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Contractor Site Specific Training Bagdad Operations 2023

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Introduction



Restrooms – Please don't hesitate to go.



Evacuation – Exits and assembly points.



Cell Phones – Please turn the ringer off.



Participation - We encourage maximum participation.

Welcome to Bagdad



Bagdad Operations Overview Video

24/7 FM Bagdad Support

Health & Safety On-Call

(928) 830-9885

Environmental On-Call

(928) 830-8783

Security Main Line

(928) 633-3211

Mine Emergencies

(928) 633-5000

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FMI Expectations



Safe production with a focus on fatality prevention and alignment with Freeport-McMoRan expectations and philosophies (Edge Behaviors).

Promote and maintain a drug-free workplace.

Emphasize the value of:

- Proactive management of risk
- Pre-project/pre-task planning
- Safety orientation and training
- Incident investigation and analysis
- Constant communication of safety expectations

Meet or exceed compliance with Contractor Health and Safety Manual and regulatory requirements

Comply with all Freeport-McMoRan site-specific health and safety requirements

Health & Safety Policy

“At Freeport-McMoRan Inc. (“Freeport”), Safe Production is more than words – it’s our culture. It defines our work, our behaviors and our expectations. It is why we do what we do and how we do it, so that our workforce goes home safely each day. This focus underpins everything we do – from our management systems and strategy to how we engage employees and communities to the standards we set for business partners and ourselves.

The safety and health of all Freeport employees is our highest priority and a core value of the company. Our objective is **zero** workplace injuries and occupational illnesses. Production and costs are critical to the well-being of the company, but these considerations must never take precedence over safety, employee health or protection of the environment.

We believe that all injuries and occupational illnesses are preventable. We further believe that safety and health considerations are integral to and compatible with all other management functions in the organization and that proper safety and health management will enhance rather than adversely affect production or costs.”



Stop Work Authority

- Every person has the **authority and responsibility to stop work** that they feel is being conducted in an unsafe manner.
-
- When do we stop work?
 - Why don't we stop work?
 - How do others respond when we stop work?
 - How do we respond when asked to stop work?
 - How does this change when you are behind/in a hurry?
 - How should we respond when asked to stop work?



Stop Work Video



Mantle Liner Incident

Mill Maintenance – 8/18/2022

8/18 - A new mantle liner is delivered to the Mill Maintenance Shop and is placed on (2) stacked 4x4s.

The liner was previously located at ready spares and was brought to the shop by forklift. The 4x4s were used to provide enough clearance for the forklift.

8/25 – (5) employees are assigned to relocate the mantle liner from its current position

(4) employees are required to perform this task - the employees must hold the cables in place, until tension is created on the cable slings around the ear of the liner.

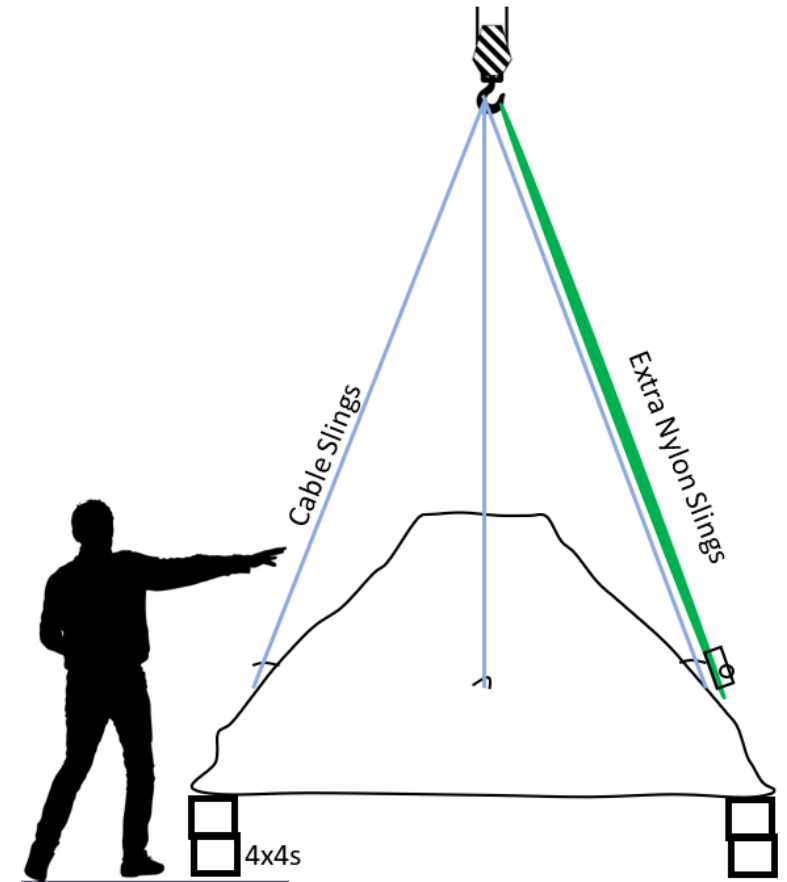
The crane operator had placed (4) cable slings and **an unnecessary** extra nylon 4-way strap on the hook of the crane to lift the liner.

The crew communicated the potential pinch points and travel plan of the lift.

The extra nylon sling with extra clevis **caught the ear of the liner** while the crane operator was troling the crane, shifting the liner to the edge of the 4x4 and causing the 4x4s to shift.

The liner fell eight inches and pinched the employee's foot.

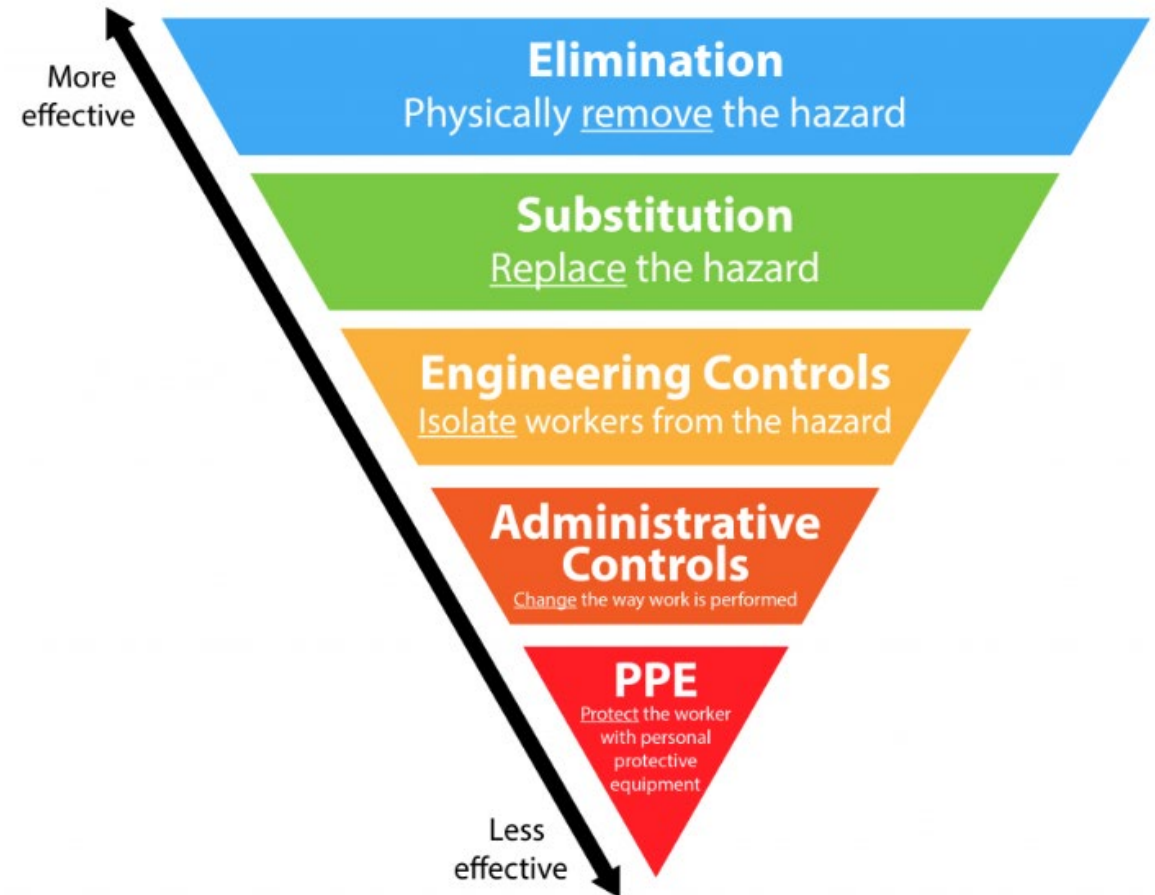
Employee was transported via ambulance and ultimately lost a portion of their foot.



