

ELECTRIFYING THE FUTURE

# Contractor Orientation North America

V 1.4.1 2025

**FCX**  
**LISTED**  
**NYSE**

A member of  
**ICMM**  
International Council  
on Mining & Metals

[fcx.com](https://fcx.com)

**FREEPORT**  
FOREMOST IN COPPER

01

# Welcome and Introduction

# Classroom Safety

## Emergency Response Plan

Every site has an established ERP. Refer to handout, poster, whiteboard, instructor.

## Emergency Equipment

Know what is available and where it is located at your site.

## Evacuation

Know what evacuation alarm is used for this location and where to meet.





RESPECT

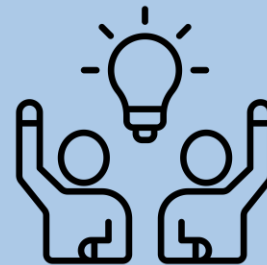


RESTROOMS

## Class Conduct



CELL PHONES



PARTICIPATION





## Purpose of this course

- To orient you to Freeport-McMoRan's mission, values, principles, standards and expectations.
- To explain where you can find further information as needed.

# Course Contents

- |  |  |
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| <b>01</b> Welcome/Introductions          | <b>08</b> Hazard Recognition           |
| <b>02</b> Health and Safety Policies     | <b>09</b> Standard Safety Requirements |
| <b>03</b> Fatality Prevention Initiative | <b>10</b> Safe Work Practices          |
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| <b>06</b> Occupational Health            | <b>13</b> Site Specific                |
| <b>07</b> Emergency Procedures           |  |



# FREEPORT-McMoRAN



**ICMM**  
Member



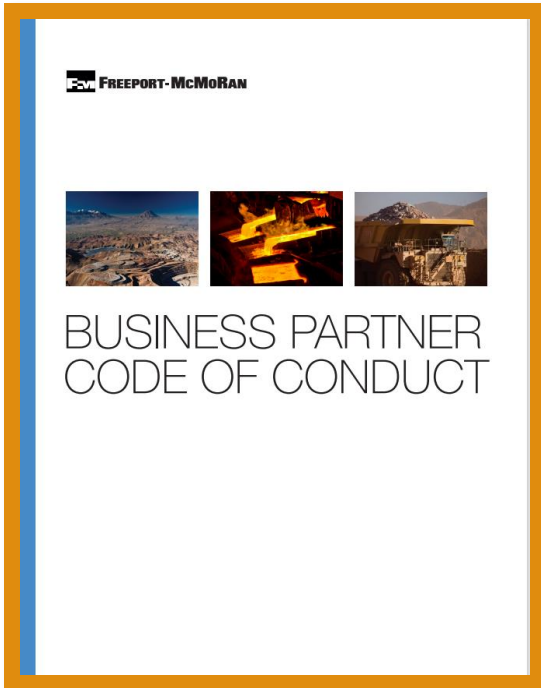
INTERNATIONAL MOLYBDENUM ASSOCIATION



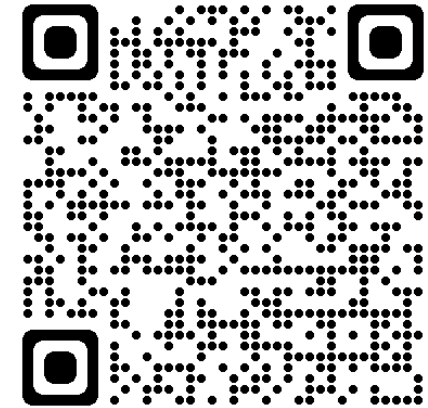
International Copper  
Association  
Copper Alliance



# Business Partner Code of Conduct



Freeport-McMoRan believes in doing business only with Business Partners who share our core values and demonstrate a high level of ethical and legal conduct. We seek to establish mutually beneficial, long-term relationships with Business Partners who demonstrate their commitment to our Business Partner Code of Conduct (the Code).



[https://www.fcx.com/sites/fcx/files/documents/policies/bpcc\\_eng.pdf](https://www.fcx.com/sites/fcx/files/documents/policies/bpcc_eng.pdf)

# Compliance Line



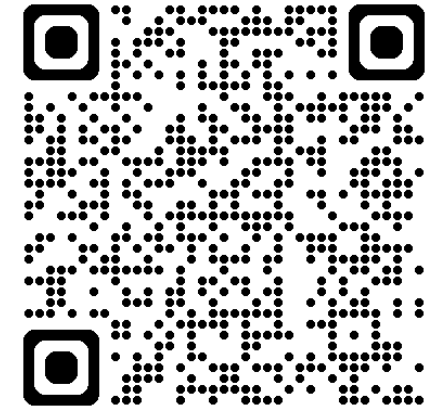
The FCX Compliance Line is available **24/7** to all contractors and subcontractors to anonymously ask questions and report incidents or other concerns that raise legal or ethical concerns.



compliance@fmi.com



800-295-6783



<https://www.fcxcompliance.ethicspoint.com>

# Safe Production Matters



## OUR COMMITMENT TO **SAFE PRODUCTION**

I commit to work safely and put safety first every day,  
holding myself and others accountable for our actions.

X \_\_\_\_\_



## How We Put Safety First

**SAFE  
PRODUCTION  
MATTERS**

### All Employees

- Report fit for duty
- Take responsibility for my own and others' safety
- Assess risk and eliminate hazards using specified controls
- Follow all standard operating procedures
- Speak up and stop work if it's not safe or unclear
- Promptly act on unsafe conditions

### All Leaders

- Set clear safety and work expectations
- Ensure certifications/trainings are current for assigned work
- Support, demonstrate and teach safe work practices
- Coach to safety standards and confirm understanding
- Prioritize time in the field and engage in safety conversations
- Listen to employees and follow up on concerns
- Reinforce the expectation to stop work

# Valuing Inclusion & Diversity



# Workplace Related Violence



# Internal Rules & External H&S Standards

**FCX Critical safety rules are those rules that if not followed can cause serious injury or fatality. Examples include:**

- Drug & Alcohol Policy
- Fighting or Physical Assault Rule
- Lockout/Tagout/Tryout Policy
- Permit required activities
  - Confined Space Entry
  - Hot Work
  - Digging, Trenching or Utility Location
- Restricted Area Access
- Fall Protection
- Failure to follow safe procedures while operating equipment
- Inappropriate removal, alteration or bypass of a safety guard
- Do not interfere with any radio communication
- Cell Phones
- Site specific rules may apply



# Key Takeaways

- As a matter of philosophy and practice, we will hold all contractors operating at our facilities accountable for the same level of safety that we expect of ourselves.
- Contractors are responsible for:
  - Complying with FCX Policies, FCX Contractor Health, Safety and Environmental Manual, local, regional and national regulations as applicable
  - Identifying Fatal Risks and Implement Critical Controls
  - Supporting Site Health and Safety Programs
  - Reporting Injuries, Illnesses, Near Misses, and Property Damage
  - Using **Stop Work Authority** to stop work when an unsafe act, behavior, condition or change in conditions is perceived that may lead to an injury, illness, or serious situation.

# Knowledge Check

1. It is expected that only supervisors exercise stop the job authority when Critical Controls are not in place or are not effective.

- a. True
- ☒ b. False

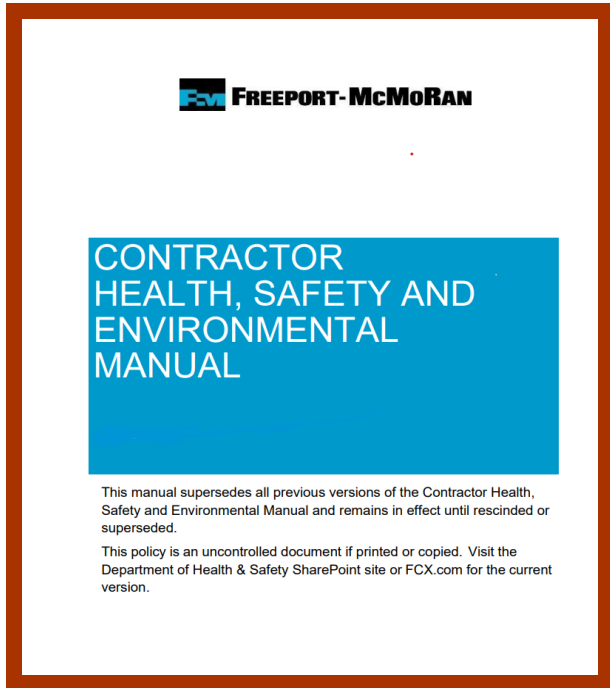
2. Freeport-McMoRan has a zero-tolerance policy toward workplace violence.

- ☒ a. True
- b. False

02

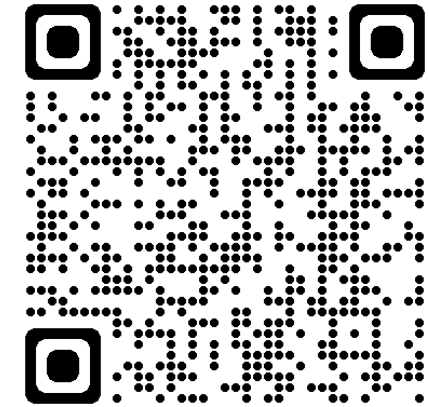
# Health and Safety Practices

# Contractor Health, Safety and Environmental Manual



Every contract approved states that every contractor working on property will comply with the provisions of the Contractor Health, Safety, and Environmental Manual and FCX Health and Safety Policies.

Non-compliance may result in work stoppage or removal of contractor or its employee(s) from FCX property.



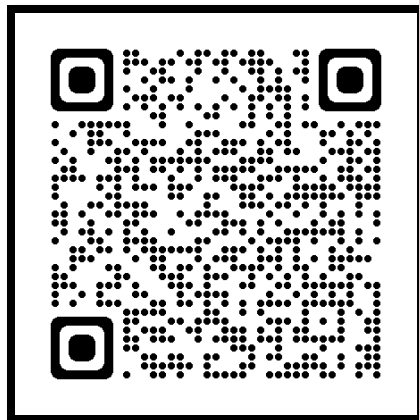
<https://www.fcx.com/sites/fcx/files/documents/csm.pdf>

# Health & Safety Policies

To access all Freeport-McMoRan policies:

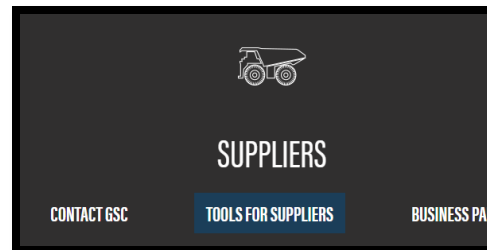
1

Visit fcx.com



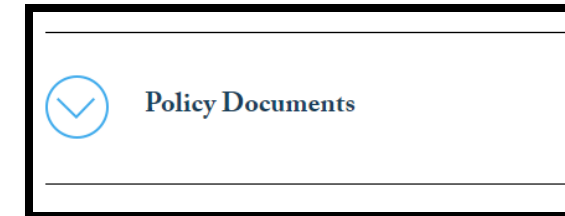
2

Scroll down to “Suppliers” and select “Tools for Suppliers”.



3


Scroll down to “Policy Documents” and expand the section to view all Freeport-McMoRan policies.



# H&S Policy Requirements for Contractor



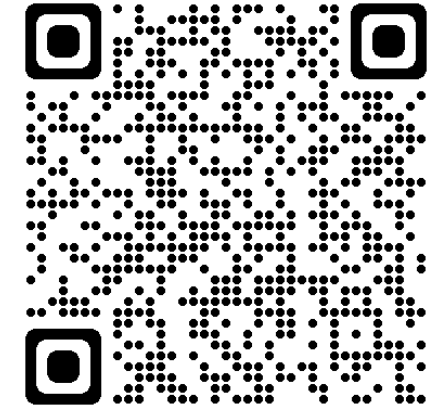
# Administration Policy FCX-HS01

	
FCX DEPARTMENT OF OCCUPATIONAL HEALTH AND SAFETY	
POLICY ADMINISTRATION REQUIREMENTS	
FCX-HS01   APPROVED 1/22/2020   RELEASED 1/22/2020	
VERSION 1.5	
Contents	
1.0 Policy .....	2
2.0 Responsibilities and Duties .....	2
2.1 Management Responsibilities .....	2
2.2 Health and Safety Department Responsibilities .....	3
2.3 Supervisors .....	4
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The Administration Policy document serves to outline the specific requirements for FCX safety policy administration.

In an effort to improve understanding and implementation of FCX health and safety policy, administrative requirements have been compiled into one document.

FCX-HS01 accompanies every other FCX policy.

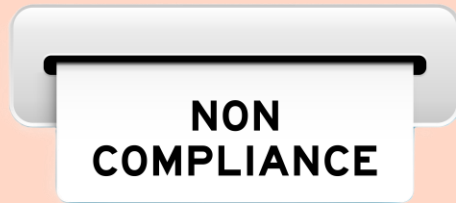


<https://www.fcx.com/sites/fcx/files/documents/suppliers/admin-policy.pdf>

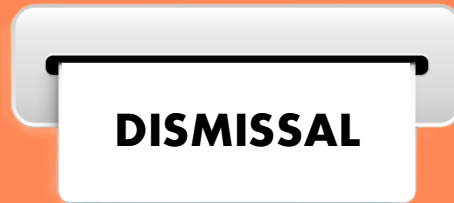
# What are the FCX H&S Policies?

- Administration
- Aviation Safety
- Bus Safety
- Cellular and Hand-Held Communications
- Confined Space
- Control of Hazardous Energy (LOTOTO)
- Crane and Rigging
- Electrical Safety
- EW ER
- Fatigue Management
- Flagging & Barricading
- Hazard ID & Risk Assessment
- Hazardous Gas Monitoring Systems
- HDPE Pipe Handling
- Hot Work
- Industrial Railroad
- Interaction with Heavy Mobile Equipment
- Material Handling & Conveyance
- Metal Fume Control
- MSHA Training Requirements
- Property Entry
- Round Stock Management
- Shovel Moves
- Social Distancing and Face Coverings
- Standard Safety Requirements
- Sulfuric Acid Bulk Handling
- Surface Blasting
- Utility Location (Blue Stake)
- Working at Heights

# Violations



Non-compliance may result in work stoppage or removal from FCX property.



Repeated non-compliance will result in Contractor dismissal.



Contractors in violation of Critical Safety Rules may have access removed for 3 years.

# Safety Responsibilities & Duties

## FMI/Contractor Management

- Maintain equipment in good working order
- Ensure proper employee training
- Provide equipment and resources
- Maintain document control
- Identify fatal risks and critical controls
- Perform periodic audits and inspections
- Evaluate MOC and variance requests
- Develop site programs

## FMI/Contractor Health & Safety

- Health Monitoring and Sampling
- Fatal Risks and Critical Controls
- Support Site Programs
- Collect, Maintain and Report Required Information as it Pertains to Policies
- Evaluate MOC and Variance Requests

## Contractor

- Comply with FCX Policies, FCX Contractor Health, Safety and Environmental Manual, local, regional and national laws and regulations as applicable.
- Support Site Health and Safety Programs
- Trained and Qualified
- Identify Fatal Risks and Implement Critical Controls
- Support Site Health and Safety Programs
- Report Injuries, Illnesses, Near Misses, and Property Damages

## FMI/Contractor Supervisor

- Ensure employees are fit for duty
- Report Injuries, Illnesses, Near Misses and Property Damages
- Identify Fatal Risks and Implement Critical Controls
- Support Site Health and Safety Programs

# Safety Meetings

## Monthly

- Contractor Management
- Employee
- FCX Representative



## Daily



Supervisor led tailgate or line-out



## Ongoing


Health, Safety, & Environmental

# Safety Communication Tools


**Safety Success: Feed Pump Lifting Operation**


Incident Details		Photos / Links	
Operation	Chino	  <p>Test lifting operation</p> <p>At right is where the pump fell, clearing the other equipment to the left</p>	
Date / Time	June 10, 2023		
Type	Best Practice		
Success Summary	Planning and executing a safe lifting operation that resulted in zero injuries and no significant plant damage despite crane brake failure.		
Description	A team was preparing to lift a feed pump with a crane. Before beginning the operation, the team created a plan that included possible safety maneuvers in the event of potential crane brake failure and to help ensure all employees were out of the line of fire. During the test lift and regular brake test, the crane held the load. However, as the operator began to move the load, the crane experienced brake failure. This prompted the operator to engage the pre-plan maneuver and move the crane to an open area where it fell without a risk to employees or other equipment.		
Fatal Risk	Lifting Operation		
Tools for Sharing Learning	Pre-planning before a lifting operation to mitigate potential safety hazards.		
Additional Information	N/A		
Author	Sean Maddock, Superintendent Mill Maintenance		


**Potential Fatal Event: Dozer Operator Slid Into Feeder**


Preliminary Incident Details		Photos / Links	
Operation	Morenci	 <p>Dozer inside feeder</p>	
Date / Time	January 16, 2023 / 6:43 AM		
Type	Property Damage		
Summary	A dozer operator was pushing material into the feeder on the mill stockpile when the dozer slid into it. The operator radioed dispatch to stop the feeder but was not able to make positive communication. The operator proceeded to self-extricate from the dozer and moved to a safe area. A full investigation is underway.		
Fatal Risk	Crushing & Entanglement		
Risk Category	Actionable		
Pre / Post Rating	Significant (3) Likely (3)		
Preliminary Findings / Missing Controls	<ul style="list-style-type: none"> <li>Failure to make positive communication</li> <li>Failure to follow dozer operating procedure for pushing in stockpile area</li> <li>Failure to stay outside geofencing boundary</li> </ul>		
Applicable Policies / Procedures	Morenci Safe Operating - Pushing in the Mill Intermediate Ore Stockpile (IOS)		
Employee Condition	No injury		
Contact	Rassie Ras, Manager-Health and Safety		



Safety Success  
&  
Safety Alerts

Potentially Fatal  
Events (PFE)  
&  
Fatal Event  
Advisories

Toolbox Talks  
&  
Safety Meetings

# Key Takeaways

- Every contract approved states that every contractor working on property will comply with the provisions of the Contractor Health, Safety, and Environmental Manual and FCX Health and Safety Policies. Non-compliance may result in work stoppage or removal of contractor or its employee(s) from FCX property.
- It is expected that all employees, contractors, vendors and visitors exercise stop the job authority when Critical Controls are not in place or are not effective.
- Effective safety meetings ensure workers, managers, and leadership stay safe, informed, and aligned on current workplace priorities.
- Various safety communication tools are used including safety success and safety alerts, Potentially Fatal Event, Fatal Event Advisories, and Toolbox Talks.

