using scrapers, shovels, pry bars, hammers and torches to remove ice, mud or buildup. The tools can be caught in pinch points between the conveyor belt and rollers and pull in the tools and miners' hands, arms, and bodies.



Victim caught between moving conveyor belt and bend pulley.

A miner suffered fatal injuries in 2018 when he was entangled in a conveyor's take-up assembly. He was working from an elevated aerial lift cleaning buildup from a bend pulley while it was operating.



This photo shows buildup on a bend pulley. In 2024 a miner lost a thumb when he removed a guard and began to clean a rotating bend pulley with a 15-inch-long pry bar.

Best Practices

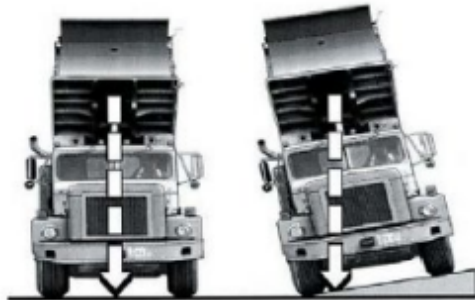
- **Keep guards in place.** Do not defeat or circumvent any protective system.
- **Have an effective lock-out program.** Shut down, deenergize and lock out power switches and block conveyor parts against hazardous motion prior to performing belt roller or pulley cleaning, belt tracking or other maintenance.
- **Establish policies and procedures** to ensure proper and safe cleaning and maintenance of conveyor components.
- **Provide task and site-specific hazard training** that prohibits cleaning or working on or around moving conveyor components.
- **Follow safe cleaning and maintenance policies and procedures.** Supervisors, miners, and contractors are all responsible for working safely.

MSHA Safety Alert – Truck Dumping Safety

On January 2, 2024, the driver of an over the road tractor-trailer haul truck died when the trailer tipped over onto the cab of the tractor. The driver was dumping part of the load of gravel from the trailer. Between 2018 and 2024, mine operators reported 14 injury accidents where over the road trucks tipped or rolled over while dumping. During the same period, miners were also injured when 28 off-road mine haul trucks tipped or rolled over. The accidents can be prevented with proper training and following best practices:



Photograph: Trailer tipped over onto cab of tractor.



A slight slope can increase the likelihood of tipping if material sticks in the top of the box.

BEST PRACTICES

For drivers:

- ❖ Dump only on level surfaces, free of spillage. Make sure elevated dump sites are substantial and equipped with adequate dump point restraints.
- ❖ Keep your truck and trailer in a straight line when backing up and never move faster than walking speed.
- ❖ Avoid dumping in high or gusty wind conditions.
- ❖ Stay in the cab with your seatbelt on during the dumping process. Never attempt to exit or jump from an overturning truck.
- ❖ After dumping, remove any compacted material before reloading the truck.
- ❖ Evenly distribute the load and use antifreeze in cold weather to prevent material from freezing and sticking in the truck bed.
- ❖ Never overload trucks or trailers.

OSHA Share – Trenching and Excavation

OSHA is focusing on reducing trenching and excavation hazards. Trench collapses, or cave-ins, pose the greatest risk to workers' lives. To prevent cave-ins:

- SLOPE or bench trench walls
- SHORE trench walls with supports, or
- SHIELD trench walls with trench boxes

Employers should also ensure there is a safe way to enter and exit the trench. Keep materials away from the edge of the trench. Look for standing water or atmospheric hazards. Never enter a trench unless it has been properly inspected.

[29 CFR 1926.650](#), [29 CFR 1926.651](#), and [29 CFR 1926.652](#) are applicable OSHA standards.



[Resources LINK](#)

ASMI – Pinch Point Safety Awareness



SAFETY SHARE OF THE MONTH

PINCH POINT SAFETY AWARENESS

A *pinch point* is where two objects come together and a body part, most commonly the fingers and hands, can get caught. While pinch point hazards most often involve the fingers and hands, they can also affect other parts of the body. *Pinch points* are common workplace hazards that can lead to serious injury, amputations, and even death on the job site.

Pinch point injuries most commonly involve the fingers and hands. Minor types of *pinch point* injuries include cuts, bruises, blisters, and contusions. More serious types of *pinch point* injuries include amputations, lacerations, broken bones, and even death.

A *pinch point* injury can happen when:

- *Reaching into machinery or equipment with moving parts*
- *Walking or working in areas with mobile equipment*
- *Not paying attention to the location of hands or feet*
- *Equipment or safety guards are in poor condition*
- *Clothing, jewelry, or hair gets caught or tangled*

It's extremely important for everyone to take personal responsibility and be able to recognize pinch point hazards in order to prevent injuries. To help keep workers safe from *pinch point* injuries, be sure to carefully inspect all machinery and equipment to identify potential *pinch point* hazards.

Tips to avoid pinch point hazards

- *Never place your hands where you can't see them*
- *Pay close attention around moving parts*
- *Never walk away from machines that are turned on or in motion*
- *Securely block equipment or parts where stored energy can be released*
- *Check machine and tool safety guards*
- *Follow Lock Out/Tag Out Procedures*
- *Wear proper PPE*

ASMI – Mechanisms and Hydraulics



BEST PRACTICE OF THE MONTH

Goodfellow Corporation
Blake Goodfellow

Mechanisms and Hydraulics

- In 2023, the United States saw two fatal incidents (8/24/2023 and 12/14/2023) involving a portable aggregate wash plant. These portable plants typically consist of a feed chute, wash screen (either horizontal or inclined), discharge chutes, and a fine material washer mounted on a wheeled chassis. These plants are very popular in Arizona, and a common site at sand and gravel operations.
- Due to size constraints imposed by portability, the feed chute (which acts to add moisture to the material prior to screening) must be folded down or removed prior to transport.
- In both of the referenced fatalities, the Miners were involved in the operation of folding the feed chute (for transport or maintenance) when they were crushed between the chute and the handrail at the feed end of the screen.
- From photos provided in the MSHA fatality alerts, it can be seen that both chutes were equipped with hydraulic folding mechanisms, although it is unclear whether these were OEM designs or installed later.

Best Practice:

- MSHA Reports detail four best practices to prevent such injuries
 - Block machinery components against motion before beginning maintenance or repairs and verify miners are in a safe location before moving equipment and components.
 - Examine work areas during the shift for hazards that could be created while performing the work.
 - When conducting a non-routine task, review safe procedures before starting work and ensure all safety components are in place.
 - Do not work under suspended loads.
- Additional best practices can also be gleaned from these and similar situations
 - Hydraulic systems should never be utilized for blocking machinery components against movement.
 - When removing bolted connections, consider the forces traveling through the bolt and the consequent reaction once the bolt is removed. Consider gravity, thermal, spring, and other loading factors.
 - Bolts loaded in shear are less prone to careless removal while under load compared to bolts loaded in tension, and equipment manufacturers should consider this in equipment design.
 - Task-training for hydraulic systems should be standard, similar to other lifting equipment (cranes, telehandlers, etc.), and the use of traditional lifting equipment should be considered if operators are better trained with that equipment.