Managing Risks

What tools do we use to manage risks?

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



FRM Verifications

Fatal Risk Management (FRM) is the next step in the fatality prevention program:

- Focused on improving identification of Fatal Risks and implementing Critical Controls
- It consists of several tools to be used in the field

Fatal Risks versus other risks

- Fatal Risks are the risks that will get you killed; When not controlled, they have the potential to cause serious injury or death
- Other risks are still potentially harmful, but carry a lesser risk

These symbols indicate a Fatal Risk may be present in the area. Consult with area leadership before proceeding to ensure all Critical Controls are in place to prevent any serious incidents from occurring.



Training Requirements

Contractors are required to ensure their employees meet training requirements of the Contractor H&S Manual and applicable H&S Policies.

Records of appropriate training must be maintained and available.

Examples include:

- Task Training
- MSHA, OSHA
- HAZWOPER
- Hazard Recognition/Site Specific
- Hot Work, Confined Space, Working at Heights, etc.
- Hazard Communication

If you are not task trained to operate equipment or perform a task, do not proceed. STOP WORK, if necessary. No production deadline is more important than any individual's life.

Possible Consequences of Non-Compliance: Termination, Injury, Fatality



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Hazard Communication

Industrial Hygiene



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Health Hazards & Controls

Basic Required PPE

- ✓ Safety glasses
- ✓ Hard hats
- ✓ Steel toe boots

Common PPE

- ✓ Gloves
- ✓ Ear plugs
- ✓ Respirators
- ✓ Reflective vests

Wear appropriate PPE to avoid contamination.

Adequately decontaminate or appropriately discard potentially-contaminated shoes/clothing/re-usable PPE after use.

Do not wear potentially-contaminated shoes/clothing/PPE outside of the work area.

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

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

- After leaving work area
- Before leaving the site
- Before smoking, eating, drinking, chewing gum, etc.

Hearing protection should be considered if one must raise their voice to communicate at a distance of 3 feet.

When noise exposures equals or exceeds 85 dBA as an 8-hr time-weighted average hearing protection will be utilized.

If excessive noise cannot be adequately controlled with engineering/administrative controls - hearing protection must be worn

Some areas, like the Mill (Concentrator) Grind Floors, REQUIRE hearing protection.

Health Hazards & Controls

The following areas have hazardous gas and require respirators or monitors:

Monitors – Moly Plant, Leach Fields, SX Tanks, CLP Kiln Area, Confined Spaces

Respirators – 1 Belt Tunnel, Underground Level of Primary Crusher, 4/5 Transfer, Dark Side CLP (if handling CV Moly)

- Most welding applications require a respirator or PAPR depending on the project.

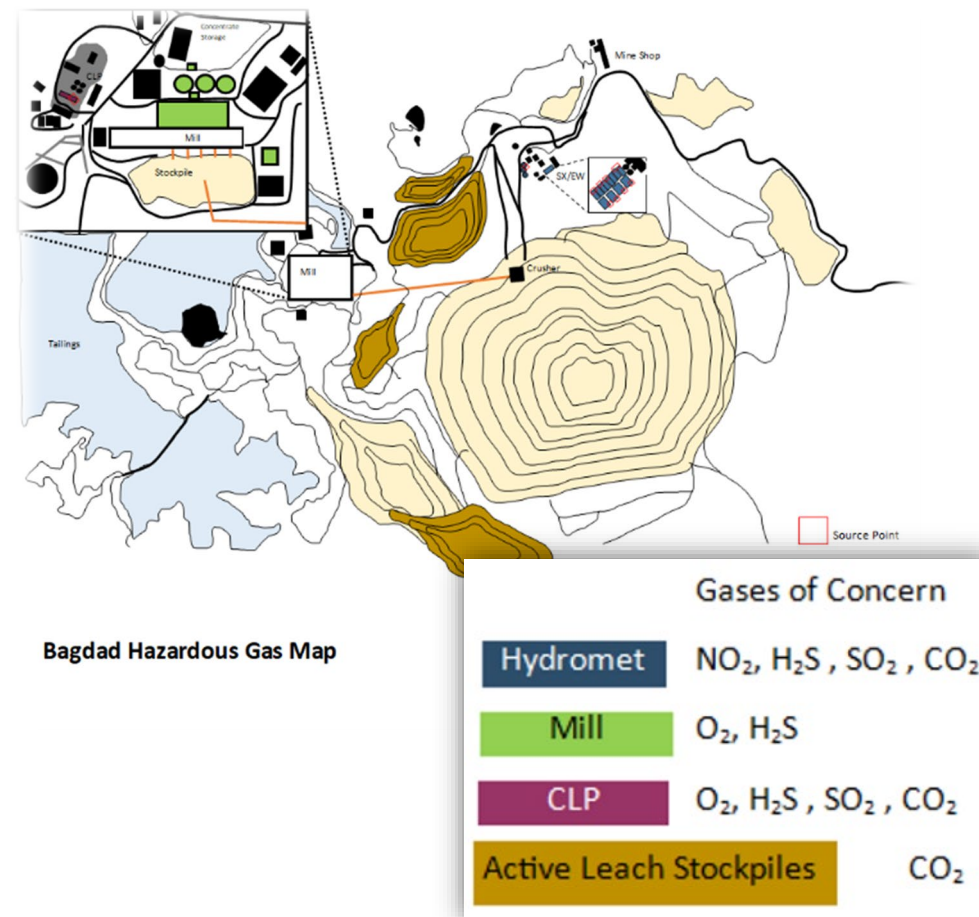
Hazardous Gas Training – Any area a monitor is required, or for any Confined Space work

You must sign into these areas:

Moly Plant – Sign in at the Mill Control Room.

Kiln – Sign in at the CLP Control Room.

SX Areas – Sign in at the SX Control Room.



Welding Policy

	GTAW (TIG) Cutting	GMAW (MIG)	FCAW (Flux Core)	SMAW (Stick)	CAC/PAC (Carbon/ plasma arc)
Carbon	Elective	Half Mask (P100 or Equivalent) (APF 10)			
Galvanized Cadmium	PAPR (APF 25)				PAPR with Shroud/SA (APF 1000)
Manganese Stainless	PAPR (APF 25)	PAPR with Shroud/Supplied Air (APF 1000)			
Enclosed or Confined	Local Exhaust Ventilation and RPE specified above - or - PAPR with Shroud/Supplied Air (APF 1000)				

- Outlines requirements for protection from chronic and acute health hazards associated with metal fumes from work including welding, cutting, brazing, air arcing and other processes that create metal fumes.
- Requirements are dependent on welding/cutting process used and material that is being welded, cut, or heated.

PAPR & Respirator Care & Usage

Replace cartridge when:

- ✓ It becomes difficult to breathe comfortably or gas smell/ taste appears present- breakthrough
- ✓ Physical damage occurs
- ✓ Obstruction of air flow
- ✓ Department recommendation based on usage and environment
 - Mill changes their cartridges every rotation unless usage requires changing more frequently.


Properly inspect equipment before each use.

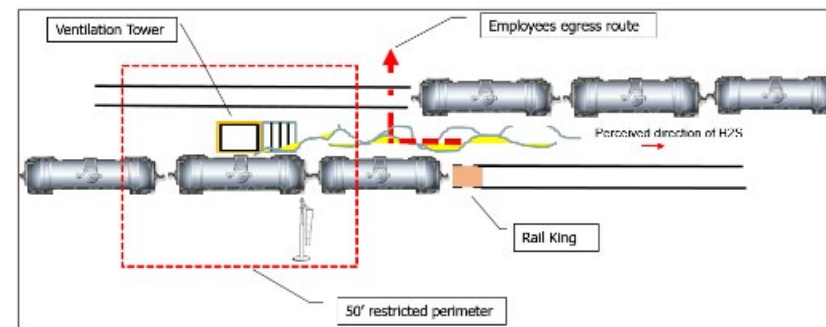
Identify appropriate areas to store materials.

Clean respirator after each use.