# Knowledge Check

1. Non-compliance of these may result in work stoppage or removal of contractor or its employee(s) from FCX property. (Select all that apply)
  - a. Health and Safety Policy
  - b. Contractor Health, Safety and Environmental Manual
  - c. Environmental Requirements
  - ☒ d. All the above
  
2. Contractors that are in violation of critical safety rules could have their site access removed for 1 year.
  - a. True
  - ☒ b. False

03

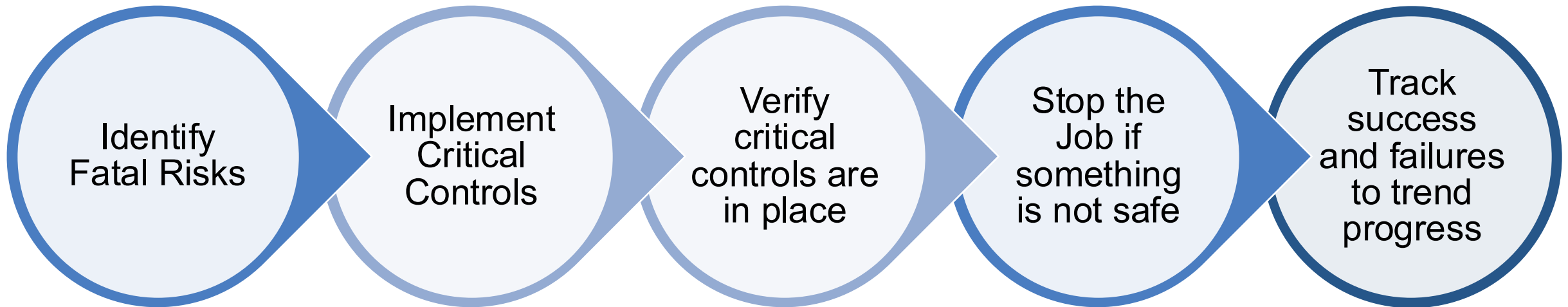
# Fatality Prevention Initiative

# Fatality Prevention is an Ongoing Effort

## Core elements of the Fatality Prevention Program

1. Communication
2. Messaging and Perception
3. Accountability
4. Stopping Work
5. Situational Risks and Outcomes
6. Pre-job Planning
7. Evaluating and Improving Controls

# What is Fatal Risk Management (FRM)?



# FCX Fatal Risk Icons

## Present at all sites



**Vehicle Collision or Rollover**



**Falling Objects**



**Vehicle Impact on Person**



**Fall from Heights**



**Entanglement and Crushing**



**Uncontrolled Release of Energy**



**Lifting Operations**



**Fire**



**Exposure to Electrical Hazards**



**Exposure to Hazardous Substances - Chronic**



**Exposure to Hazardous Substances - Acute**

## Present at many sites



**Confined Space**



**Blasting**



**Drowning**



**Ground Failure**



**Rail Collision**



**Rail Impact on Person**

## Present at a few sites



**Underground Rock Fall**



**Personnel Hoisting**



**Underground Hazardous Atmosphere**



**Underground Inrush**



**Underground Shaft Hoisting**



**Contact with Molten Material**



**Interaction With Aircraft**



**Maritime Operations**

# Fatal Risk Management Tools

Fatal Risk Management is a set of tools to address the gaps in Fatality Prevention, and make the skills more usable in the field

## Fatal Risk Icons

Consistent visual representation of the 25 fatal risks for use in signs, documents, tailgate meetings



**Lifting Operations**



**Vehicle Impact on Person**



**Fall from Heights**

## Critical Controls & Verification Questions

For each Fatal Risk we have defined a set of critical controls and provided a set of verification questions to ensure effective implementation of each control



**Lifting Operations**

Exposure to loss of control of a load suspended by equipment.



**Vehicle Impact**

Person struck by vehicle/mobile equipment.



**Fall from Heights**

Working at height where the danger of falling exists.

Barriers and Segregation	
Is the lifting operation controlled by barriers?	
Have I verified that the barricading has no unintended access?	
Is the exclusion zone large enough to prevent falling?	
Have I erected barricades as required?	
Do barricaded areas have adequate notice?	
Are there only authorized personnel inside?	
For personnel in controlled zone, are safety rules enforced?	
Lifting Execution	
If there is a formal written lift plan, has it been followed?	
Have I determined that the weather conditions are suitable for the lift?	
Have underground hazards been identified or abandoned utilities or mine works, etc.	
Are the ground conditions stable for the lift?	
Mechanical Integrity of Lifting Equipment	
Have I performed a walk around inspection?	
Is the maximum safe working load indicated?	
Have I verified that the annual certification is valid and current?	

Vehicle Preoperational Inspection	
Have I conducted a pre-operational inspection of the vehicle?	
Have I taken action where critical (safety) pre-operational inspection?	
Fundamentally Stable Parking	
Have I parked the vehicle correctly?	
Did I test the braking system as part of the pre-operational inspection?	
Positive Communication System	
Am I using the required equipment for communication?	
Are all positive communication protocols followed?	
Segregation	
Are the segregation controls suitable for the task?	
Are the segregation controls visible, as required?	
Are personnel following the segregation controls?	
Are segregation controls implemented and maintained?	
Signage and Demarcation	
Is signage/demarcation of pedestrian walkways in place?	
Is the signage visible and readable?	

Fall Protection System			
	Yes	No	N/A
Have I visually inspected the anchor points prior to use?			
Have I inspected my harness prior to use?			
Have I inspected the connector/lanyard/shock absorber equipment prior to use?			
Is my selected fall protection adequate for the task? Note: check length, compatibility with work from height (restraint vs. arrest).			
Have I reviewed the rescue plan for the task?			
Is the rescue plan appropriate for the risks involved with the task?			
Have all team members reviewed and understood the rescue plan?			
Fixed Work Platform			
	Yes	No	N/A
Have I inspected the fixed work platform before use? Note: check for missing / loose floor grating panels, secured handrails, toe boards, etc.			
Is the fixed work platform suitable for the job/task?			
Mobile Work Platform			
	Yes	No	N/A
Am I using the correct mobile work platform for the job/task? Note: check suitability of the equipment for task and position/placement, including function, and load limit, terrain, environment/weather, location, current inspection, fundamentally stable.			
Am I correctly secured in the basket with proper fall protection equipment?			
Have I completed a pre-operational inspection? If any issues were raised, were they addressed?			
Have I confirmed that weather conditions will allow for safe use?			
Do I remain inside the confines of the basket at all times (e.g. Not stepping on midrails, leaning over the handrails, etc.)?			
Have the ground conditions for mobile platform travel areas been inspected (e.g. Buried hazards, underground services, uneven terrain)?			

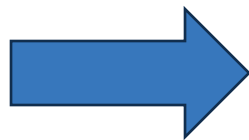
# Relationship Between the Tools



- Fall Protection System
- Fixed Work Platform & Scaffolding
- Mobile Work Platform
- Leading Edge/Open Hole Protection
- Emergency Response

- Has a rescue plan been reviewed and approved by the team?
- Has the fall protection harness been properly inspected prior to use?
- Has the right fall protection been selected for the task?
- Are proper tie off/anchor points readily available and allow for 100% tie off at all times?
- Has the mobile platform been approved for the work and inspected by a competent person?
- Do the operating conditions (weather, ground conditions) allow for safe operation of the mobile platform?
- Has the scaffolding/work platform been approved and inspected prior to use by a qualified and competent person?
- Is the scaffolding protected from any potential impact by equipment?
- Have all leading edges and/or open holes been properly guarded or hard barricaded?
- Have adequate protection systems been installed and inspected?

ICONS

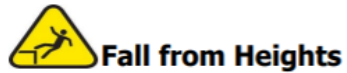


CRITICAL CONTROLS



VERIFICATION QUESTIONS

# Verification Question Checklist



## Fall from Heights

Working at height where the danger of falling exists.

Fall Protection System	Yes	No	N/A
Has the fall protection harness been properly inspected prior to use?			
Has the right fall protection been selected for the task?			
Are proper tie off/anchor points readily available and allow for 100% tie off at all times?			
Fixed Work Platform & Scaffolding	Yes	No	N/A
- Has the scaffolding/work platform been approved and inspected prior to use by a qualified and competent person?			
- Is the scaffolding protected from any potential impact by equipment?			
Mobile Work Platform	Yes	No	N/A
Has the mobile platform been approved for the work and inspected by a competent person?			
Do the operating conditions (weather, ground conditions) allow for safe operation of the mobile platform?			
Leading Edge / Open Hole Protection	Yes	No	N/A
Have all leading edges and/or open holes been properly guarded or hard barricaded?			
Have adequate protection systems been installed and inspected?			
Emergency Response	Yes	No	N/A
Has a rescue plan been reviewed and approved by the team?			

FCX - Fatality Prevention Program Critical Control Checklists v1.0

- Checklist for each Icon
- Used in the field with Crew
- Increase
  - Communication
  - Understanding
  - Awareness
- Yes or No Questions
  - Yes: Continue Work
  - No: **STOP WORK**

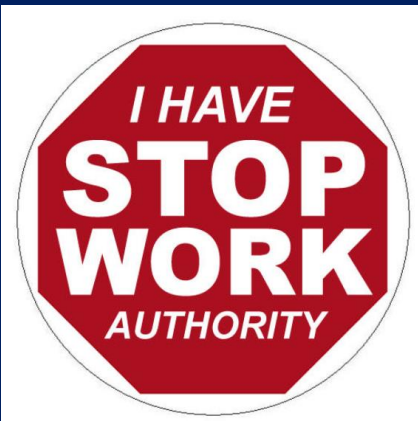
# Fatal Risk Management in Action



# Stop Work Authority

“No job will be considered so important, and no schedule so urgent, that time cannot be taken to perform work in a safe manner.”

-Freeport-McMoRan Safety and Health Policy



Every person has the authority and responsibility to stop work that they feel is being conducted in an unsafe manner.



# Stop Work in Action



# Situational Risk



**No One  
Stopped  
The Job**

# Key Takeaways

- Each Fatal Risk has a set of critical controls that should be known by all applicable employees.
- The critical controls must be in place prior to work beginning.
- If a critical control is missing or not working, work shall be stopped until controls are implemented.
- Prioritize field verifications with tasks that rely more on behaviors than engineered controls.
- Using one set of fatal risk icons, critical controls and verification questions will create consistency across sites.

# Knowledge Check

1. You have the responsibility to stop the work for safety-related concerns at any time.
  - a. True
  - b. False
  
2. If a Fatal risk has been identified, what must be used?
  - a. Critical Control with Verification Question

04

# Fit For Duty

# Fit for Duty



What does fit for  
duty mean to  
you?

# Fit for Duty

## Physically

- Drug & alcohol free
- Well rested
- Well hydrated
- Wearing PPE and proper clothing

## Mentally/Emotionally

- Focused (head in the game)
- On time
- In good mental and emotional health
- Not fatigued

# Drug and Alcohol Policy



It is the position and intent of FCX to maintain a workplace free from the use and influence of drugs and alcohol.



# Fatigue Management



## Working Hours & Fatigue Management Policy

Health and Safety FCX-HS10 | Release Date: 11/2009 | Version 2: 7/2022

### POTENTIAL FATAL RISKS

Identify Potential Fatal Risks prior to performing any task or job

### CRITICAL CONTROLS

- Fit for Duty checks
- Provide time for adequate rest
- Immediately report any unsafe conditions or behaviors

### TRAINING REQUIREMENTS

- Trained on this Policy
- New Hire training
- Annual Refresher training

### RELATED POLICIES

- [Safety & Health Policy](#)
- [Human Rights Policy](#)
- [Principles of Business Conduct](#)
- [FCX-HS01 – Policy Administration Requirements](#)

### REQUIREMENTS

#### Working Hours

- Working hours shall not exceed 60 hours per week on average over a period of a calendar month unless it is done with voluntary overtime (OT) that is approved in advance by the employee's Supervisor.
  - No one will be subject to, and the Company prohibits, any form of retaliation for not volunteering for OT.
- The workforce shall be provided an average of at least one rest day in seven over the period of a calendar month (i.e., over a period of 28 calendar days there should be at least 4 rest days)
- Scheduled consecutive work days shall not exceed either 92 hours per work-set (total hours worked in consecutive days without a rest day) during normal operations or 182 hours per work-set during outages without a rest day.
- Once a scheduled work-set is complete, there shall be:
  - A minimum of 24 consecutive hours of rest for 8-hour to 10-hour shifts
  - A minimum of 34 consecutive hours of rest for shifts longer than 10 hours if the immediately preceding work set did not exceed 3 night shifts.
  - A minimum of 46 consecutive hours of rest for shifts longer than 10 hours if the immediately preceding work set included 4 or more night shifts.

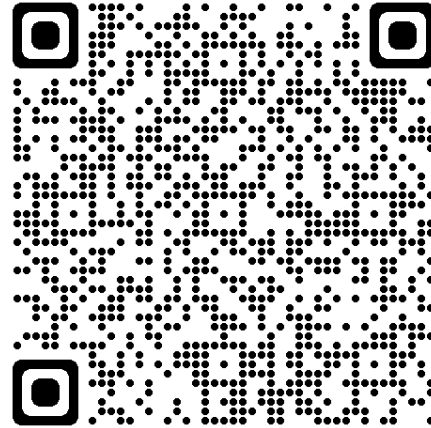
### POLICY

#### OVERVIEW

This policy establishes the working hours requirements designed to manage fatigue and provide a safe and healthy working environment for employees and contractors, providing regular on-site services, while supporting the business needs. Additionally, it is intended to meet the requirements of Copper Mark Criterion 10 for working hours. The Company's operations are 365 days a year, 24 hours a day which requires multiple rotating shift schedules and at times business driven overtime. Rotating shift schedules are designed to meet site operational needs while ensuring health, safety, and wellbeing of our employees and contractors. This policy applies to all employees and contractors working onsite (workforce).

#### ACTIONS TO STAY SAFE

- Report to work fit for duty.
- Empower our workforce to address concerns of fitness for duty.
- Exercise fatigue management by, among other things, recognizing the signs of fatigue and assessing/controlling risk factors associated with fatigue.
- Follow work hours requirements.