H2S Gas Exposure PFE

POTENTIAL FATAL EVENT ADVISORY		FREEPORT-McMoRAN	
 Hydrogen Sulfide Gas Exposure	PFE #	PFE – 2020 - 3	
	IMS #	106296	
	OPERATION:	Morenci	
	INCIDENT DATE:	4/23/2020	
	TIME:	8:54 a.m.	
	TYPE:	Injury	
	PFE Follow-Up:		
Issued By: Joe Edwards, Manager-Health and Safety		Contact For Additional Details: Joe Jackson, Superintendent-Acid Plant, at jjackson@fmi.com	
<p>This Advisory is a NOTIFICATION of an event/condition, or potential which may have resulted in a fatality at a Freeport-McMoRan location. The information below is intended to be used for proactive preventative purposes.</p>			
DESCRIPTION / DETAILS OF ADVISORY			
<p>Summary: A sulfur transload contractor employee was exposed to a high concentration of hydrogen sulfide gas while venting a railcar tanker.</p> <p>Description: Two contractor employees wearing air masks were venting hydrogen sulfide (H2S) from a tank car while a third contractor waited in the cab of the railcar mover (Rail King), located about 90 feet away. The two contractors placed the ventilation hood over the dome lid and started the exhaust system. They loosened one of the bolts securing the lid and heard a hiss from the release of pressure. The two contractors continued to loosen the other bolts when there was an excessive release of H2S gas, which settled and drifted toward the Rail King.</p> <p>Inside the cab of the Rail King, the contractor's personal gas monitor sounded an alarm. The contractor immediately exited the cab without wearing an escape respirator. The contractor checked the windsock, which was drooping, and then proceeded in the direction of the H2S source before turning to leave the area. The contractor began coughing and stumbled to the ground. Another employee on the venting platform of the Ventilation Tower noticed the contractor and went over to help. A Mayday was initiated, and the contractor was transported to the hospital for further evaluation. The contractor was released the same day.</p>			
FATAL RISKS			
Exposure to Hazardous Substance		N/A	
OTHER SIGNIFICANT RISK (specific to site or task not categorized as global)			
N/A			
ABSENT / INSUFFICIENT CONTROLS CONTRIBUTING TO THE EVENT			
<ul style="list-style-type: none"> Excessive pressure release that overwhelmed ventilation system Failure to put on escape respirator before exiting the cab and evacuating the area Evacuating in the direction of the H2S source No instrumentation to show airflow (cubic feet per minute or CFM) on exhaust fan 			
HEALTH AND SAFETY POLICIES		APPLICABLE STANDARDS / POLICIES / PROCEDURES	
N/A			



Scene overview



Tankcar dome lid (left) and ventilation hood



Ventilation Tower (left) and Rail King

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Critical Rules / Required Permits



Critical Rules

Critical Safety Rules are those rules that if not followed can cause serious injury or a fatality.

What are some Critical Safety Rules or Fatal Risks in the field?

- Working at Heights
- Confined Spaces
- Hot Work
- Blue Stake
- Flagging/Barricading
- LOTOTO
- HDPE / Round Stock
- Drug & Alcohol Policy
- Fighting or Physical Assault
- Restricted Area Access
- Safety Procedures while Operating Heavy Equipment
- Inappropriate Removal, Alteration, or Bypass of a Safety Guard

Hazardous Energy

What is Hazardous Energy?

Atmospheric
Electrical
Gravitational
Kinetic
Pneumatic
Stored
Chemical
Electromagnetic
Hydraulic
Mechanical
Residual
Thermal

Contact with Electricity

- Electrical PPE
- Electrical Protection
- Energy Isolation/LOTOTO
- Non-Conductive Tools and Equipment



Entanglement and Crushing

- Blocking for Maintenance Work
- Energy Isolation/LOTOTO
- Guards, Barriers, and Barricades



Uncontrolled Release of Energy

- Energy Isolation/LOTOTO
- Guards, Barriers, and Barricades
- HDPE Management
- Hose Coupling Lock System
- Piping Hoses and Equipment Mechanical Integrity
- Relief Valves
- Tensioned Line Management
- Tire Management



Confined Space

- Atmospheric Monitoring
- Energy Isolation/LOTOTO
- Entry Permit Execution



LOTOTO (Lockout, Tagout, Tryout)



Affected Individuals

Job requires them to operate/use equipment where controlling hazardous energy source required to perform service/maintenance
Includes personnel in area not performing work on equipment



Authorized Individuals

Locks and tags isolation device
Performs work on locked-out equipment
Responsibilities:
Place own locks/tags
Maintain control of lock key
Return equipment to serviceable condition before removing energy isolation device/lock



Qualified Individual/Personnel

Have qualifications to perform energy isolation and de-energize system
May or may not work on lockout
Responsibilities:
•Ensure workers follow safe procedures
•Verify effectiveness of energy isolation
•Conduct tryout



Energy Control Coordinator (ECC)

Assigned by supervision
Has technical/working knowledge of isolated equipment
Has overall responsibility of energy isolation (supported by qualified and authorized individuals)
Has specific locks and tags
Has responsibility of completing ECC form

Prior to performing Lockout/Tagout/Tryout (LOTOTO) by yourself, training is required.



Blue Stake Policy



- Arizona law requires a Blue Stake Permit for any penetration of building surfaces, floors, or ground surfaces greater than one inch.
- Includes: Electrical Power, Gas-Oil Product Lines, Water Systems/Slurry Pipelines, Communication Cable Television, Sanitary Sewer Systems, Temporary Survey Markings, Reclaimed Water, Proposed Excavation.
- Greater than one-inch Penetration, contact the site Environmental Representatives and/or Industrial Hygiene Representative if material are uncovered that are suspected to contain asbestos prior to penetration greater than one inch (1") in any surface.
- Everyone can have a copy but there must be always one copy of the permit on the job site.
- Only a Blue Stake Representative may add additional operators to the Blue Stake Permit. Everyone doing excavation will be on the permit.

Questions or concerns contact Blue Stake Representative or email BASTAKE@FCX365.onmicrosoft.com.

Below The Gate Blue Stake Permitting



BLUE STAKE PERMITTING

Blue Stake Incident

Mill Ops – Filter Loadout

Contractor was working on excavating the dirt for installing new scale. They did not have a Blue Stake Permit form for the excavation. Contractor assumed they had the blue stake permit along with other forms and started working in the morning. In this event since contractor did not have a blue stake permit, they did not know what was in the excavating area. As the work progressed the contractor ended up locating a HDPE pipe in 2-3 ft.



Confined Space Policy

		ADDITIONAL MONITORING RECORD								
GAS	ACCEPTABLE	TIME	READING	INITIALS	TIME	READING	INITIALS	TIME	READING	INITIALS
Oxygen	19.5 - 23.5%									
LEL*	< 10%									
Toxic	< PEL / TLV / OEL†									
Other										

AUTHORIZED BY _____

CONFINED SPACE Entry Permit

DIVISION	TIME	DEPARTMENT
DATE	SHIFT	
CONTAINED SPACE LOCATION		CONTAINED SPACE ID #
PURPOSE OF ENTRY		AUTHORIZED DURATION
ENTRY SUPERVISOR NAME		SUPERVISOR APPROVAL SIGNATURE
ENTRY ATTENDANT (NAME)(S)		
AUTHORIZED ENTRANTS' NAMES(N) _____ <small>(continue over Freeman's)</small>		
ROUTINE <input type="checkbox"/> NON-ROUTINE <input type="checkbox"/> WORKPLACE CRAIN COMPLETED <input type="checkbox"/> SOP/HJS COMPLETE AND REVIEWED <input type="checkbox"/>		

AUTHORIZED ATY _____

STEP 1: HAZARD IDENTIFICATION AND RECOGNITION			
EXISTING HAZARDS WITHIN, CONNECTED TO, OR NEAR THE SPACE <small>(include name, location, etc.)</small>	CONTROLS	HAZARDS TO BE INTRODUCED TO THE SPACE FROM THIS WORK AREA PERFORMER <small>(welding, grinding, cutting, gouging, hot work, hot tasks, other tasks that require excavation PPE)</small>	CONTROLS

STEP 2: ASSESSING THE SPACE																					
SECTION A: CONFIRMED SPACE HAZARDS	YES	NO	SECTION B: INITIAL AIR SAMPLING <small>(perform for opening of the space, and at multiple levels within the vessel)</small>																		
Atmosphere: Potentially Hazardous Atmospheres Explosive or Combusting Gases or Vapors Engulfment: Slime/Slop Any Other Recognized Hazards: (noise, heat, uncontrolled energy sources, fall hazards, motion, fire, radiation, force not exposure risk) List Other Hazards and controls as needed.			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>GAS</th> <th>ACCEPTABLE</th> <th>READING</th> </tr> <tr> <td>Oxygen</td> <td>19.5 - 23.5%</td> <td></td> </tr> <tr> <td>LEL*</td> <td>< 10%</td> <td></td> </tr> <tr> <td>Toxic</td> <td>< PEL / TLV / OEL†</td> <td></td> </tr> <tr> <td>Other:</td> <td></td> <td></td> </tr> <tr> <td colspan="3"><small>Time of testing: Date of calibration Initials of person taking the sample Test instrument used: #</small></td> </tr> </table>	GAS	ACCEPTABLE	READING	Oxygen	19.5 - 23.5%		LEL*	< 10%		Toxic	< PEL / TLV / OEL†		Other:			<small>Time of testing: Date of calibration Initials of person taking the sample Test instrument used: #</small>		
GAS	ACCEPTABLE	READING																			
Oxygen	19.5 - 23.5%																				
LEL*	< 10%																				
Toxic	< PEL / TLV / OEL†																				
Other:																					
<small>Time of testing: Date of calibration Initials of person taking the sample Test instrument used: #</small>																					
If the answer to ALL questions above is NO, or can be eliminated: The space may be classified as NON-PERMIT REQUIRED. Name: _____ Signature: _____																					

STEP 3: PRE-ENTRY PREPARATION AND CONTROLS			
EQUIPMENT	REQUIRED / N/A	COMMUNICATION	TESTED
Ventilation Required: YES/NO Type: Duration: Isolation System (if Emergency Evacuation Applicable) Fire Extinguishers Intrinsically Safe Equipment LOOTO Flagging and Barricading		Effluent and Ambient Communication Method: Supervisor Communication Method: Emergency Response Communication Method:	

STEP 4: Pre-Entry Air Sampling (Immediately Prior to Entry)			STEP 5: Pre-Entry Meeting and Review	
GAS	ACCEPTABLE	READING	MEETING/REVIEW	INITIALS
Oxygen	19.5 - 23.5%		Pre-Entry Meeting and Review Conducted	
LEL*	< 10%		Acceptable Entry Conditions Have Been Met	
Toxic	< PEL / TLV / OEL†			
Other				
Time of testing: Initials of Tester				

* LEL = Lower Explosive Limit, PEL = Permissible Exposure Limit, TLV = Threshold Limit Value

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

Permit Required Confined Spaces

Confined spaces that have one or more of the following characteristics:

- ✓ Contains or has the potential of containing a hazardous atmosphere
- ✓ Contains a material that has the potential for engulfing an entrant
- ✓ Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section
- ✓ Contains any other recognized serious safety or health hazard

NOTE: Permits are valid only for as long as it takes to complete the task, but not more than one shift.

Retrieval lines for non-entry rescue (attached to harness, wristlet, or other device) must be worn in Permit Required Confined spaces

FCX-HS05- Confined Space Policy

Confined Space Fatal Event

Morenci Operations – 9/15/2021

An experienced welder employed was welding a joint on a 30-inch diameter stainless steel pipe. The joint was approximately 80 feet from the end of the pipe. For unknown reasons*, the welder entered the end of the pipe and crawled approximately 40 feet toward the joint being welded. Shortly thereafter, the welder's co-workers, noted the welder missing, and subsequently found the welder unresponsive inside the pipe.




Photo of pipe that welder entered.

Hot Work 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 _____ W/O No. _____ From _____ AM/PM To _____ AM/PM Bldg. or Area _____ Dept. _____ Floor _____ Task/Activity _____ _____ Hot Work Performed By _____ _____ Fire watch assigned? <input type="checkbox"/> Yes <input type="checkbox"/> 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/LFL. NOTE: Welding on mobile equipment fuel tanks is not permitted. _____ Initial when reading is taken and tested to verify an LEL/LFL less than 10%	
HOT WORK IN ALL AREAS, INCLUDING THE ABOVE 1. Person completing "Hot Work Permit" understands hazards in the hot work zone. <input type="checkbox"/> Yes <input type="checkbox"/> No 2. Flame or spark-producing equipment to be used has been inspected and found to be in good repair. <input type="checkbox"/> Yes <input type="checkbox"/> No 3. Sprinklers and fire water, where provided, are in working condition and will remain in service while this work is being done. <input type="checkbox"/> Yes <input type="checkbox"/> No 4. Portable fire extinguishers are available, are appropriate for the fire hazard, and personnel have been trained to use them. <input type="checkbox"/> Yes <input type="checkbox"/> 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. <input type="checkbox"/> Yes <input type="checkbox"/> No 6. All voids and openings leading to other areas (rooms, floors) have been covered. <input type="checkbox"/> Yes <input type="checkbox"/> No 7. All appropriate SOPs and good work practices are being followed. <input type="checkbox"/> Yes <input type="checkbox"/> No 8. Do you have the proper personal protective equipment including welding shields, respirators, hearing protection for the job? <input type="checkbox"/> Yes <input type="checkbox"/> No 9. A method for contacting emergency responders is in place. <input type="checkbox"/> Yes <input type="checkbox"/> 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/LFL).	

- Permit is required for hot work operations unless working in designated 'fire safe' area (i.e., welding shop). Fire safe areas shall be documented by management.
- Hot work permits are valid for one work shift and one task.
- Operational areas shall have signage indicating fire hazards that may not be easily recognizable to personnel (i.e., machinery containing rubber liners, conveyor galleries, oil containment/storage, etc.).
- Hot work permit must be completed by all involved prior to the work initiating unless the area is designated as "fire safe" and remain in the area until work is complete, and permit is cancelled.
- The work area must be monitored for **60 minutes** after hot work has ceased, and a thorough inspection of the entire work area has been completed.

Hot Work Incident

SAFETY ALERT NOTIFICATION		FREEPORT-McMoRAN	
 Auto Mill Feed Cart Rebuild – Serious Burn Injury	Safety Alert #	SA – 2018 - 4	
	IMS #	82851	
	OPERATION:	Bagged	
	INCIDENT DATE:	2/2/2018	
	TIME:	10:15am	
	TYPE:	Injury	
Issued By: Justin Taylor		Contact For Additional Details: jtaylor7@fmi.com (928) 713-0301	
<p>This is NOT an investigation report. It is a NOTIFICATION of a Significant Incident that has taken place at a Freeport-McMoRan location. The information below is a preliminary assessment and not a formal investigation.</p>			
INCIDENT DESCRIPTION			
<p>On 2-2-2018, an individual was cutting lifting lugs off the liners of an Auto Mill feed cart using an air arc. The feed cart was fully assembled during this task. Due to the configuration of the feed cart, an individual must position himself or herself at the discharge end of the feed chute to cut the bottom lugs off. Slag/sparks from the air arc caught the lower left side of the uniform shirt on fire. After trying unsuccessfully to take the shirt off, another individual put the fire out with a fire extinguisher. This resulted in serious burns to the individual.</p> <p>The work was being performed in a "hot work safe zone," and the individual was working alone. A thigh length leather coat is the protective equipment that should have been worn. That was not available when the job occurred. Leather gloves and arm/chest protection was being worn over the standard uniform shirt (100% cotton).</p>			
FATAL RISKS	HEALTH AND SAFETY POLICIES		
Fire	Choose an item.		
Choose an item.	Choose an item.		
Choose an item.	Choose an item.		
OTHER SIGNIFICANT RISK (specific to site or task not categorized as global)			
N/A			
PROBABLE DIRECT CAUSES			
<p>6.2 Inadequate or improper protective equipment - The PPE available and worn at the time of the incident was inadequate to protect the entire surface area of the employee's torso. The full-length leather coat that should have been worn was unavailable.</p> <p>8.2.3 Inadequate standards, specifications, and/or design criteria - The liners that are used in the feed carts have lifting lugs that must be removed before placing the cart into service. In order to remove the liners, an air arc is used. Rebuilding the cart while it is completely assembled, places the employee in a constricted area. This area is in the line of fire of the slag generated during the task.</p>			
IMMEDIATE CORRECTIVE ACTION(S)			
<ul style="list-style-type: none"> Two employees will be required for this task. Even though this is a hot work safe zone, there will be a permit, fire watch and extinguisher at the location. A full leather jacket will be used at all times in addition to leather gloves. 			
REQUIRED ACTIONS(S)			

- Make thigh length leather coats warehouse stock.
- Order FR rated uniforms for maintenance personnel.
- Evaluate mechanical lifting lugs that do not require cutting to remove.
- Dismantle feed cart prior to rebuild. This will allow for ease of access to the components.



Weapons and Drug & Alcohol Policy

WEAPONS CONNEX

Lockers are available at the Main Security Gate to store weapons, if needed.

FIT FOR DUTY

- Anyone impaired by drugs, alcohol or other causes will be permitted to work or remain on the premises.
- Employees are only allowed to work 16 hours maximum in a 24-hour day.