<https://fcx.com/sites/fcx/files/documents/suppliers/WorkingHours-Fatigue%20Mgmt-Policy.pdf>

This policy supersedes all previous versions of the Fatigue Management Policy and remains in effect until rescinded or superseded. This printed policy is an uncontrolled document. Visit DOHS SharePoint site for current version and/or supplements. 1 of 2

# Key Takeaways

- Being Fit for Duty includes being drug and alcohol free, being well rested, in good mental and physical health, being well hydrated, wearing PPE and proper clothing, and being focused.
- To maintain a safe work environment, FCX may require drug and alcohol testing in the following circumstances: pre-employment, for cause, and random.
- FCX's Working Hours & Fatigue Management Policy establishes the working hours requirements designed to manage fatigue and provide a safe and healthy working environment for employees and contractors.

# Knowledge Check

1. Failure to submit external D&A results within 72 hours will result in that contract employee not being allowed on property for three years.
  - ☒ a. True
  - ☐ b. False
  
2. Blood and breath alcohol levels of .05% and above shall result in removal from work area.
  - ☐ a. True
  - ☒ b. False

05

# Property Entry

# Entering the Property



# Vehicles/Equipment

Personal vehicles entering property must have properly functioning headlights, rear lights, brakes, brake lights, and seat belts.



Personal UVs must be street legal and current state law must be followed.



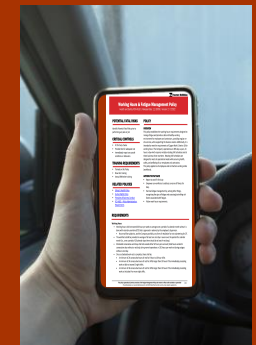
Give adequate warning when operating a vehicle.



Equipment/vehicles should be secured when parked.



Cell phone use while operating vehicles, including personal vehicles, is forbidden while on property.



# Weapons



- FCX prohibits the use or possession of weapons while on Company-controlled property or while attending any Company sponsored event.
- Weapons include, but are not limited to firearms, ammunition explosives of any type, any knife having a blade more than three inches in length or any other substances/devices that may cause harm.

# Interacting with Heavy Equipment



When approaching heavy equipment:

- Approach shall never be made from blind area of the equipment.
- Positive radio contact should be made before approaching.
- Visual contact must be maintained.
- Operator is required to be out of the cab before others approach the equipment and are out of operator's line of site.

# Property Entry Policies

Property Entry –  
Surface Mines North  
America Operations



[https://fcx.com/sites/fcx/files/documents/suppliers/property\\_entry\\_guidelines.pdf](https://fcx.com/sites/fcx/files/documents/suppliers/property_entry_guidelines.pdf)

Interaction with Heavy  
Mobile Equipment -  
Surface (FCX-23)



[https://fcx.com/sites/fcx/files/documents/suppliers/interaction\\_heavy\\_mobile\\_equipment.pdf](https://fcx.com/sites/fcx/files/documents/suppliers/interaction_heavy_mobile_equipment.pdf)

Specific Site Entry  
Documentation

Some sites may have additional site entry documentation. Please consult with your site leadership.

# Restricted Area Access

## Left-hand Traffic Areas



Left hand traffic areas are mine areas where large Haul trucks are utilized

- If authorized to enter:
  - Have a two-way radio tuned to mine operations channel
  - Pit driver training is required
  - An escort will be required for persons untrained in pit driving
  - Have a buggy whip that is 12' tall with a highly visible orange flag
  - Headlights on

## Slag Hauler Areas



Slag hauler areas are restricted access areas – authorized personnel only may enter

- If authorized to enter:
  - Have a two-way radio tuned to smelter operations channel
  - Have a buggy whip that is 12' tall with a highly visible orange flag
  - Headlights on

# Key Takeaways

- Site-specific “Hazard Recognition Training” is required for everyone traveling beyond access control points and entering the mine or process areas and annually thereafter.
- When operating vehicles and equipment on property, follow all regulations found Site Entry Policy, Property Entry – Surface Mines North America Policy and FCX 23 Interaction with Heavy Mobile Equipment – Surface Policy.
- The horn signals on property are one blast before starting, two blasts before moving forward, three blasts before moving backward.
- When parking vehicles and equipment, park brake set, and wheels chocked, in a ditch, or against a windrow to prevent movement.
- When approaching heavy equipment approach from cab side, make contact, follow site specific requirements.

# Knowledge Check

1. The Company prohibits the use or possession of weapons while on Company-controlled property or while attending any Company sponsored event.

- ☒ a. True
- ☐ b. False

2. It is okay to use cell phones and hand free devices while operating any vehicle or equipment on site.

- ☐ a. True
- ☒ b. False

06

# Occupational Health



## What is Occupational Health?

# Occupational Health

## What is Occupational Health?

- Employee Wellness
- Medical Surveillance
- Ergonomics
- Occupational Therapy
- Occupational Medicine and more

It is the job of each employee to create a work environment that eliminates occupational health and safety hazards whenever possible. *Safety and health Policy*

# Occupational Health Hazards



Physical: Noise,  
Vibration, Radiation,  
Heat, Cold, Dust

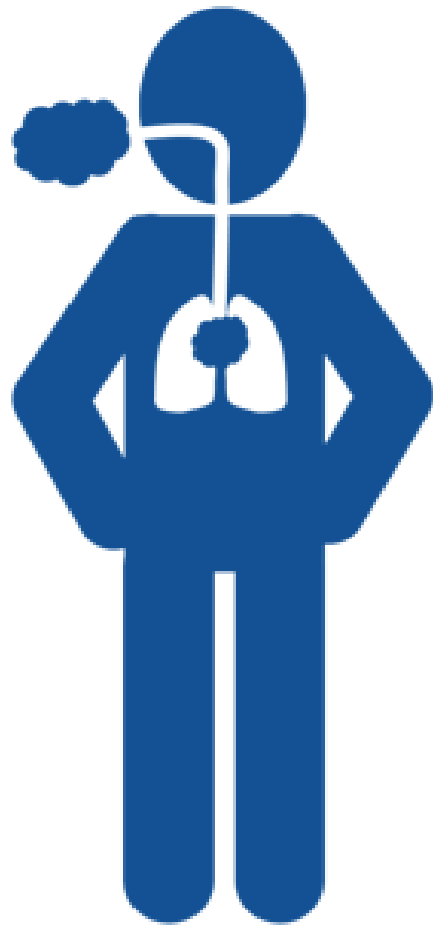
Chemical: Fumes,  
Gases, Aerosols, Mists,  
Liquids, Vapors

Ergonomic: Repetitive  
Movement, Restrictive  
Working Area, Lifting,  
Reaching, Stretching

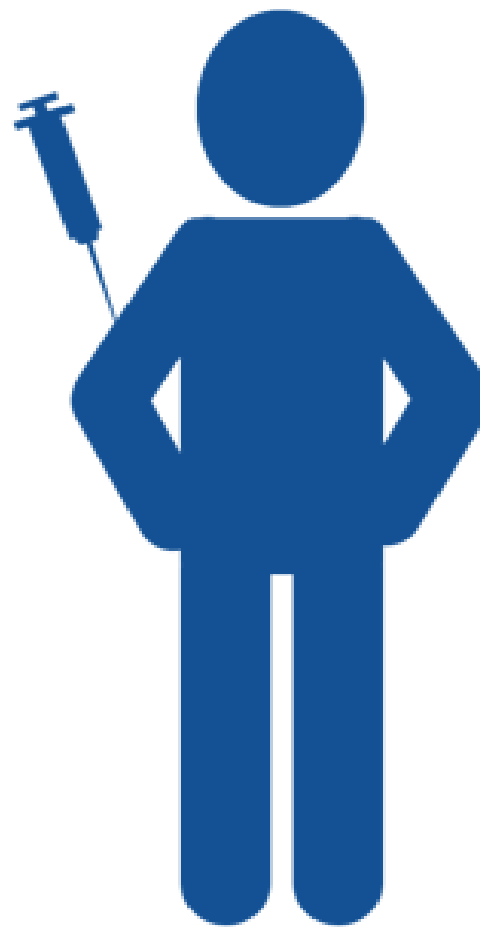
Biological: Bacteria,  
Fungi, Insects, Viruses,  
Bloodborne Pathogens

Psychological: Job  
Stress, Job Monotony,  
Unsociable Hours, Job  
Organization

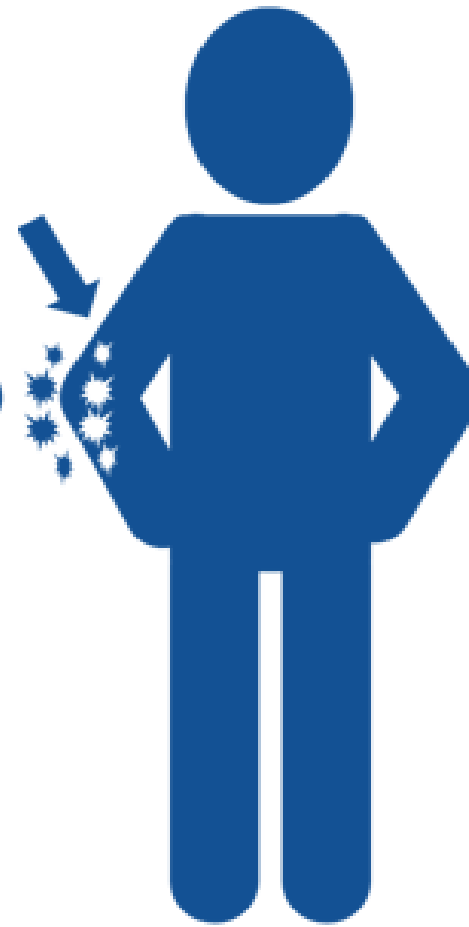
# Routes of Exposure



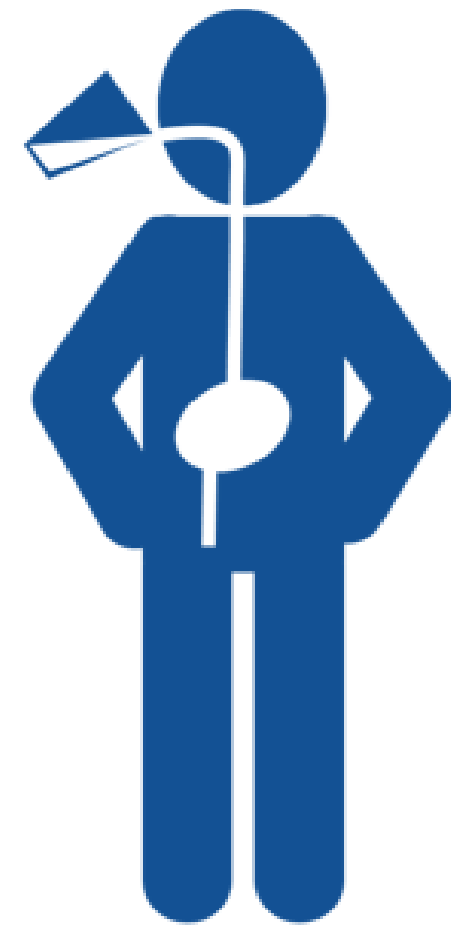
**INHALATION**



**INJECTION**



**ABSORPTION**



**INGESTION**

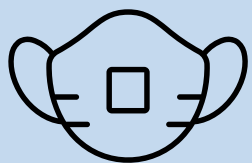
# Hazard Awareness



The key to preventing accidents is awareness.

The risk of an accident may be reduced significantly by using safe work practices and by controlling the hazards through the Hierarchy of Controls.

# General Hygiene



Wear appropriate PPE to avoid contamination.



Smoking, eating, drinking, etc. are prohibited in areas where health hazardous exposures are present.



Decontaminate or discard contaminated shoes/clothing/re-usable PPE.



Wash hands (and face when necessary) with soap and water.

# Physical Hazard-Noise

Duration per day, hours	FCX (dB)	OSHA / MSHA (dB)
16	82.00	85.00
14	82.57	85.96
<b>12</b>	<b>83.24</b>	<b>87.08</b>
<b>10</b>	<b>84.03</b>	<b>88.39</b>
<b>8</b>	<b>85.00</b>	<b>90.00</b>
6	86.25	92.08
4	88.01	95.00
2	91.00	100.0
1	94.00	105.0
½	97.00	110.0
¼ or less	100.0	115.0

## FCX Protection Requirements

85 db = Single Protection  
105 db = Double Protection

# Respirator Use

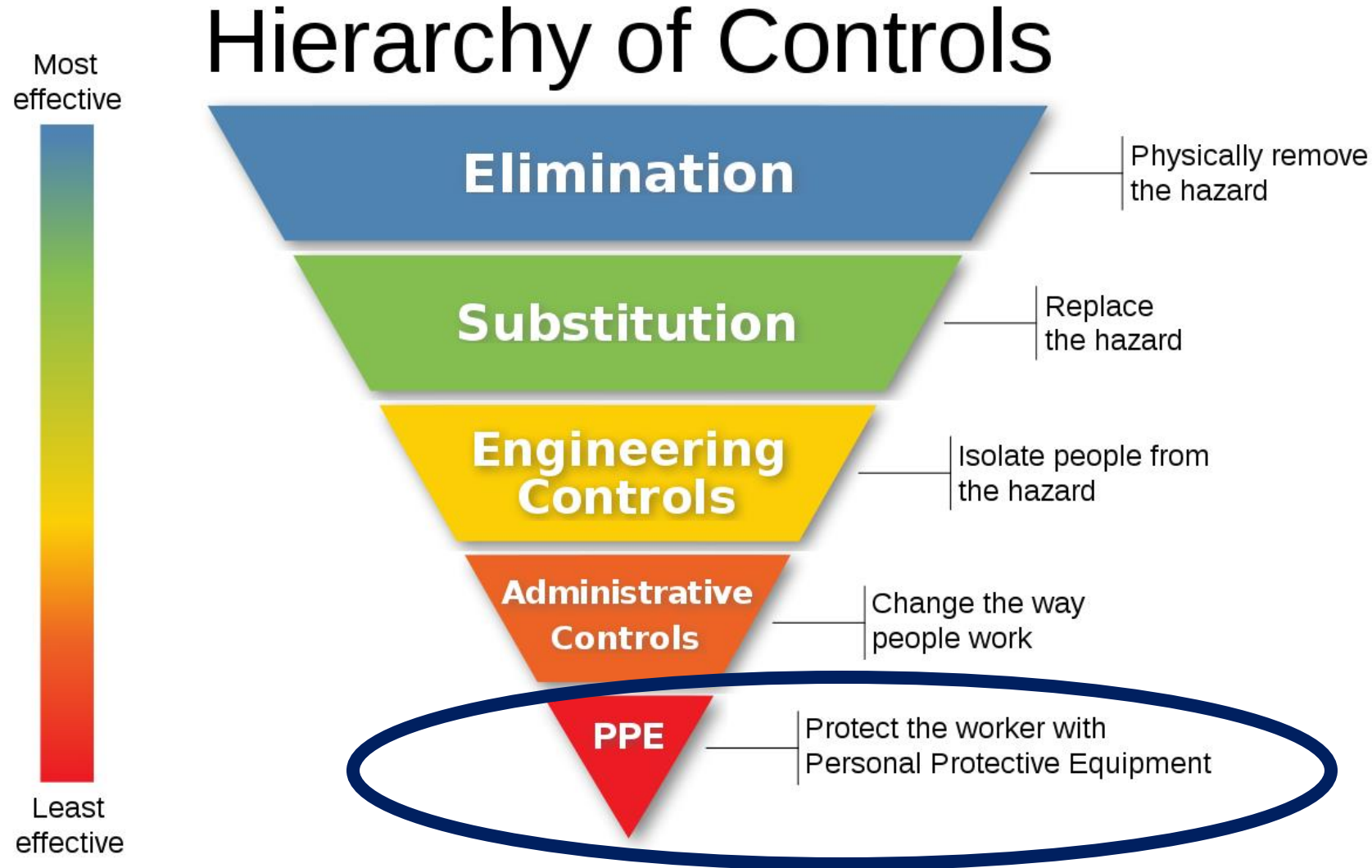


- Required Area
  - Airborne exposure to a substance might exceed an Occupational Exposure Limit (OEL).
- If respirators are used to control inhalation hazards, an MSHA/OSHA-compliant, written Respiratory Protection Program is required and must be followed.
- NIOSH-approved, disposable dust masks are included in this requirement (unless worn voluntarily).

# General PPE requirements



# PPE: Last line of defense



# Key Takeaways

- You practice good hygiene by discarding PPE to avoid contamination, washing hands, not smoking, eating, etc. in prohibited areas.
- Freeport requires single hearing protection at 85 db and double at 105 db.
- The general property entrance dress code includes sleeved shirts, long pants, and closed toe shoes. Minimum PPE required for working areas includes hard hat, safety glasses with side-shields, safety toed boots, hearing protection – task specific, reflective vests, and proper gloves based on job hazards.
- Contractors must have a Health, Safety and Environmental Plan (HSEP) that is project specific and describes the PPE to be worn.