WEAPONS POLICY The Company 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, explosives, knives (more than 4 in. in length), and other substances and devices that may be considered dangerous or have the potential to cause harm to people or property.

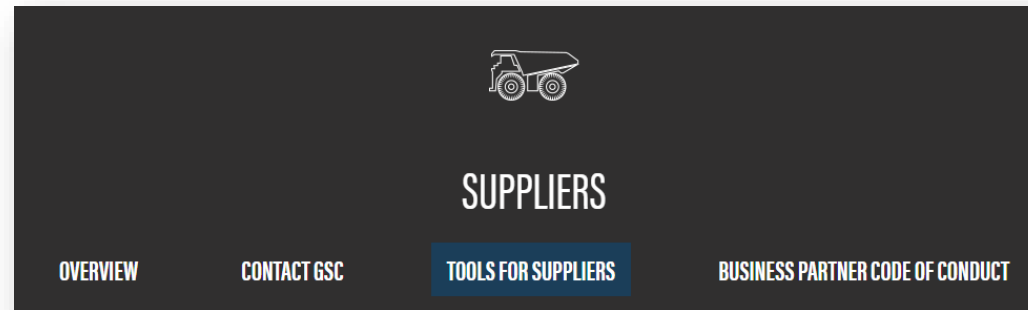
DRUG & ALCOHOL POLICY It is the position and intent of FCX to maintain a workplace free from the use and influence of drugs and alcohol— this includes all stakeholders in a safe workplace, including Contractors. **Contractors with drug and alcohol programs shall have a written drug and alcohol program consistent with national, regional and local regulations.**

- It shall be made available to FCX upon request. Contractors without drug and alcohol programs shall notify the FCX Project Manager, in writing of their lack of a drug and alcohol program. For small Contractors (fewer than 10 employees) or Contractors without a program will need to work with the Project Manager and site resources to identify and coordinate the resources(collection services, labs, MRO, consortium, etc.) to accomplish the objectives of the program, such as, but not limited to initial, random, or for cause testing. Aspects of the program such as costs associated with testing, management of the employees tested, consequences of positive tests results, schedules for random testing, etc. are and remain the responsibility of the Contractor.
- Contractor employees shall be subject to an initial test, with a negative result, prior to performing services on any FCX properties or projects. They shall be periodically included in the FCX contractor managed, unannounced random testing schedule with a probability of 20% (or one chance in five) of Contractor's employees being selected for testing in a calendar year. Only negative or non-negative test results will be submitted to FCX, no personal identifying information should be provided.

Health & Safety Polices

To access all Freeport-McMoRan policies:

1. Visit the fcx.com
2. Scroll down to “Suppliers” and select “Tools for Suppliers”.



3. Scroll down to “Policy Documents” that shares all Freeport-McMoRan policies for review.



MSHA and State Mine Visits

Periodically, the State Mine Inspectors or MSHA Inspectors may come on site.

- Please cooperate with them when they are on site. By law, they can inspect anything on Mine Property.
- They are here to help us prevent injuries, not just issue citations.
- You may be asked to provide copies of training records, JSA's, Workplace Exams, etc.
- You may be asked to participate in an area inspection or correct any potential hazards they may identify.



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Incident / Emergency Response & Reporting

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Incident Reporting

Immediately report all incidents to your supervisor and Freeport-McMoRan

- Occupational Injuries/Illnesses
- Property Damage
- Near Miss

Contractor must provide an initial written incident report to FM Bagdad by end of shift with a final written report within 24 hours.

- In medium to high-risk events, it may be required to secure the site to investigate.
- Depending on the seriousness of the event, we may need to report to MSHA, and an RCA (Root Cause Analysis) may be required.

FREEPORT-McMoRAN
Bagdad Operations

Incident Reporting Form

Open form in desktop application and SAVE AS A NEW DOCUMENT on your desktop.
Please do not save/submit as a PDF; LEAVE IN WORD FORMAT.
Email completed form and attachments to BAG-HS-Bagdad-Incidents
(BAG-HS-Bagdad-Incidents@FCX365.onmicrosoft.com)

Before End of Shift

Today's Date	Click or tap to enter a date.	DATE of Incident OR, IF UNKNOWN, DATE of Discovery	Click or tap to enter a date.
Incident Type	Choose an item.	TIME of Incident OR, IF UNKNOWN, TIME of Discovery	AM <input type="checkbox"/> PM <input type="checkbox"/>
Report Completed By		Exact Location of Incident:	
Responding Safety Pro		Exact Location DIV/DEPT:	

Identifying Employee Information

Employee Names	People Soft #	Employee DIV/DEPT	Involved	Witness	Injury/Illness Treated?	D&A
			<input type="checkbox"/>	<input type="checkbox"/>	Onsite <input type="checkbox"/> Offsite <input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	Onsite <input type="checkbox"/> Offsite <input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	Onsite <input type="checkbox"/> Offsite <input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	Onsite <input type="checkbox"/> Offsite <input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	Onsite <input type="checkbox"/> Offsite <input type="checkbox"/>	<input type="checkbox"/>

ACCOUNTABILITY

ACCOUNTABLE DIV/DEPT	Choose an item.	FMI Crew OR Contractor Company	Name of Supervisor Contacted
Did this incident involve contractors?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Were the contractors supervised?	<input type="checkbox"/> Yes <input type="checkbox"/> No

Property Information

Property Description (Make, Model, Etc.)	Property ID #	Description of Damage

Full Incident Description (Who, What, When, Where)

What are the potential immediate action items that need to take place to prevent re-occurrence?

Action Item Details	Responsible Person	Due Date

EVALUATION OF LOSS POTENTIAL/RISK

POTENTIAL CONSEQUENCE OF EVENT	PROBABILITY/FREQUENCY (Likelihood of Reoccurrence)
<input type="checkbox"/> CATASTROPHIC <input type="checkbox"/> SIGNIFICANT	<input type="checkbox"/> ALMOST CERTAIN <input type="checkbox"/> LIKELY
<input type="checkbox"/> MODERATE <input type="checkbox"/> MINOR	<input type="checkbox"/> POSSIBLE <input type="checkbox"/> UNLIKELY

HSP-003 Uncontrolled Document if Copied or Printed March 17, 2023

Safety On-Call Number: (928) 830-9885

Environmental On-Call: (928) 830-8783

Security Gate: (928) 633-3211

Mine Emergency: (928) 633-5000

Know the area...



It is the responsibility of each individual to be aware of your surroundings and know where to obtain first aid and summon for emergency help.

Ensure you are aware of the locations for:

- ✓ Eyewash Stations / Safety Showers
- ✓ Fire Extinguishers
- ✓ First Aid Kits
- ✓ AED's
- ✓ Spill Response Kits
- ✓ Any other emergency response tools available in the area you are working.