# Knowledge Check

1. It is the job of each employee to create a work environment that eliminates occupational health and safety hazards whenever possible.
  - a. True
  - b. False
2. What are the four routes of hazardous material exposure?
  - a. Inhalation, Ingestion, Injection, Absorption
3. What are the minimum PPE requirements for working area?
  - a. Hard Hats, Safety Glasses with side-shields, Safety Toed Boots, Hearing Protection – task specific, Reflective Vests, Proper Gloves Based on Job Hazards

07

# Emergency Procedures

# Emergency Response Plan (ERP)



# Emergency Equipment



Responder Kit



AED Kit



On-Site Spill Kit



Self Contained Breathing Apparatus (SCBA)



Safety  
Showers  
&  
Eyewash  
Stations



Emergency Lighting &  
Exit Signs

# Escape & Emergency Evacuation

What are some elements of evacuation?

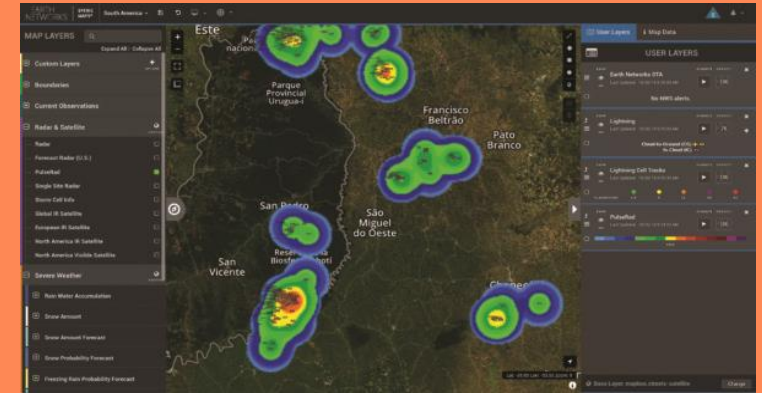
- Training employees on Emergency Action Plan
- Identifying and not obstructing Exit routes
- Roll call at muster area
- Handling vehicle fire appropriately

# Lightning Detection

Most Freeport locations have lightning detection systems, and some are equipped with additional warning sirens and lights.

If lightning is detected, security or dispatch will call over the radio to notify workers with one of the following alerts:

1. **Yellow Alert** - Lightning detected in the area be prepared to seek shelter
2. **Red Alert** - Seek shelter immediately
3. **All Clear** - Return to work



Lighting Detection System



Lighting Siren and Warning Light

# Incident Reporting

1

- Speak Up
- Stop Work

2

Secure the  
Scene

3

- Call H&S
- Call Supervision

**All incidents SHALL be reported to the FCX Health and Safety Department Immediately.**

# What Requires a MAYDAY?

## Medical Conditions

- Chest Pains
- Difficulty breathing
- Unconscious/unresponsive person
- Electrical shock
- Major trauma (*broken bones, amputations, severe bleeding, major burns and signs of shock*)
- Heat Stress

## Events

- Unplanned fire/explosion
- Confined space event
- Equipment (large or small equipment) accident where an injury is suspected, or injury exists
- Open or damaged radiation shielding case/container
- Uncontained chemical spills

**When in doubt, initiate a MAYDAY!**

# Initiating a Mine Emergency (MAYDAY)

The first person on scene secures the area and activates emergency response. There are three ways to initiate a Mine Emergency:

1



RADIO: Verbal  
**MAYDAY, MAYDAY, MAYDAY** on the primary channel in that area.

2



RADIO: Press the **ORANGE/P4** button on the radio. Wait for console operator to answer.

3



PHONE: Call Site Specific phone number.

## Share pertinent information:

- Caller's name
- Location of the incident
- Nature of the emergency
- Number of people involved
- Any other information that will aid emergency responders

# Key Takeaways

- Everyone on property should understand that there is an ERP and how to activate it.
- Everyone on property must know how, when, and where to evacuate.
- No employee shall be required or knowingly be allowed to work in an unsafe environment.
- All incidents SHALL be reported to the FCX Health and Safety Department Immediately.
- Every employee is responsible for reporting and correcting observed or anticipated hazards to his or her immediate supervisor.

# Knowledge Check

1. Any person discovering an injured employee, fire, explosion or any imminent danger involving chemicals should immediately notify \_\_\_\_\_.
  - a. Security or Emergency Response Team
2. If there is a red alert, what action must be taken?
  - a. Evacuate
  - b. Shelter in place
  - ☒ c. Seek shelter
3. During a MAYDAY, traffic in the pit continues.
  - a. True
  - ☒ b. False
4. During a MAYDAY, radio silence is in effect.
  - ☒ a. True
  - b. False

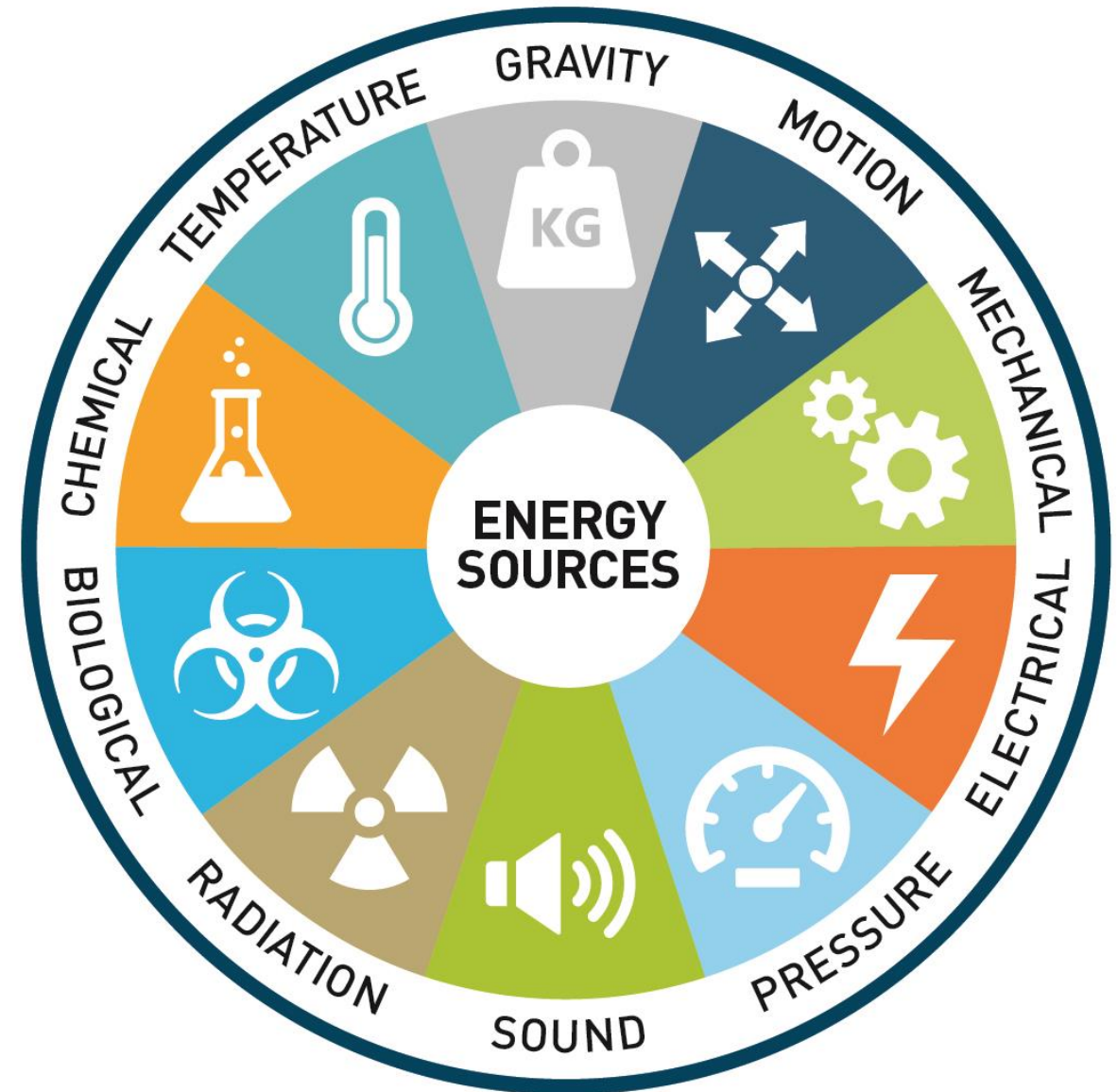
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# Hazard Recognition

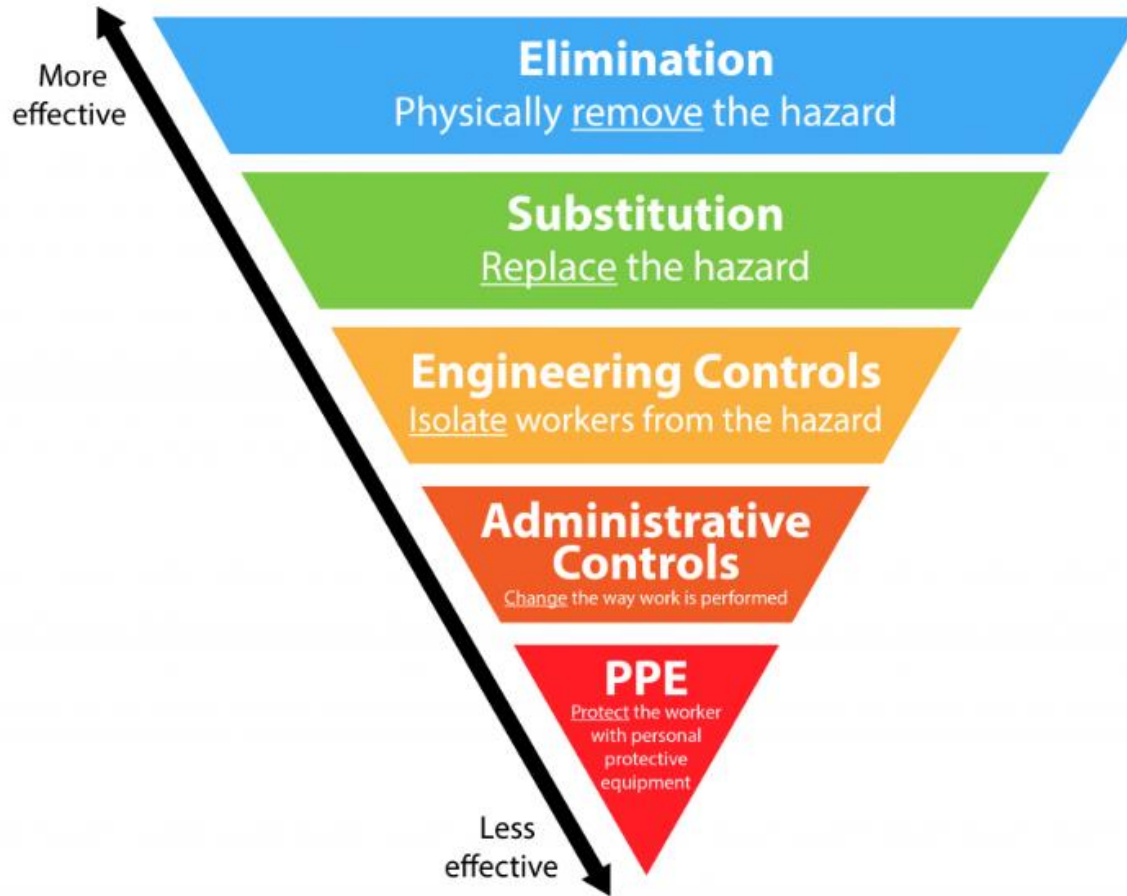
# Hazard Identification

Consider the following when conducting hazards identification in your workplace:

- Routine and non-routine activities
- All personnel at or having been in the workplace
- Behavior, capabilities and other human factors
- Hazards originating from outside the workplace
- Changes or proposed changes in the operations



# Managing Risks



Tools that we use to manage risks.

- Risk Assessment
- Job Risk Analysis (JRA)
- Fatal Risk Verifications (FRM)
- Equipment Inspections
- Safety Operating Procedures (SOPs)
- Workplace Exams (WPE)
- Policies and Permits

# Job Risk Assessment (JRA) AKA Job Safety Analysis (JSA)



Select a Job  
for Analysis

Separate  
the Job into  
steps

Identify the  
Hazards

Estimate  
Risk




Define  
Control  
Measures

Document  
and Train

Observe  
the  
Work

# Workplace Examinations

Workplace examinations are used to identify and control hazards before work begins and throughout a shift and promote safer work areas.

  <b>Workplace Examination – Miami Operations</b> 			
Follow SOPs and Policies, make safe choices, and use consequence thinking to ensure you go home safely!			
A competent person shall examine each working place at least once each shift for conditions, which may adversely affect safety and health. Conditions that present imminent danger shall be brought to the attention of supervision and all persons shall withdraw from the affected area. This form is to be completed and any deficiencies shall be addressed or corrected within 1 hour of the start of every shift. Completed forms will be kept on file for 12 months from date performed.			
Location:	Date:	Time:	Shift:
Location is meant to indicate the overall site: "Mine", "Smelter", "Rod Plant", etc. Exam shall be performed for each shift.			
Competent Person(s):		Working Place(s):	
Payroll #:		The phrase "Working place" means where work is being performed	
The competent person who performed this exam must be identified.		Check "OK" if no concerns, Check "NC" for Non-Conforming or requires corrective action. Check "N/A" if does not apply.	
General:	OK	NC	N/A
Housekeeping (general cleanliness)			
Waste			
Chemical Storage			
Container Labels (correct contents & legible)			
Spills			
Lighting (light is adequate)			
Lunchroom/Clean (fridge, microwave, etc.)			
Restroom (clean, stocked, graffiti, etc.)			
Utility Location (power, gas, sewer, etc.)			
Slip/Hold/Walk/Ground conditions			
Noise			
Machines and Guarding:	OK	NC	N/A
Loose parts or guards			
Missing parts or guards			
Lighting (start-up, warning, alarm, etc.)			
Alarms (start-up, warning, backup, etc.)			
Clearances (pathways, idlers, safety railings)			
Grinder (shield, gap, wheel condition, etc.)			
Emergency Stop Switch			
Whip checks			
Electrical:	OK	NC	N/A
Access to Disconnect (36" min.)			
Lines and tools (grounded, insulated, condition)			
Cords (condition, grounded, temporary)			
Receptacles and fixtures			
Labeling on electric gear			
Condition of boxes (mount, latch, knockout)			
Walkways/Stairways/Travel ways:	OK	NC	N/A
Un-obstructed			
Signs Posted			
Floor Grading (slope, missing, etc.)			
Hazards (damage, water, staining, etc.)			
Underfooting (rocks, dirt, mud, traction, etc.)			
Trips/Slips/Falls (holes, boxes, cords, etc.)			
Floor Condition (identifiable, barricaded, etc.)			
Stairway (clean, safety cleats, banister, etc.)			
Traffic (direction, volume, type, etc.)			
Weather (Dust, Rain, Snow, etc.)			
Barriers (height, construction, guardrail, etc.)			
Emergency Equipment	OK	NC	N/A
Eyewash/Safety shower			
Evacuation alarms			
Evacuation routes and location signs			
Emergency lighting			
Fire Prevention	OK	NC	N/A
Restricted area equipment (tag-out, fuel island)			
Fire Extinguisher (charged, pin, keeper, tags)			
Flue, source segregation			
Flammable cabinets (separation, vents, SDS)			
Flammable/Combustible liquid cans (lid, labels)			
Waste Management:	OK	NC	N/A
Container labels (correct, legible, attached)			
Container covers in place and secure			
Quantity/Condition of containers			
Waste Segregation (metal, welding rod, municipal, industrial, hazardous, etc.)			
Miscellaneous:	OK	NC	N/A
High-pressure cylinders (caps, separation, etc.)			
Oxygen station (leak, damage, shutoff, etc.)			
Corrective Action Required, Comments, Work Order			
Acknowledgement & Commitment to Safety: I am responsible for my safety and my co-workers safety. I am obligated to stop unsafe work.			
Payroll #:	Name:	Company:	Initials:
Supervisor:	Payroll #:	Contact #:	Date:

# Standard Operating Procedures (SOPs)



## Why review SOPs?

- To view instructions for specific operations
- Eliminate or control risks
- Meet safety requirements
- Prevent fatalities

# Key Takeaways

- A hazard is any source of potential damage, harm or adverse health effects on something or someone.
- Risk is the chance or probability that a person will be harmed or experience an adverse health effect if exposed to a hazard.
- The group that will perform the task should carry out hazard identification and risk assessment for the workplace in its entirety.
- Risk assessment is the process we use to identify hazards in our workplace and establish controls.
- Workplace examinations are used to identify and control hazards before work begins and throughout a shift and promote safer work areas.