Safety On-Call Number: (928) 830-9885

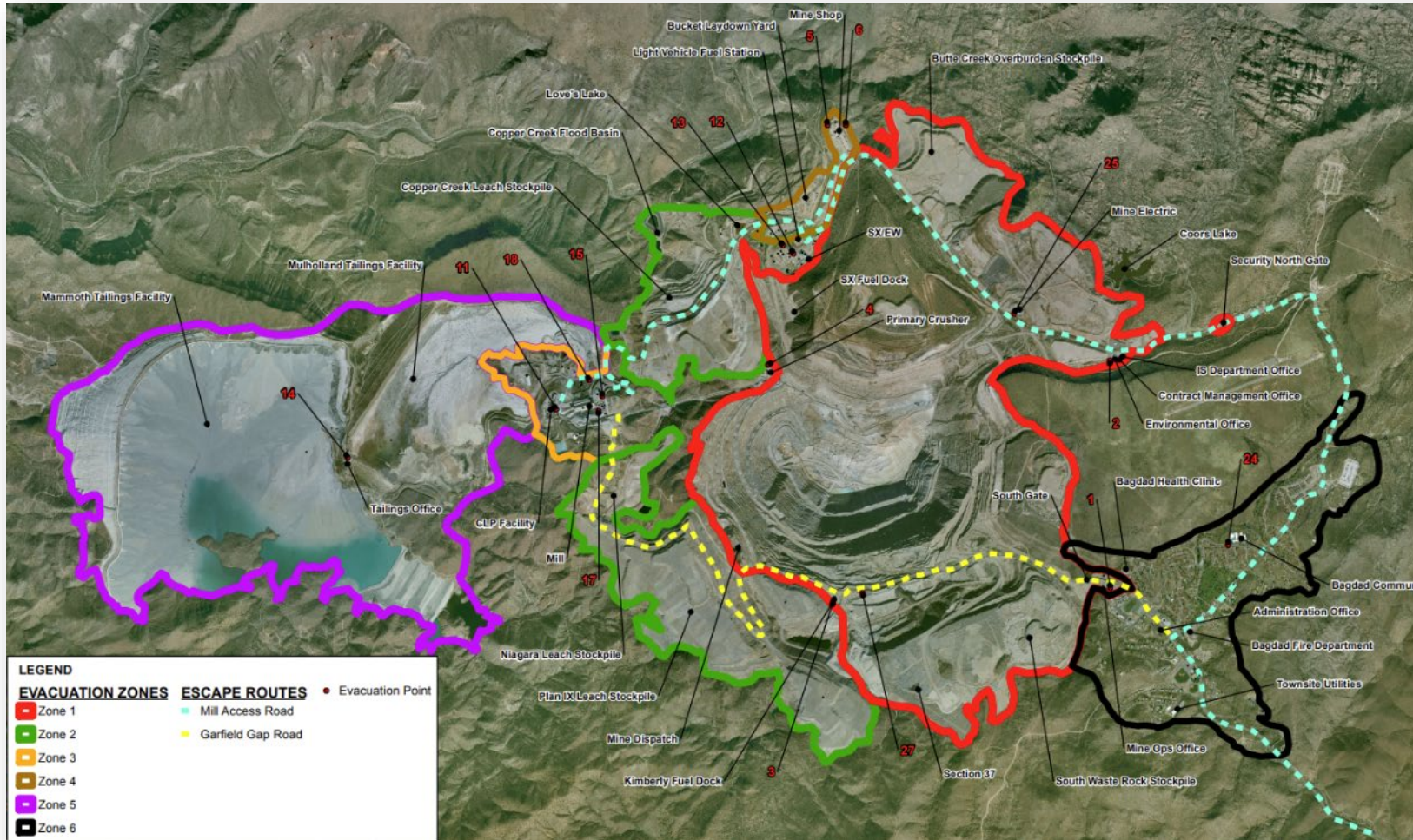
Environmental On-Call: (928) 830-8783

Security Gate: (928) 633-3211

Mine Emergency: (928) 633-5000

Know the area...

Ensure you are aware of the area emergency evacuation procedures.



Each area or zone has designated Assembly Points.

Escape routes to exit the property:

- ✓ Mill Access Road
- ✓ Garfield Gap Road

Individual area evacuation maps are available.

Initiating a Mine Emergency (MAYDAY)

The first person on scene secures the area before calling the Main Security Gate for emergency help.

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 MINE EMERGENCY (928)633-5000, or the Security MAIN LINE (928)633-3211.**

Share pertinent information:

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

Safety On-Call Number: (928) 830-9885

Environmental On-Call: (928) 830-8783

Security Gate: (928) 633-3211

Mine Emergency: (928) 633-5000

MAYDAY Activated...

- **ALL CALL ALERT** to all radios announcing MAYDAY and location.



- **RADIO SILENCE** is required in that area only.
 - Channel marker is set in affected locations – beeps every 9 seconds
 - Only communication regarding the emergency, another emergency or an unexpected hazard

- The responding emergency team will notify Security to lift Radio Silence when appropriate to do so.

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!

Gate for Mine / 911 for Town

MINE Emergencies...

WHY CALL THE SECURITY GATE?	SECURITY	911
Calls fire department dispatch directly	X	X
Mine radio contact with responding personnel	X	
Knows and communicates site locations	X	
Arranges escorts and correct gate entrance	X	
Prepares gates for Fire Department entry	X	
Notifies site personnel there is an emergency	X	
Notifies Safety, Environmental, etc.	X	
Documents and tracks times for all calls	X	
Fastest way to get emergency help on site	X	



**Verbal MAYDAY 3x's
or
Orange/P4 Button**



**928-633-5000
Emergency
or
928-633-3211
Main Line**

Townsite Emergencies...CALL 911.

Radio Alerts

MINE EMERGENCIES

- ALL CALL ALERT
- Requires radio silence
- Pit – All equipment stops until verbally released.



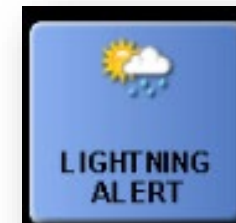
BLASTING

- Blasting occurs 7 days a week
- Alert is on Pit Main only
- Requires radio silence
- 3-minute countdown
 - 1-minute out
 - Fire in the hole
 - Shot area cleared



LIGHTNING

- Yellow Alert – Lightning detected 10-15 miles
 - Warning
- Red Alert – Lightning detected within 5 miles
 - Stop outdoor work and seek safety inside or stay in equipment



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Transportation & Pit Driving



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Property Entry

Vehicle Operations

- Seatbelts must be worn by all occupants. Headlights must be on at all times.
- All vehicles are required to chock when parked. Other means such as parking ditches or berms are acceptable.
- All vehicles are required to use the HORN SIGNALS:
One blast - START, Two blasts - MOVE FORWARD, Three blasts – REVERSE

Access Management – All personnel must check in/out.

- **Badge** – All occupants in the vehicles must badge when entering and exiting the property.
- **No Badge** – If you do not have a badge, checking in and out at the Main Security Gate is required.

MINE EMERGENCY

Blue & white lights will be flashing on the roof of the Main Security Gate. Allow emergency vehicles to pass through the gates and proceed with caution, watching for emergency traffic.



Property Entry

- **Bagdad is always 100% LEFT HAND traffic.**
 - Haul trucks utilized in the mine areas have an extremely large “blind area” to the front and right side of their vehicle, placing these haulage trucks on the left side of the road, not only separates the operator’s cabs, it places the driver on the edge of the road where there is better visibility.
- **Speed Limits**
 - Maximum posted speed limit on the main roads is 35mph.
 - Other posted speed limits range from 5mph to 25mph.
 - All posted speed limits must be followed.
- All vehicles are subject to periodic, unannounced inspections at any location on the site.

PASSING PROCEDURES (Light Vehicle Access Roads)

Passing of mobile equipment is not allowed. Equipment must come to a complete stop and visual communication must occur between the equipment operator and the individual passing before passing can occur.



Pit Driving Requirements

- Pit Driving training & certification is required to access the haul roads.
- A radio programmed to Pit Main and a lighted buggy whip (minimum of 12 feet in height measured from the ground) are required in all light vehicles that travel on the haul roads.
- An escort will be required for persons untrained in pit driving and for vehicles not properly equipped.
- Radios and buggy whips are available for daily check out at the Main Security Gate.

To schedule Pit Driving, contact:
Shawntih McHaney
(928)633-3146 or smchaney@fmi.com



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Environmental Site Specific

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We Are Bagdad!



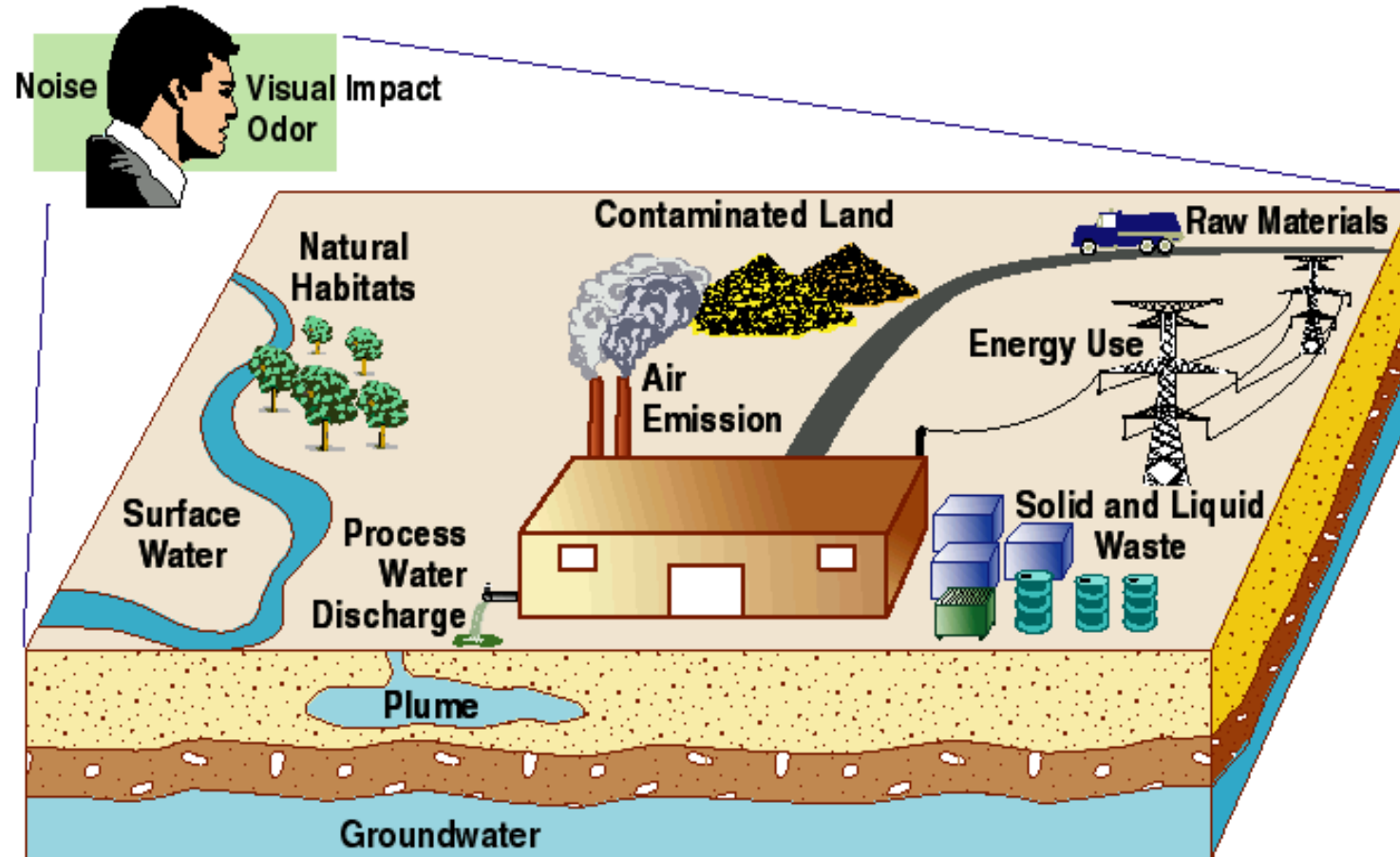
Environmental Policy

“COPPER” is the best way to remember the key commitments in the Environmental Policy.

- **C** Comply with the Rules
- **O** Open to Improvement
- **P** Prevent Pollution
- **P** Personal Responsibility
- **E** Efficient Operations
- **R** Relationship with Stakeholders



Aspects and Impacts



Product Review Request



Product Review Request

- Make sure all chemicals brought on site go through the process

FREEPORT-McMoRAN **Product Review Request** Bagdad Operations

Complete ALL fields, attach most current SDS document and email to BagdadProductRequests@FCX365.onmicrosoft.com, or interoffice hard copies to the Security Gate

Product Name	Common Name	Manufactured By	Phone # of Manufacturer																
Is this product replacing another product? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, what product will it be replacing and when is it expected		Address																	
Requestor Name		Requestor Phone #																	
Date Requested		Requestor Email																	
Please fill out two boxes below if product requestor is a contractor																			
Contractor Name		Where product will be stored																	
Describe the work activity and processes in which this material will be used																			
Location where product will be used <table border="0"> <tr> <td><input type="checkbox"/> Mine Ops</td> <td><input type="checkbox"/> Tailings</td> </tr> <tr> <td><input type="checkbox"/> Mine Maint</td> <td><input type="checkbox"/> SX/EW</td> </tr> <tr> <td><input type="checkbox"/> Mine Tech</td> <td><input type="checkbox"/> CLP</td> </tr> <tr> <td><input type="checkbox"/> Mine Electric</td> <td><input type="checkbox"/> Campus</td> </tr> <tr> <td><input type="checkbox"/> Mill Ops</td> <td><input type="checkbox"/> WH 41</td> </tr> <tr> <td><input type="checkbox"/> Mill Maint</td> <td><input type="checkbox"/> WH 42</td> </tr> <tr> <td><input type="checkbox"/> Mill Tech</td> <td><input type="checkbox"/> Townsite-Utilities</td> </tr> <tr> <td><input type="checkbox"/> Mill Electric</td> <td>Other: <input type="text"/></td> </tr> </table>				<input type="checkbox"/> Mine Ops	<input type="checkbox"/> Tailings	<input type="checkbox"/> Mine Maint	<input type="checkbox"/> SX/EW	<input type="checkbox"/> Mine Tech	<input type="checkbox"/> CLP	<input type="checkbox"/> Mine Electric	<input type="checkbox"/> Campus	<input type="checkbox"/> Mill Ops	<input type="checkbox"/> WH 41	<input type="checkbox"/> Mill Maint	<input type="checkbox"/> WH 42	<input type="checkbox"/> Mill Tech	<input type="checkbox"/> Townsite-Utilities	<input type="checkbox"/> Mill Electric	Other: <input type="text"/>
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<input type="checkbox"/> Mill Electric	Other: <input type="text"/>																		
If location for storage is																			

****IMPORTANT - NOT all chemicals are allowed on site**

- Contact BagdadProductRequests@FCX365.onmicrosoft.com



ESR Signs



**Catastrophic Release to
Surface Waters**



**Catastrophic or Chronic
Release to Groundwater**



ESR Signs



Air Releases



Improper Material/Waste Management



Wildlife Mortalities



Resource Conservation and Recovery Act (RCRA)

››› Large Quantity Generator (LQG)

- >1000 kg of hazardous waste (monthly)

››› LQG requirements

- This training
- 90 Day storage- Central Accumulation Area (CAA)
- RCRA Contingency Plan



Hazardous Waste Identification

Hazardous wastes could be:

- Ignitable - Liquids with a Flash Point $<140^{\circ}\text{F}$, Oxidizers
- Corrosive - Acids and Bases
 - pH range: ≤ 2 or ≥ 12.5
- Reactive - Unstable, Reactive or Explosive
- Toxic – 40 Specific Chemicals/Concentrations
- Listed – Specified by EPA (100's)
 - F, K, U, P wastes

Contact Environmental with questions to ensure the proper handling of all wastes



Hazardous Waste Satellite Accumulation

Solvent Rags



Aerosol Evacuators



Waste Segregation (Sign/Bin Color Coding)

- Municipal
(Food/office) **White**
- Construction Debris
(Section 37) **Red**
- Grease/Debris **Grey**
- Solid Waste **Brown**
- Scrap Metal **Navy**
- Cardboard **Green**



Waste Segregation (Sign/Bin Color Coding)



Other Special Wastes/Procedures

»»»Universal waste

»»»Used oil

»»»Welding rod/electrode management

»»»Aerosol can management

Do not puncture aerosol foam,
adhesives, or pesticides

***Contact Environmental with questions to
ensure the proper handling of all wastes***



Proper Material Management

Container Labeling

- **ALL** drums, buckets or other containers *MUST* have a label or marking indicating the contents of the container

Unknown Drums or Containers

- Call the Environmental Department with the following information:
 - Name
 - Location of the drum

Empty Drums

- Place empty drums that cannot be returned to vendor in empty drum shed



Why is it Important to Properly Manage Waste?

- »»» Safety Hazards
- »»» Protect the Environmental
- »»» Compliance Obligation
- »»» Avoid Violation and Deviations
- »»» Social License
 - EPA/ADEQ relationships



Spill, Leaks, or Releases – Response

- »» Keep yourself safe
- »» Keep other personnel out of the area
- »» Stop the release, if safe to do so
- »» Contain the release, if safe to do so
- »» Contact Environmental, Supervision and Project Manager
- »» Clean up the release, as advised by Environmental
- »» Fill out a “Spill Report Form” and forward to Environmental Contact

If material is hazardous, do not attempt to clean up spills without the appropriate hazardous material training.