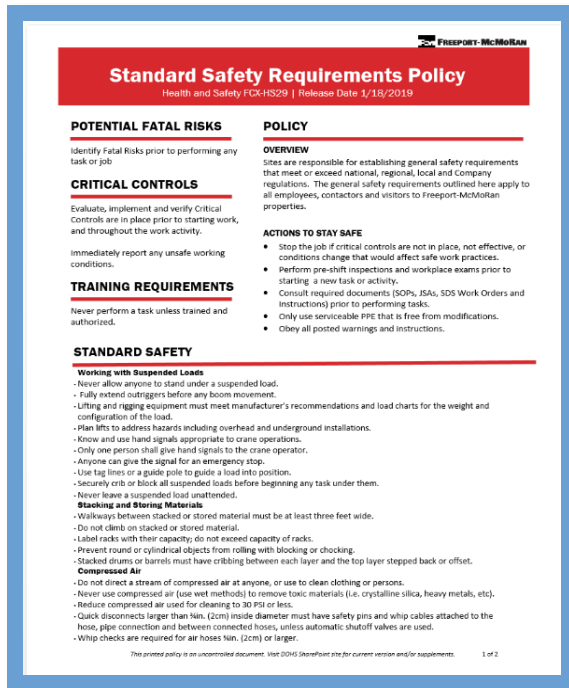
# Knowledge Check

1. What tools do we use to manage risks?
  - a. JRA (JSA), Fatal Risk Verifications (FRM), Equipment Inspections, Safe Operating Procedures (SOPs), Workplace Exams (WPE), Policies and Permits
2. Some hazards are virtually invisible until a step-by-step analysis is performed on a given job/task.
  - a. True
  - b. False

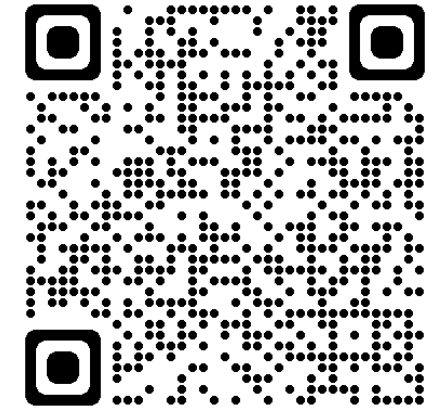
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# Standard Safety Requirements

# Safety Requirements



- The purpose of the Standard Safety Requirements Policy is to provide all Freeport and contract employees with proven safe practices that are common to all Freeport-McMoRan operations in North America.
- Lack of understanding or familiarity with safety rules is not an acceptable reason for a safety rule violation.



[https://www.fcx.com/sites/fcx/files/documents/suppliers/standard\\_safety\\_policy.pdf](https://www.fcx.com/sites/fcx/files/documents/suppliers/standard_safety_policy.pdf)

# Standard Safety



## Standard Safety Requirements include:

- Working with suspended loads
- Stacking and storing materials
- Compressed air
- Compressed gas cylinders
- Hand and power tools
- Housekeeping
- Lifting heavy objects
- Clothing and accessories
- Personal protective equipment
- Vehicle operation



## Actions to Stay Safe Are:

- Stop the job if critical controls are not in place, not effective, or conditions change that would affect safe work practices.
- Perform pre-shift inspections and workplace exams prior to starting a new task or activity.
- Consult required documents (SOPs, JSAs, SDS Work Orders and Instructions) prior to performing tasks.
- Only use serviceable PPE that is free from modifications.
- Obey all posted warnings and instructions.



# Working With Suspended Loads

**Hand signals**

Raise Hoist   Bridge Travel   Lower Hoist   Trolley Travel

Stop   Magnet is Disconnected   Multiple Trolleys

Appropriate hand signals must be known and used in relation to crane operations.

Use tag lines or a guide pole to guide a load into position.

**EMERGENCY STOP**

Anyone can give the signal for emergency stop.

# Stacking & Storing Materials



Walkways must be at least 3 feet wide



Racks must be labeled



Prevent round objects from rolling with blocking or chocking

# Compressed Air



Key safety requirements for compressed air include:

- Do not direct a stream of compressed air at anyone.
- Reduce compressed air used for cleaning to 30 PSI or less.
- Quick disconnects larger than  $\frac{3}{4}$ in. (2cm) inside diameter must have safety pins and whip cables attached.
- Whip checks are required for air hoses  $\frac{3}{4}$ in. (2cm) or larger.
- Do not use compressed air to leak test unrated pressure vessels unless approved by inspector.
- Relief-valve flow capacities must match those of the air pressure-generating device.



# Compressed Gas Cylinders



- General safety guidelines for compressed gas cylinders:
  - Secure cylinders against falling at all times.
  - Cap compressed cylinders when not in use.
  - Flammable and combustible cylinders shall not be stored with oxygen cylinders unless properly segregated and prevent oil and grease from coming into contact with compressed oxygen systems.
  - Never bring compressed gas cylinders into a confined space.



# Hand & Power Tools



When using utility knives or similar; cut resistant sleeves and gloves with a cut resistance rating of 5 (ANSI or equivalent) must be used.



When cutting rubber line or conveyor belt, cut resistant material must be worn over groin and inner thighs.



Use grounded or UL-approved (or similar national standard) double insulated portable tools in good condition.

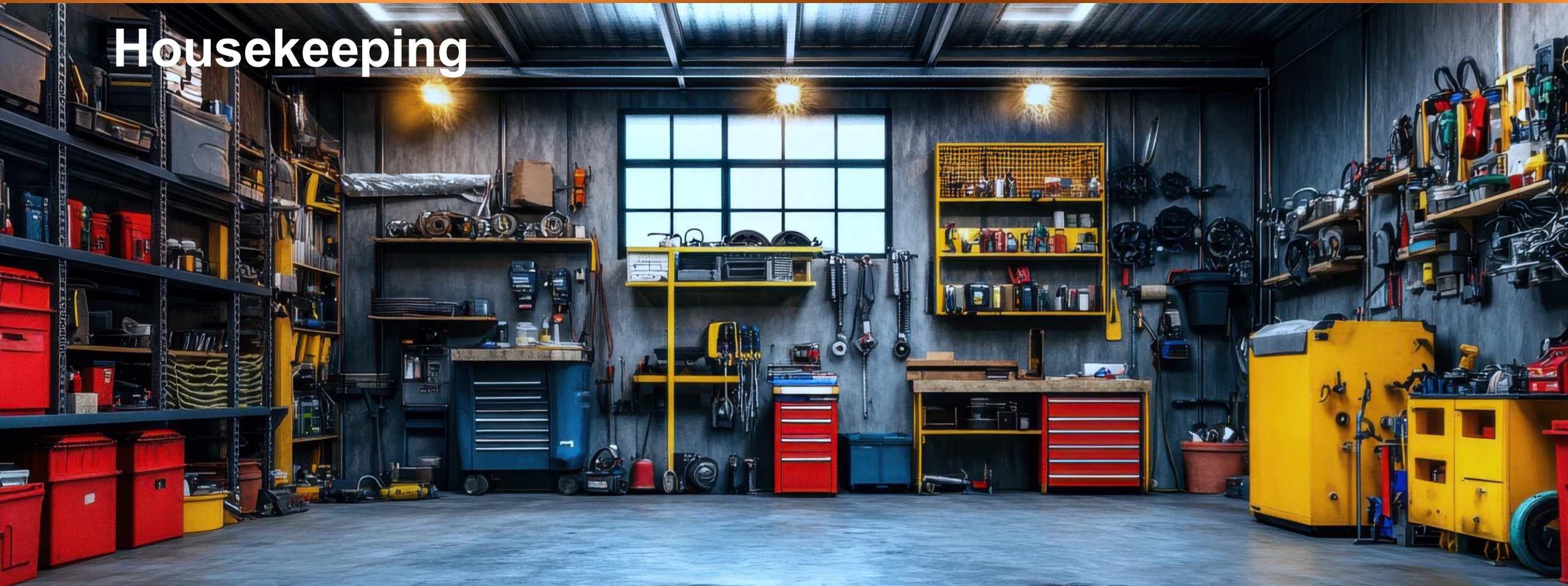


Do not remove or bypass the ground conductors on electrical equipment.

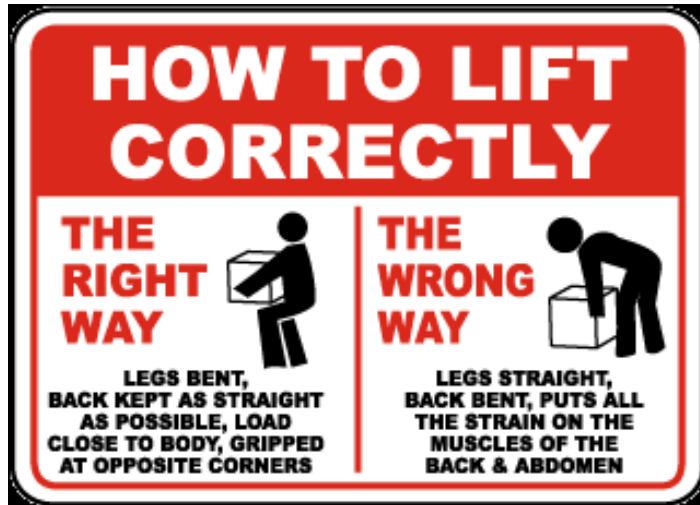


When using electrical equipment, where available, always use GFCI protection installed at the source.

# Housekeeping



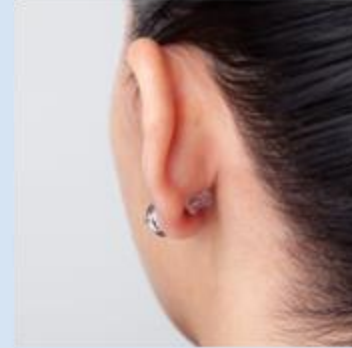
# Lifting Heavy Objects



# Clothing & Accessories



Secure loose clothing and long hair



Earrings must have protective backs and not extend beyond the edge of the ear.



Watches and medical bracelets must have break-away pin features



Gauges should be plugged



# Hand Safety



How can we stop hand injuries?

- Stop distractions
- Stop inattentiveness
- Stop negligence
- Stop disregard
- Increase knowledge of job
- Use the right PPE

**Proper use of gloves may have prevented 90% of those 1 million injuries.**

# Key Takeaways

- The purpose of the Standard Safety Requirements Policy is to provide all Freeport and contract employees with proven safe practices that are common to all Freeport-McMoRan operations in North America.
- Lack of understanding or familiarity with safety rules is not an acceptable reason for a safety rule violation.
- Using proper lifting techniques, team lifting, or using equipment will reduce chances of injuries.
- Watches and jewelry can create hazards in operations areas.
- Each year more than 1 million workers lives are affected because of a serious hand injury. Proper use of gloves may prevent 90% of the 1 million injuries.

# Knowledge Check

1. Racks must be \_\_\_\_\_ and walkways must be at least \_\_\_\_\_ wide.
  - a. Labeled with capacity, 3 Feet
  
2. One of the most common housekeeping hazards is slip, trip, or fall.
  - ☒ a. True
  - b. False

10

# Safe Work Practices

# Round Stock Management FCX-HS24

**Round Stock Management Policy**  
Health and Safety FCX-HS24 | Release Date 1/22/2020

**POTENTIAL FATAL RISKS**

- Uncontrolled Release of Energy
- Lifting Operations
- Vehicle Impact on Person

**CRITICAL CONTROLS**

- Segregation, Guarding, Locking/Tagging
- Pipe Management
- Energy Isolation
- Mechanical Integrity
- Vehicle Preparation
- Positive Communication
- Fundamentally Safe

**STORAGE REQUIREMENTS**

Block all rolling material stored. This list is not exhaustive. Items must be stored in a safe manner. Items must be stored in a safe manner. Items must be stored in a safe manner.

**TRAINING**

Safety Watchmen must be trained and certified. Safety Watchmen must be trained and certified. Safety Watchmen must be trained and certified.

**Technical Supplement**  
Receiving/Loading/Unloading Checklist | Round Stock Management Policy FCX-HS24 | Release Date 1/22/2020

Date: \_\_\_\_\_ SOU: \_\_\_\_\_ Inspected By: \_\_\_\_\_

Driver: \_\_\_\_\_ Load Description: \_\_\_\_\_

**Part 1 - Load Checklist**

YES	NO	Damage is in place as needed.
YES	NO	The load is strapped and secured properly so that unstrapping will not permit material to roll from trailer.
YES	NO	Has the load shifted or is it leaning?
YES	NO	Was rigging inspected and in good condition when the load was strapped?

**NOTE:** If the material is not loaded properly or any of the above conditions have not been met (checked "No"), the truck will NOT be released for off-loading. The area receiving the material must be contacted immediately for further evaluation.

Load Approved: \_\_\_\_\_

**Part 2 - Receiving Checklist**

YES	NO	Has the load shifted or is it leaning?
YES	NO	The load is strapped and/or secured properly so that it will not roll from trailer during unloading.
YES	NO	Is proper size damage in place between layers (if needed) and chocks placed to prevent rolling?
YES	NO	Is load free from visible defects or damage?

**NOTE:** If the material is not loaded properly or any of the above conditions have not been met (checked "No"), the truck will NOT be released for off-loading. The area receiving the material must be contacted immediately for further evaluation.

**NOTE:** All incoming loads must be communicated to GSC or warehouse leadership.

Receive and Approved: \_\_\_\_\_

**Part 3 - Unloading Checklist**

YES	NO	Have all operators and safety watchmen been task trained?
YES	NO	Has operator completed a pre-use inspection for equipment?
YES	NO	Is unloading area free of other equipment, debris, and other hazards?
YES	NO	Is clear access established to both sides of the truck, where necessary?
YES	NO	Are truck wheels level and chocked?
YES	NO	Has a 50m (15-25m) safe zone been established, where possible (or a substantial barrier is put in place)?
YES	NO	Is a safety watchman in place?
YES	NO	Is the driver with the safety watch or in the cab?
YES	NO	Is the area where material will be placed inspected and free from hazards?

**NOTE:** Do NOT proceed with unloading if any question above is answered "No".

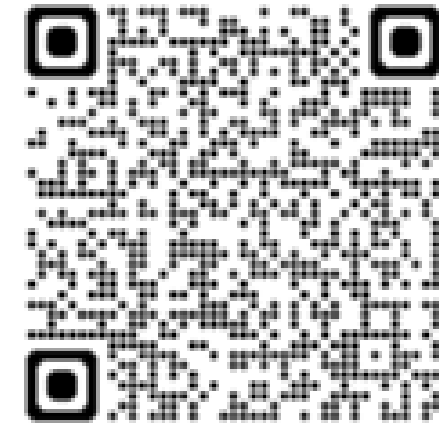
**Loading/Unloading Approval Signatures**

Driver: _____	Safety Watch: _____	Unloading Crew: _____
---------------	---------------------	-----------------------

This printed supplement is an uncontrolled document. Visit DMS SharePoint site for current version and full policy details. 1.

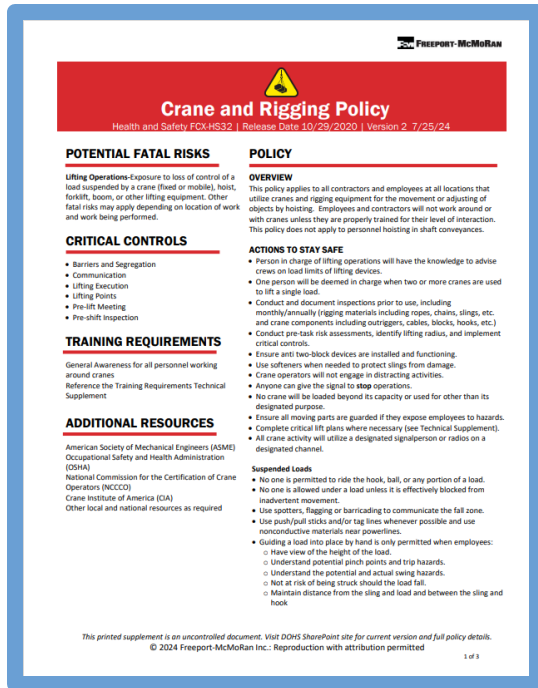
## Key elements of Round Stock Management policy:

- Maintain 50' safety distance from such activities
- Use when loading, uploading, and storing materials that can roll and crush people



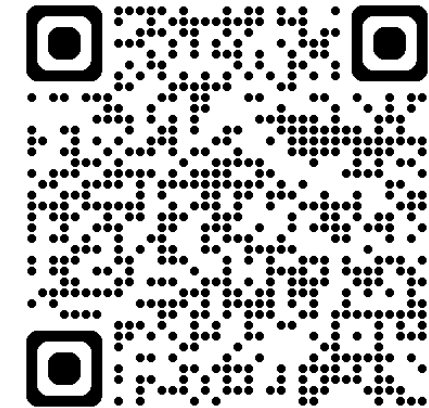
<https://www.fcx.com/sites/fcx/files/documents/suppliers/Round-Stock-Management-Policy.pdf>

# Crane & Rigging Policy



## Key elements of Crane & Rigging Policy:

- The Crane and Rigging Policy includes three technical supplements.
- The policy applies to all contractor and employees that utilize cranes and rigging equipment for object hoisting.
- The policy does not apply to personnel hoisting for underground purposes.

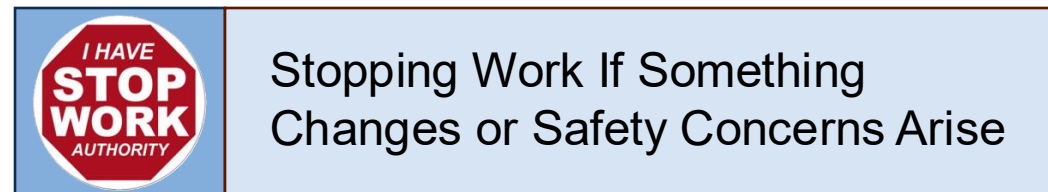
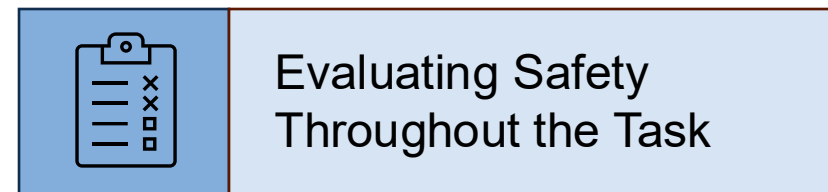
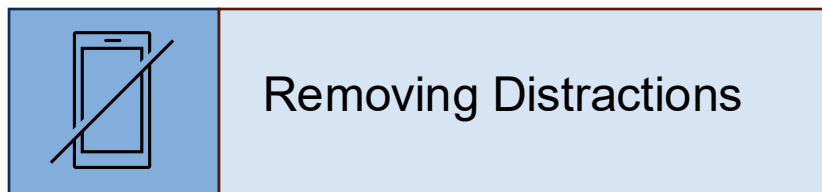
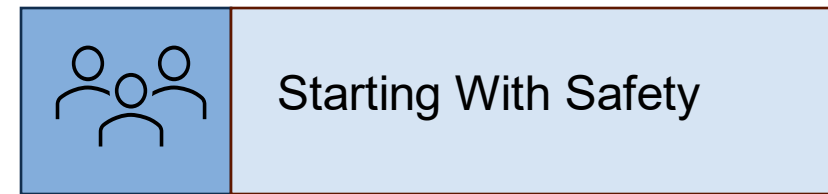
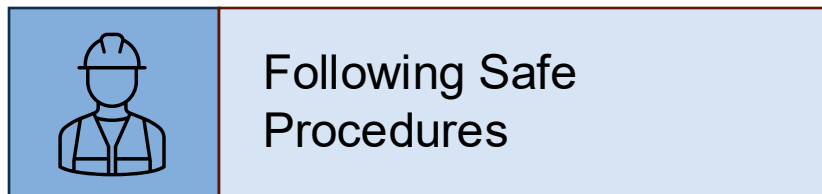


<https://www.fcx.com/sites/fcx/files/documents/suppliers/crane-rigging.pdf>

# Critical Communication for High-Risk Tasks

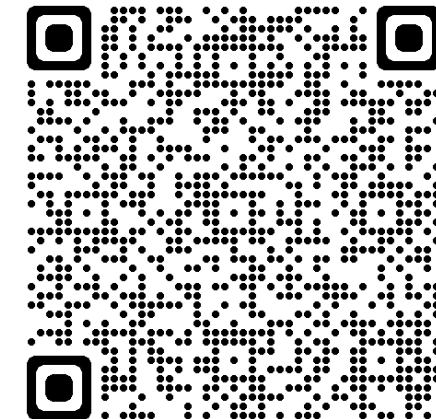
What are some high-risk tasks where communication is vital to safe completion?

Ensure critical communication is effective by:





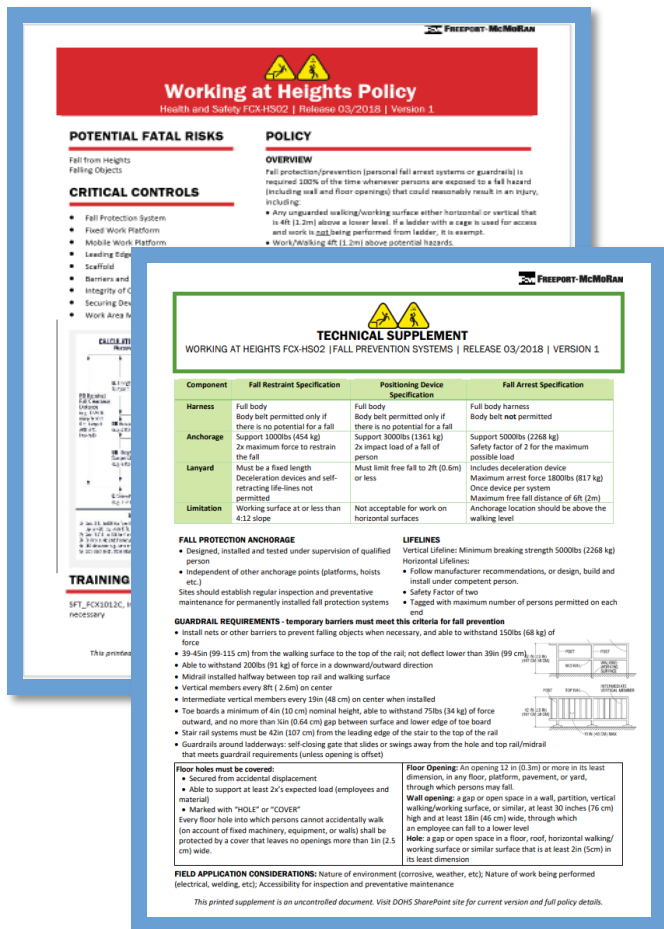
# Working From Heights FCX-HS02



[https://www.fcx.com/sites/fcx/files/documents/suppliers/working\\_at\\_heights\\_policy.pdf](https://www.fcx.com/sites/fcx/files/documents/suppliers/working_at_heights_policy.pdf)

## Key elements of Working from Heights policy:

- Fall protection required 100% of the time when exposed to a fall hazard
- Must be trained to use fall protection



# Scaffolding





# Confined Space FCX-HS05

The 3 criteria of a confined space:

- Large enough to enter
- Not designed for human occupancy
- Limited or restricted entry or exit





# Confined Space FCX-HS05

**Confined Space Policy**  
Health and Safety FCX-HS05 | Version 1 | Release 03/2018

**POTENTIAL FATAL RISKS**  
Exposure to Hazardous Substances  
Entanglement  
Uncontrolled Energy

**POLICY**  
OVERVIEW

**CRITICAL**  
Atmospheric  
Ventilation  
Energy Isolation  
Entry Permit

A Confined Space is defined as a space that is not designed for continuous occupancy and which has limited means of entry and exit.

1. Is large enough to enter and perform work.

2. Has a limited means of entry and exit.

3. Is not designed for continuous occupancy.

**TRAINING**  
Awareness  
Initial Training  
Annual Refresher  
Remedial

**CONFINED SPACE Entry Permit**

**SECTION A: CONFIRMED SPACE HAZARDS**

HAZARD	YES	NO
Hazardous / Potentially Hazardous Atmosphere		
Isolation or Confinement Hazards		
Equipment / Environment		
Any Other Recognized Hazards (Toxic, Heat, Uncontrolled Energy, etc.)		

**SECTION B: INITIAL AIR SAMPLING**

GAS	ACCEPTABLE	READING
Oxygen	19.5 - 23.5%	
LEL*	< 10%	
Toxics	< PEL* / TLV* / OEL*	
Other		

**SECTION C: PRE-ENTRY PREPARATION AND CONTROLS**

EQUIPMENT	REQUIRED - Y/N	TESTED
Ventilation Required: YES / NO		
Types		
Isolation System (Emergency Escape Apparatus)		
Pro Entry/Exit		
Isolation Safe Equipment		
LEL/TLV		
Rescue and Resuscitation		

**SECTION D: PRE-ENTRY AIR SAMPLING (Immediately Prior to Entry)**

GAS	ACCEPTABLE	READING
Oxygen	19.5 - 23.5%	
LEL*	< 10%	
Toxics	< PEL* / TLV* / OEL*	
Other		

**SECTION E: PRE-ENTRY MEETING AND REVIEW**

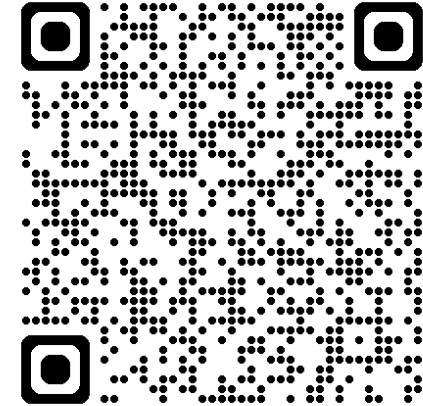
MEETING REVIEW	INITIALS
Pre-Entry Meeting and Review Conducted	
Acceptable Entry Conditions Have Been Met	

**NOTE: Post completed permit, and any other relevant forms at the entrance to the Confined Space**

Key elements of Confined Space policy:

- Training is required to enter a confined space
- Confined Space Entry Permit
- Air monitoring
- Rescue plan
- Energy Isolation
- Ventilation

**\*NEVER** attempt an entry rescue of a worker trapped in a confined space



[https://www.fcx.com/sites/fcx/files/documents/suppliers/confined\\_space\\_policy.pdf?d=20220406](https://www.fcx.com/sites/fcx/files/documents/suppliers/confined_space_policy.pdf?d=20220406)



# Hot Work FCX-HS06

**FREEPORT-McMoRan**

**Hot Work Policy**  
Health and Safety FCX-HS06 | Release 3/2018 | Version 2

**POTENTIAL FATAL RISKS**

Fire  
Exposure to Hazardous Substances - Chronic

**CRITICAL CONTROLS**

- Segregation/Storage:
- Atmospheric Testing
- Suppression System
- Rescue Systems
- Fire Watch
- Hot Work Permit
- Alarm System
- Hazard Awareness
- Handling Requirement
- Engineered Controls
- PPE

**Additional procedures:**  
Work in or on the:  
• Fuel & storage tanks  
• Pressure vessels  
• Rubber lined equipment  
• Within 100ft/30m:  
• Dust collectors  
• SVEW Operation  
• Heavy & Mobile Equipment  
• Vessels or Confinement  
• Within 30ft/11m:  
• Materials  
• Within 50ft/15m:  
• Available Reference:  
Vessel Management:  
• ASME Boiler and  
• API 510  
• OSHA Pressure Vessel  
• NBIC, certified inspections

**TRAINING**

Hot Work Training:  
Remedial as necessary  
This printed policy

**HOT WORK PERMIT FCX-HS06 Version 2**  
Before signing this permit, think through the entire task and identify, evaluate and control energy sources. Safety precautions described in the Hot Work Policy must be followed. Every line on both sides must be completed. Evaluate the use of cold work alternatives prior to starting hot work.

**Not valid if work is delayed for 90 minutes or more. Good for one shift only**

Date: \_\_\_\_\_ Shift: \_\_\_\_\_  
WO No. \_\_\_\_\_ AM/PM To: \_\_\_\_\_ AM/PM  
Bldg. or Area: \_\_\_\_\_ Floor: \_\_\_\_\_  
Dept.: \_\_\_\_\_  
Task/Activity: \_\_\_\_\_  
Hot Work Performed By: \_\_\_\_\_  
Fire watch assigned? ☐ Yes ☐ No  
Required, if uncovered combustibles remain within 35 feet.  
Fire Watch: \_\_\_\_\_  
Time Released by Fire Watch: \_\_\_\_\_ AM/PM

I verify that the area has been inspected

Signatures of Persons Performing Work  
\_\_\_\_\_  
Signature of Area Supervisor or Designee  
\_\_\_\_\_  
Emergency Contact: \_\_\_\_\_

**COMPLETE THIS SECTION AT END OF JOB**  
Work Completed Date & Time: \_\_\_\_\_  
I verify the area has been monitored for the absence of fire for 60 minutes after hot work ceased, and that a thorough inspection of the entire work area has been completed.  
Final Inspection by: \_\_\_\_\_  
Time: \_\_\_\_\_

**HOT WORK ON CONTAINERS & FUEL TANKS**  
Containers holding flammable or combustible liquids or gases have been purged, cleaned, and filled with inert liquid or gases and tested for LEL/LEL. NOTE: Welding on mobile equipment fuel tanks is not permitted.  
Initial when reading is taken and tested to verify an LEL/LEL less than 10%.

**HOT WORK IN ALL AREAS, INCLUDING THE ABOVE**  
1. Person completing "Hot Work Permit" understands hazards in the hot work zone. ☐ Yes ☐ No  
2. Flame or spark-producing equipment to be used has been inspected and found to be in good repair. ☐ Yes ☐ No  
3. Sprinklers and fire water, where provided, are in working condition and will remain in service while this work is being done. ☐ Yes ☐ No  
4. Portable fire extinguishers, if available, are appropriate for the fire hazard, and personnel have been trained to use them. ☐ Yes ☐ No  
5. All combustibles have been relocated 35 feet from the hot work, and the remainder protected with flame-proof curtains or covers, and a fire watch is assigned as needed. ☐ Yes ☐ No  
6. All voids and openings leading to other areas (rooms, floors) have been covered. ☐ Yes ☐ No  
7. All appropriate SOPs and good work practices are being followed. ☐ Yes ☐ No  
8. Do you have the proper personal protective equipment including welding shields, respirators, hearing protection for the job? ☐ Yes ☐ No  
9. A method for contacting emergency responders is in place. ☐ Yes ☐ No

**IF ANY ANSWER IS NO, A VARIANCE MUST BE COMPLETED**

**AIR TESTING REQUIRED FOR WORK NEAR FLAMMABLE LIQUIDS AND GASES**

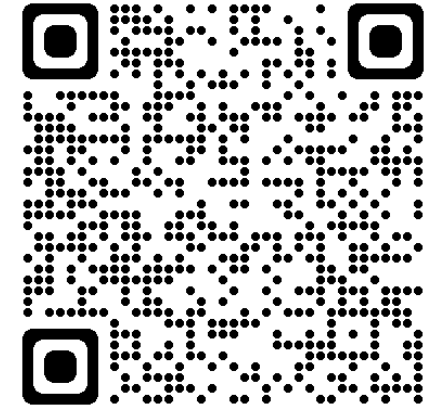
Oxygen level _____ %	LEL _____ %	Time _____
Oxygen level _____ %	LEL _____ %	Time _____
Oxygen level _____ %	LEL _____ %	Time _____

Work must not proceed if oxygen level is above 23%, or the LEL is greater than 10% (note that oxygen must be above 19.5% in order to accurately measure LEL/LEL).