SPCC Plan Requirements

>>> 55+ Gallons – Contact Environmental

- Bulk Storage Tanks
- Totes
- Mobile Equipment
- Transformers



>>> Daily Work Area Inspections

- Tanks with Petroleum Products
- Used Oil Drums and Storage Areas
- Secondary Containments (110%)
- Mobile Equipment



Potential Pollutant Sources



Sediment



Hazardous and Toxic Substances



Oil, Fuel, Grease



Heavy Metals



Landscape Debris



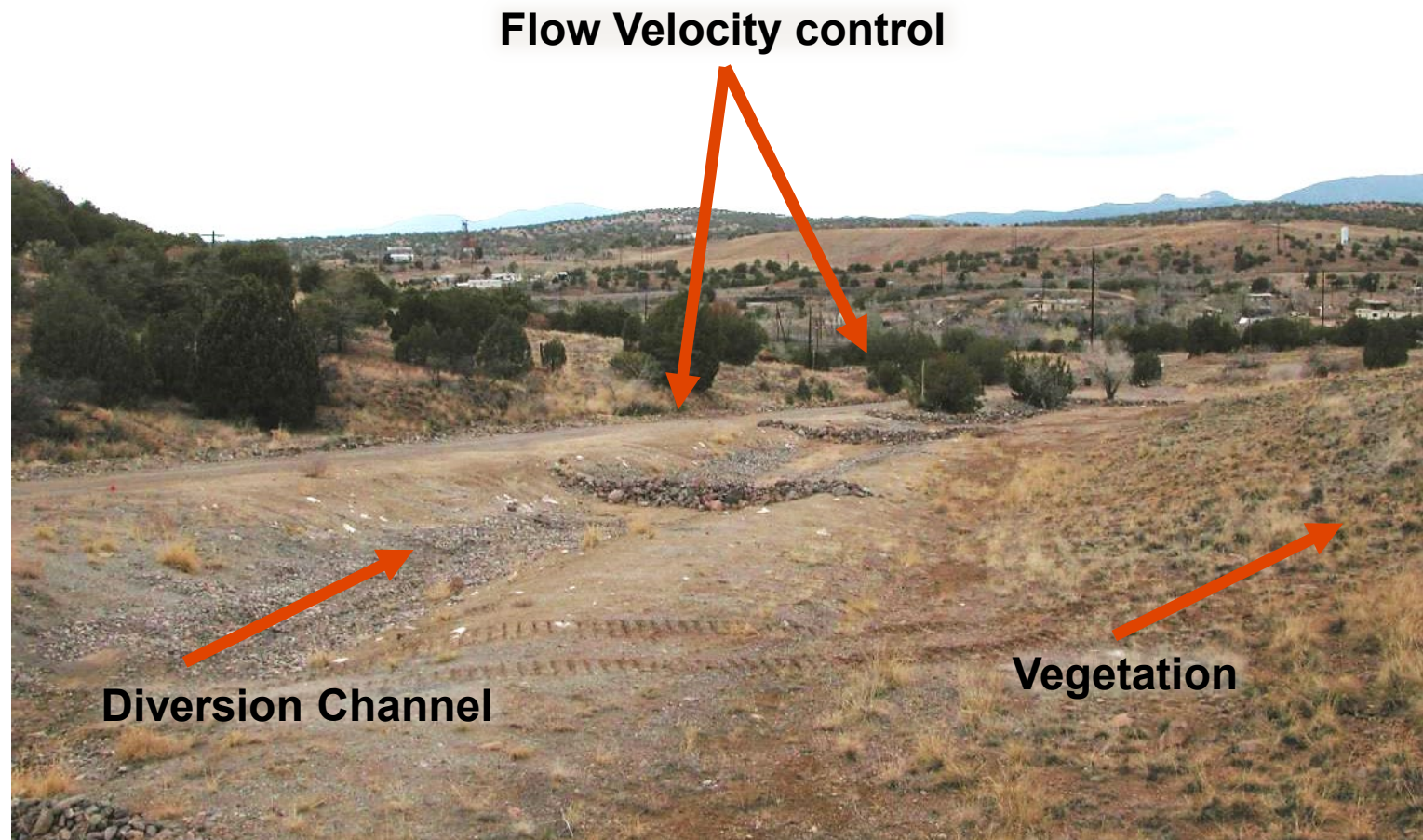
Litter



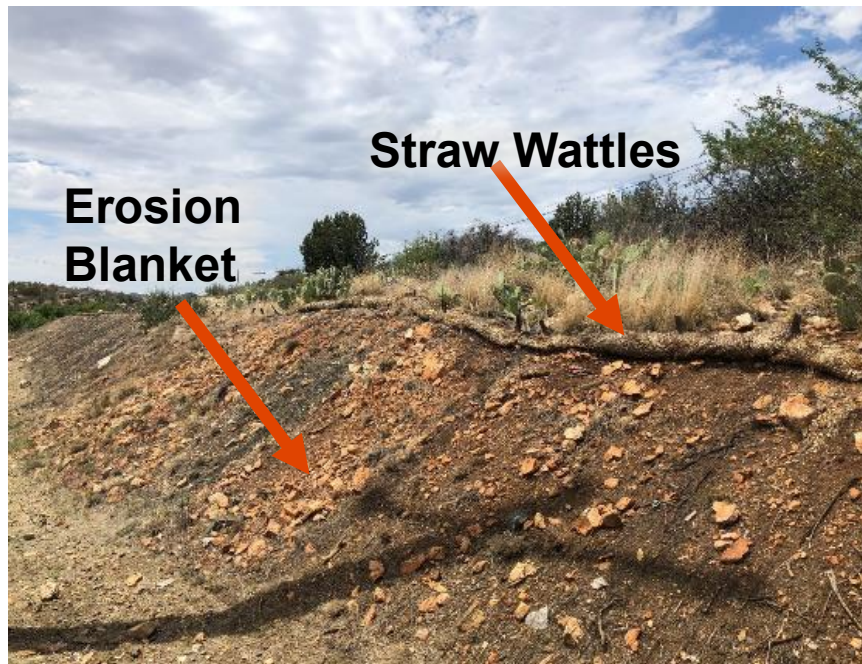
Pet Waste



Stormwater Controls



Storm Water Controls



Communication

»»»Call Environmental for:

»»»Any “NEW” dirt work which includes:

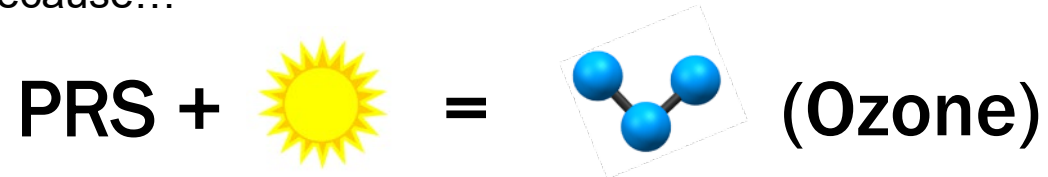
- New pipeline installs
- Pipeline moves
- Work in area of drainage ditches
- Work in area of retention/detention basins
- Road building/changing



Air Quality – Spray Painting Projects

Must...

- ››› Not spray any **architectural** coating containing photochemically reactive solvents (PRS) for industrial/commercial purposes, because...



- ››› Not be conducted without minimizing VOC emissions
- ››› Be conducted in an enclosed area to contain 96% of the overspray (*except for “spot” and architectural painting!*)
- ››› Only use approved paints/solvents
- ››› Complete and submit Spray Painting Form (EF-078) to Environmental



Air Quality – Abrasive Blasting Projects

- »» Must minimize dust generation to less than 20% opacity through use of:

 - Wet blasting techniques
 - Effective enclosures (e.g., tarps) with necessary dust control equipment, or
 - Any other method approved by ADEQ
- »» Abrasive Blasting Project Form (EF-077), found on the Environmental SharePoint site, must be filled out prior to start of project



Air Quality – Demolitions/Renovations

Air Quality Demo/Reno Projects



ASBESTOS CEMENT
(AC) PIPE



ASBESTOS CEMENT
LAB FUME HOOD
EXHAUST DUCT



Be Asbestos Aware!

Many of our facilities may contain Asbestos

Training is required for all construction, alteration, repair, maintenance, custodial, or renovation that may lead to exposure.

[Asbestos Training | US EPA 1910.12b - OSHA Construction Work defined](#)

Before such projects - Call Environmental **928-830-8783**

Contractors will need to provide Certifications or Attend Training: **Monthly every 3rd Wednesday 8:30 am @ Bozarth Comm. Campus, Starting May 17th, 2023**

Site Personnel conducting these activities can attend this training in person or virtually here: [Asbestos Awareness Training \(sharepoint.com\)](#)

Verify your safety, Be **Safe** not **Sorry!**



Air Quality – General Construction Projects

››› Must manage construction projects to minimize dust emissions

››› Fugitive vs. Non-Fugitive Dust Sources



**Fugitive dust
non-point
source!**

**Opacity limit for
fugitive dust non-
point sources = 40%**

**Fugitive
dust point
source!**

**Opacity limit for
fugitive dust point
sources = 20%**



››› Control of dust can be accomplished through:

- Approved dust suppressant or water trucks (for roads or soil prep)
- Postponing work on windy days
- Covering of loads
- Other acceptable means

**Maintain records of dates
& method(s) used!**



Wildlife



Birds and Nesting

- »» Pre-job/workplace inspections
- »» Report nest & nesting activity in your area
- »» Active nests cannot be disturbed



Sightings

Report sightings of any unusual animals or birds onsite



Reptiles



**BE ON THE
LOOKOUT!**