This printed policy is an uncontrolled document. Visit DSHS SharePoint site for current version and/or supplements. 2 of 2

## Key elements of Hot Work policy:

- Includes any work that can be a source of ignition or can be a fire hazard
- Hot Work Permit is required unless in fire safe area
- Permits are valid for one work shift/task
- Atmospheric monitoring will be conducted.
- Fire watch in place during and 60 minutes after work completed



[https://www.fcx.com/sites/fcx/files/documents/policies/hot\\_work\\_policy.pdf](https://www.fcx.com/sites/fcx/files/documents/policies/hot_work_policy.pdf)

# Metal Fume Control Policy FCX-HS33

## Metal Fume Control Policy

Health and Safety FCX-HS33 | Release Date: April 7, 2021

### POTENTIAL FATAL RISKS

Exposure to Hazardous Substances – Chronic  
Exposure to Hazardous Substances – Acute

### CRITICAL CONTROLS

**Engineered Controls**  
Local Exhaust Ventilation (LEV)

**PPE**  
Respiratory Protective Equipment (RPE)  
Half/Full Face Respirators  
Powered Air-Purifying Respirator (PAPR)  
Supplied Air Respirator (SAR)  
Assigned Protection Factor (APF)

**Handling Requirements**  
Surface Preparation  
Process & Equipment Selection

### TRAINING REQUIREMENTS

Hot Work, annual and refresher  
Respiratory Protection and Fit Testing  
Task and Technical Training

### OCCUPATIONAL EXPOSURE LIMITS (OEL)

Substance	OEL (mg/m <sup>3</sup> )
Antimony	0.5
Beryllium	0.00005
Cadmium	0.005
Chromium	0.003
Hexasulfent Chromium	0.0002
Cobalt	0.02
Copper	0.1
Iron	5.0
Lead	0.05
Manganese	0.02
Molybdenum	0.5
Nickel	0.1
Vanadium	0.05
Zinc Oxide	2.0

### POLICY

#### OVERVIEW

This policy outlines the requirements for protection from chronic and acute health hazards associated with metal fumes from hot work including welding, cutting, brazing, air arcing, and other processes that create metal fumes. Employees must consider the process, consumable, base metal, backing material and any surface coatings that may be present.

#### CONTROL REQUIREMENTS: REFERENCE CHART BELOW

- Stainless steel, high manganese alloys, galvanized or cadmium-containing material, and arc air gouging require more protective RPE, or a combination of LEV and RPE.
- Welding or cutting in confined spaces requires LEV and appropriate RPE, or RPE with an APF of 1000.
- Fume ventilation is distinct from confined space ventilation.
- Control requirements for specific tasks may be relaxed, if documented and cleared by Industrial Hygiene sampling.

#### ACTIONS TO STAY SAFE

- Complete a pre-task review for non-routine work.
- Position yourself to avoid the pathway of the plume.
- Consider others' exposure in the area, e.g. fire watch.
- Position LEV hoods close to fume source to capture maximum amount of fume.
- Remove surface contaminants and other hazardous materials (e.g. concentrate, solvents, lead, zinc, chromate paints, adhesives, etc.) before welding or cutting to prevent additional exposures.

#### CONTROL LEVEL CHART

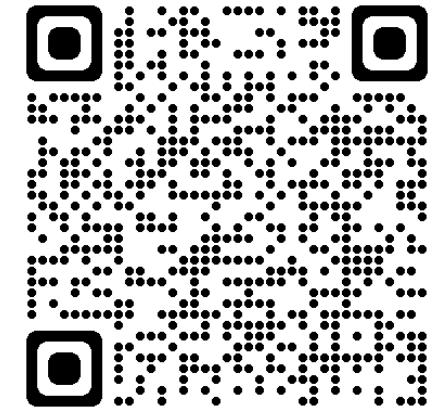
Minimum requirements to meet OELs

	GTAW (TIG) Cutting	GMAW (MIG)	FCAW (Flux Core)	SAW (Stick)	CAC/PAC (Carbon/ plasma arc)
Carbon	Elective	Half Mask (P100 or Equivalent) (APF 10)			
Galvanized					
Cadmium					
Manganese					
Stainless					
Endcapped or Confined					

Refer to site Respiratory Protection Program for additional information

## Key elements of Metal Fume Control policy:

- Protection from Chronic and Acute Health Hazards associated with metal fumes from hot work
- Provides controls and exposure limits
- Includes critical controls
- Specifies training requirements



<https://www.fcx.com/sites/fcx/files/documents/suppliers/metal-fume-control.pdf>

# Blue Stake Policy FCX-13 (Utility Location)

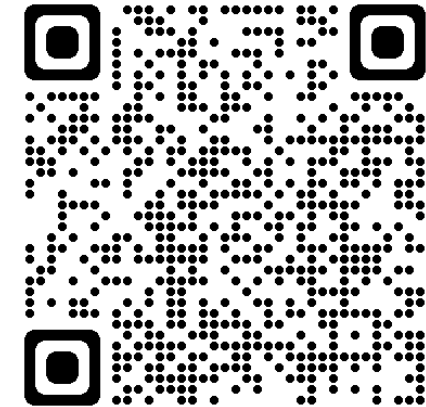
**FCX** FREEPORT-McMoRAN

FCX Department of Occupational Health and Safety	
Blue Stake Policy	
Approval Date: 12/10/2013	Original Date: 9/17/2005
SOP #	FCX-13
Revision #	
Supersedes	
Task Risk	High Medium Low NA

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## Key elements of Blue Stake policy:

- Permit required when:
  - Penetration of 1 inch or greater into any surface.
  - Sawing into floors always requires a permit.
  - Valid for 30 days
- Exemptions exist but the Blue Stake Representative(s) will determine the necessity for a permit.



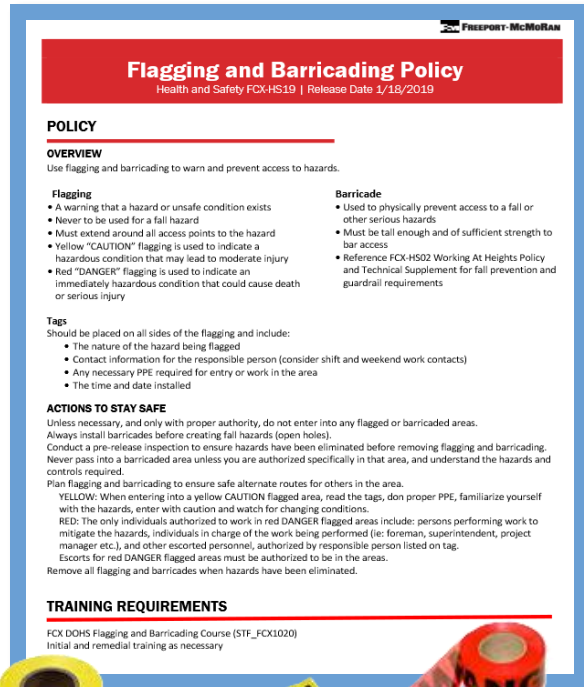
[https://www.fcx.com/sites/fcx/files/documents/suppliers/blue\\_stake\\_policy.pdf](https://www.fcx.com/sites/fcx/files/documents/suppliers/blue_stake_policy.pdf)

# Blue Stake FCX-13 (Utility Location)



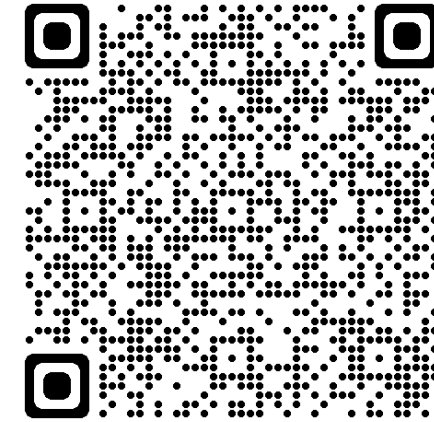
	Electric power: lines, cables, conduit
	Gas, oil, steam, petroleum, chemicals
	Communications, phone, cable, alarms
	Water, irrigation, slurry lines
	Sewers, drains
	Planned excavation
	Temporary survey markings
	Reclaimed water

# Flagging & Barricading Policy FCX-HS19



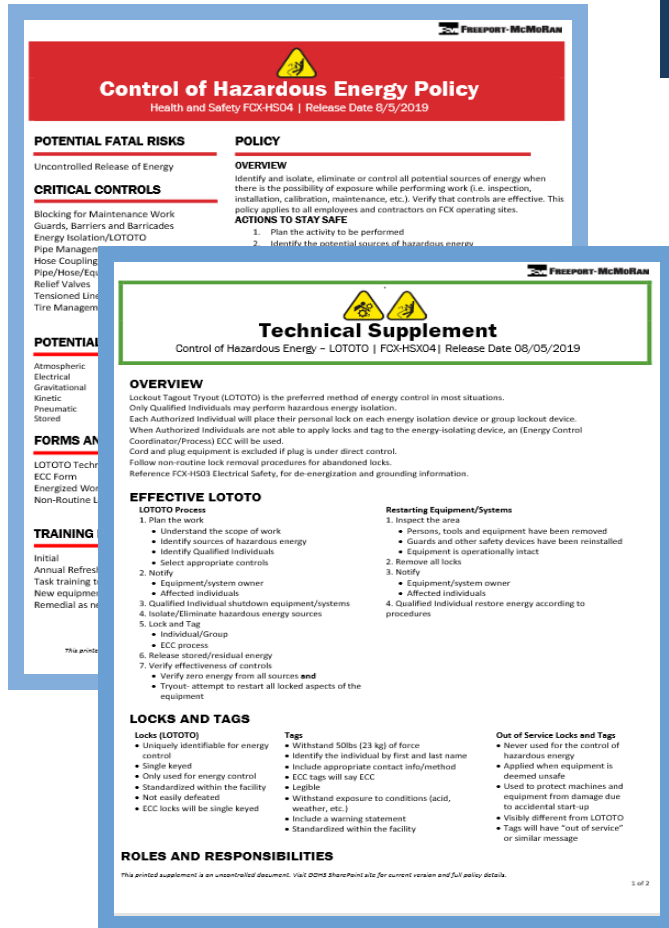
## Key elements of Flagging & Barricading policy:

- Flagging is to be placed around all access points relative to the hazards.
  - DO NOT use flagging for a fall hazard
- Barricading is used to restrict access to hazardous areas.
  - Temporary or permanent
  - Barricading includes the use of a wide assortment of items, including handrails, fences, jersey barriers, and berms.



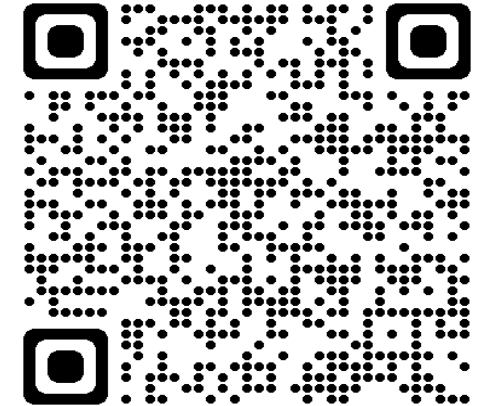
[https://www.fcx.com/sites/fcx/files/documents/suppliers/flagging\\_barricading\\_guideline.pdf](https://www.fcx.com/sites/fcx/files/documents/suppliers/flagging_barricading_guideline.pdf)

# Control of Hazardous Energy (LOTOTO) Policy FCX-04

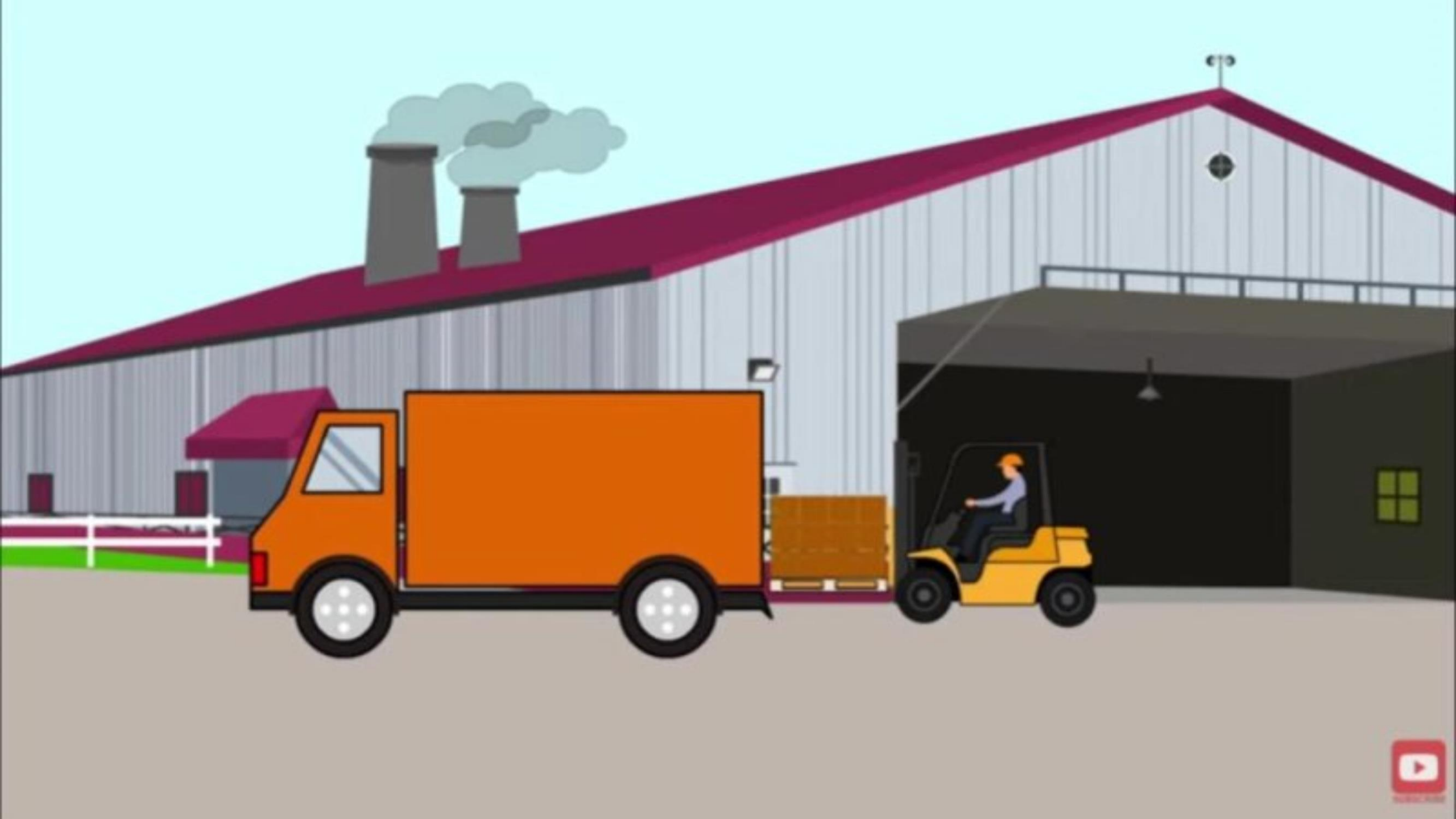


## Key elements of Control of Hazardous Energy policy:

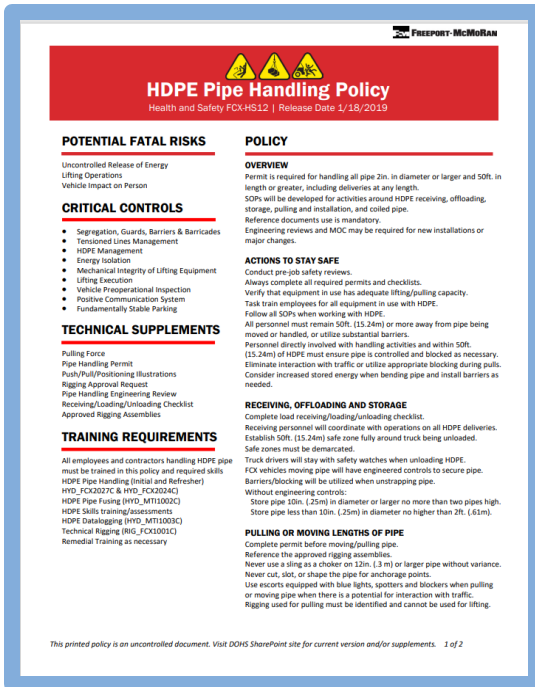
- The control of hazardous energy policy FCX-04, the technical supplement and site-specific addendum must be followed to identify and isolate, eliminate or control all potential sources of energy when there is a possibility or exposure.
- Training is required to hang a lock.



[https://www.fcx.com/sites/fcx/files/documents/suppliers/lototo\\_policy.pdf](https://www.fcx.com/sites/fcx/files/documents/suppliers/lototo_policy.pdf)

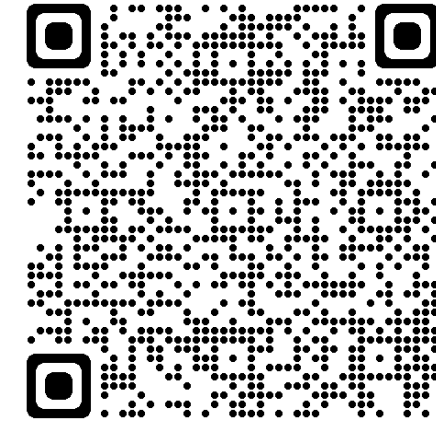


# HDPE (High-Density Polyethylene) FCX-HS12



## Key elements of HDPE policy:

- All personnel working with HDPE must be trained
  - HDPE pipe handling permit
  - Safety watch
  - Safety zone of at least 50 feet is required



[https://www.fcx.com/sites/fcx/files/documents/suppliers/hdpe\\_pipe\\_handling\\_policy.pdf](https://www.fcx.com/sites/fcx/files/documents/suppliers/hdpe_pipe_handling_policy.pdf)

# Tankhouse Electrical Safety

FCX Department of Occupational Health and Safety	
Electrowinning (EW)/Electrorefining (ER)	SOP # FCX 25
Electrical Safety Policy	Supervisor
Approval date: Feb. 20, 2017	Task Risk
	High
	Medium
	Low
	NA

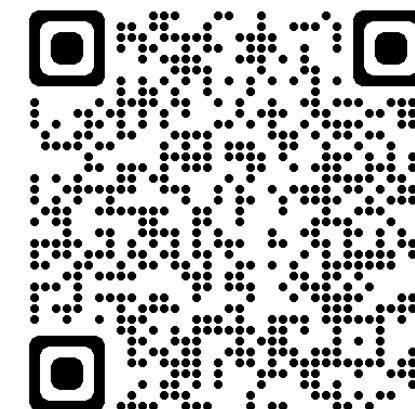
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pg. 1

## Key elements of Electrowinning (EW)/Electrorefining (ER) Electrical Safety Policy:

- A course is required before performing work in the Electrowinning Tankhouse.



[https://www.fcx.com/sites/fcx/files/documents/suppliers/ew\\_er\\_electrical\\_safety.pdf](https://www.fcx.com/sites/fcx/files/documents/suppliers/ew_er_electrical_safety.pdf)

# Key Takeaways

- Training is required to use fall protection equipment, and the training must meet the requirements of SFT\_FCX1012C.
- The three criteria for a space to be a confined space is that it is large enough to bodily enter, not designed for human occupancy, and has limited or restricted entry or exit.
- Hot work is any process that can be a source of ignition.
- A Blue Stake Permit is always required when cutting into a floor.
- Flagging and barricading must be in accordance with FCX-HS19.
- All personnel working with HDPE must be trained.
- Tankhouse Electrical Safety course is required for any employees or contractors that will be performing work in or around the Electrowinning Tankhouse.

# Knowledge Check

1. When must fall protection be used?
  - a. 100% of the time when exposed to a fall hazard
2. Scaffolding must be inspected by a competent person prior to each work shift and after any occurrence which could affect a scaffold's structural integrity.
  - ☒ a. True
  - b. False
3. Contact the site representatives prior to penetration greater than five inches in any surface.
  - a. True
  - ☒ b. False

11

# Explosives and Blasting

# Blasting and Mining

FCX Department of Occupational Health and Safety		SOP #	FCX-10
		Revision #	8
		Supervisors	Ver 2023 #7
		Task Risk	High
			Medium
			Low
			NA (North America)

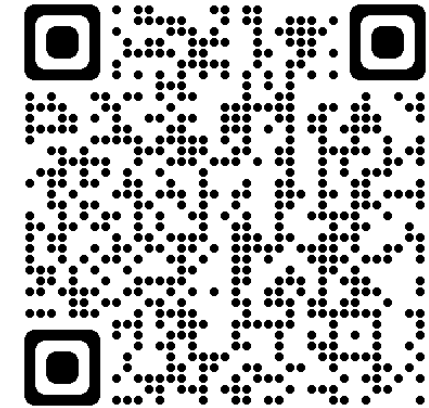
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1

## Key elements of Surface Blasting policy:

- Bureau of alcohol, tobacco, firearms and explosives (ATF) regulates the purchase, transportation and handling of explosives.
- Specialized training is required to handle explosives
- No smoking or open flames within 50' of magazines and blast areas
- Ignition devices are prohibited from being on your person around explosives.



[https://www.fcx.com/sites/fcx/files/documents/suppliers/surface\\_blasting\\_eng.pdf](https://www.fcx.com/sites/fcx/files/documents/suppliers/surface_blasting_eng.pdf)



# Misfire & Fly Rock

Misfire: incomplete detonation of explosive product.



Fly Rock: Material expelled when a blast creates enough energy to send debris flying.



# Drills and Drilling Patterns



## Approaching drills and drilling patterns

- Contact the operator before entering
- Do not park near drills
- Do not drive over power cables



# Blasting Area



Loaded Drill Pattern is a blast site.

- Established perimeter
- Blast area Security



# Vehicles Carrying Explosives



- Must have signs and flags
  - Visible from all angles
- Have fire extinguishers
- Contains day boxes for transporting
- Do not pass at any time
- No smoking or open flame within 50 feet

# Blasting Rules



- 50' restricted zone
- Smoking/open flames not permitted
- Yellow cones designate loading zone
- Blue cones designate blocking location
- Radio silence is observed before blast
- Radio siren sound during blast
- Work in blast area ceases
- Red alert

# Blasting Elements



Blasting Cap



Booster



Detonation cord



Mixed bulk material

# Key Takeaways

- Specialized training is required to handle explosives.
- Fly-rock and Misfires are highly hazardous.
- Blasting has fatal risks which require critical controls and verifications.
- When explosives are brought to a drill pattern, the area is then considered a blast site and a 50' restricted access perimeter is created.
- Do not pass vehicles carrying explosives and no smoking or open flame within 50 feet.
- Yellow cones designate a loading zone – only authorized personnel are allowed to enter or remove cones and signs.
- Radio silence is observed when requested before the blast.

# Knowledge Check

1. If you notice blasting items in unusual areas, go investigate and ensure the blasting materials are properly stored and secured.
  - a. True
  - ☒ b. False
  
2. When approaching drills and drill patterns contact the operator, do not park near drills and do not drive over power cables.
  - ☒ a. True
  - b. False

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# Environmental

# Freeport-McMoRan Inc. Environmental Policy



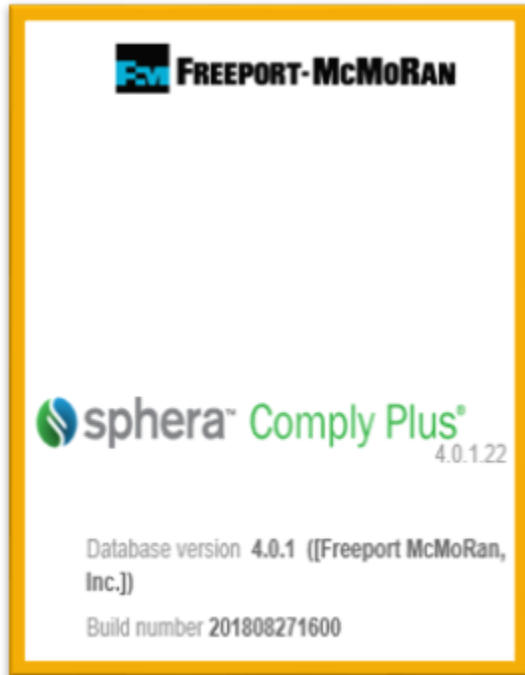
Freeport-McMoRan recognizes that mining impacts the natural environment. We conduct our operations in a manner that seeks to optimize economic use of resources while minimizing adverse environmental effects with a focus on climate, water, biodiversity, air, tailings, waste, mine closure, and reclamation.

# Environmental Significant Risk (ESR) Icons

Environmental Significant Risk (ESR)	Icon
Catastrophic Releases to Surface Water	
Catastrophic or Chronic Releases to Groundwater	
Air Releases	
Improper Material/Waste management	
Wildlife Mortalities	

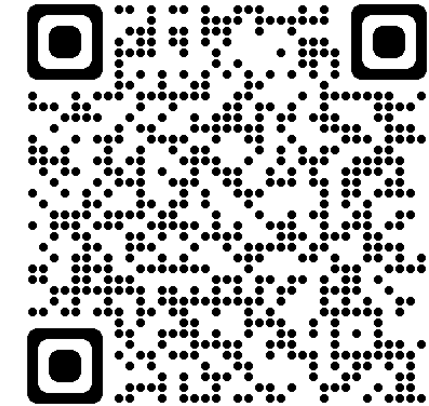
FCX has identified five enterprise-wide Environmental Significant Risks (ESRs) for all Freeport-McMoRan operations, each with an associated icon to aid in quick identification.

# Material Request Approval Process & Safety Data Sheets



Key elements of the Material Request Approval Process:

- Read and Understand SDS for all chemicals your exposed to BEFORE use
- All Chemicals on property must be in our sites Sphera (Comply Plus) System
- New Chemicals are approved through MRAP.



<https://fcx.complyplus.com/MVC/Security/Login?returnURL=%2FMVC>

# Proper Labeling

**Sample Warning Label**

**Health**

- 4 Extreme hazard—avoid contact or breathing vapor
- 3 Severe hazard—use special clothing and masks
- 2 Hazardous—use masks or special ventilation
- 1 Lightly hazardous—irritating
- 0 Normal material

**Flammability**

- 4 Extremely dangerous fire and explosion hazard—below 73° F
- 3 Fire and explosion hazard at normal temps—below 100° F
- 2 Will burn at temps above 100° F
- 1 Will burn at temps above 200° F
- 0 Will not burn

**Special Notice**

**OXY**—Oxidizing agent

**ACID**—Reacts violently with alkalis

**ALK**—Alkali—reacts violently with acids

**COR**—Corrosive

**W**—Use no water

**P**—Polymerizes

—Radioactive

**Reactivity**

- 4 Extreme hazard—vacate area in case of fire
- 3 Severe explosion hazard
- 2 Violent chemical change possible
- 1 Unstable if heated
- 0 Normally stable



# Air Quality



- The Clean Air Act is a United States federal law designed to control air pollution on a national level.
- The law encourages prevention of regional air pollution and control programs.
- Opacity Monitoring is continuously performed to ensure fugitive sources do not exceed 20%.

# Dust Control

## Why control dust?



## What controls do we have?

- Water trucks control dust on haul roads – call Dispatch when roads are dusty
- A Chemical Dust Suppressant is applied to some roads to reduce dust
- Water sprays control dust on the Crusher, Conveyor and IOS Stockpile – call Mill Control if dusty
- Dust collectors (wet scrubbers and baghouses)
- Wet down dry piles before material handling projects

# Housekeeping



# Wildlife



# Key Takeaways

- All chemicals brought on site go through the Material Request and Approval Process.
- All chemical products you use to complete work on our sites need to be approved and have a SDS in our system.
- The minimum information on Chemical labels is product identifier, signal word, and hazard statement.
- SDS are stored in the Sphera ComplyPlus and can be accessed from any computer or cell phone ([fcx.complyplus.com](https://fcx.complyplus.com)).
- Our operations are regulated by air quality permits.
- Good housekeeping in the area you're working in is your responsibility, cleaning up your mess is part of the job.
- If you encounter a sick or dead bird or animal on the property, you need to contact the Environmental department immediately.

# Knowledge Check

1. Our goal is to conduct our mining and processing operations in a manner that minimizes adverse impacts on the environment and supports protection of the ecosystems where we operate through responsible environmental stewardship.  
  - ☒ a. True
  - ☐ b. False
2. Chemicals can be brought on site if needed without approval.  
  - ☐ a. True
  - ☒ b. False
3. You must read and understand the safety data sheet associated with chemicals you may be exposed to.  
  - ☒ a. True
  - ☐ b. False

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# Site Specific

# (Policy Name)

FCX Department of Occupational Health & Safety

Surface Blasting

Approval Date: 11/25/2024

FCX-101

8

Rev 2023.07

High

Medium

Low

Content\*

Insert Policy Image

3.4 .....5

3.5 Fl .....6

3.6 Site .....6

4.0 Procedure .....7

4.1 Identificat. ....7

4.2 Pre-shift Tea. ....7

4.3 Pre-loading Wo .....8

4.4 Explosives Storage .....10

4.5 Explosives Transport .....13

4.6 Priming .....14

4.7 Loading .....16

4.8 Stemming .....17

4.9 Tie-in .....18

4.10 Pre-blast Meeting .....19

4.11 Clearing/Sweeping the Blast Area .....20

1

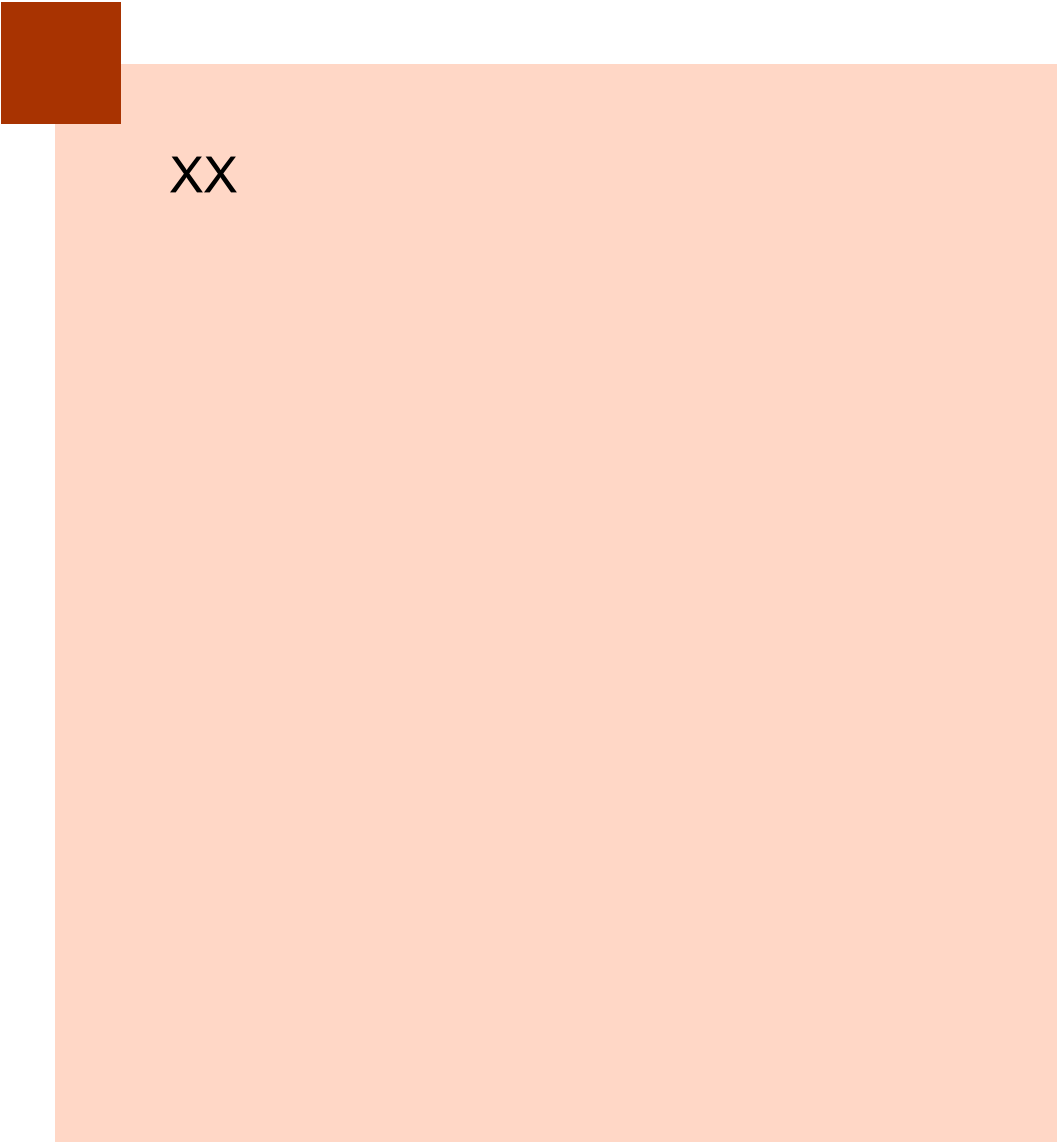
## Key elements of X policy:

- XX
- XX
- XX
- XX



[Insert URL](#)

# Title



# Slide Title



- XX
- XX
- XX
- XX
- XX

Have your  
questions ready for  
the instructor.

Thank you for your time.  
Be safe out there!