

FCX Department of Occupational Health and Safety			SOP #		FCX-01	
			Revision #		6	
			Supersedes			
Open-Hole Policy			Task Risk	X	High	
					Medium	
					Low	
					NA	
Approval Date: 12/09/13			Original Date: 03/30/09			

Contents

1.0	Policy.....	2
2.0	Procedure for Open-hole Work	2
3.0	Training	4
4.0	Definitions	5
5.0	References.....	6
6.0	Records	6
7.0	Revision History	6
	Appendix A Forms and Permits.....	7

1.0 Policy

This document establishes the minimum requirements and procedures for the health and safety of Freeport-McMoRan (FCX) employees and contract personnel working in or around open-holes.

Policy All open-holes in decks and walkways must be guarded (covered), barricaded, or made otherwise inaccessible. If work must be performed and it is infeasible to prevent access to a potential fall hazard through barricading, an attendant must be assigned to prevent accidental exposure by ensuring fall protection is used 100% of the time.

All FCX employees and contract personnel are prohibited from working around open holes unless they have been properly trained, at a minimum, as outlined within this policy and the **FCX – Working at Heights Policy (FCX-02)**.

Scope All FCX employees and contractors are required to follow this Policy when working in or near open-holes that could present a risk of falling to workers or others working in the area.

2.0 Procedure for Open-hole Work

Before removing grating, handrails or exposing a hole, safe work practices designed to control fall hazards must be identified and approved by the supervisor, and described in an Open-hole Permit.

Open-hole, grating or handrail removal Prior to removing floor grating, handrails or opening a hole which presents a potential fall hazard to personnel, a risk assessment must be conducted to identify the risks and the measures that will be taken to prevent falls.

An open-hole, grating or handrail removal requires critical controls be established to minimize or eliminate the risk of fall to personnel or to equipment/tools where personnel working on lower levels may be exposed to injury.

Flagging, tagging and barriers When a safe work platform has been altered, creating a fall hazard, substantial barriers or guarding, red “danger” flagging, and tagging that displays the nature of the hazard and protective action is required utilizing the **FCX – Flagging, Guarding, and Barricading Guideline**.

- Install red danger flagging with tagging (identifying the hazard) at all points of potential entry or exit at a reasonable distance prior to removal of grating, handrails or opening hole (typically six feet away from opening). See Appendix A for example diagram.

	<ul style="list-style-type: none"> • Install substantial barriers or guarding to protect persons from fall or provide fall arrest systems for personnel exposed to the fall hazard. • Set up warning signs (Ex: Caution – Work Above) and barricading on the level below the open-hole to protect personnel from exposure to falling objects.
Open-Hole Attendant	<p>If an opening has been exposed and no guarding is in place, a qualified person shall also be designated by the supervisor as an attendant. They are responsible for ensuring that all personnel within the exposed un-guarded areas are wearing the proper PPE (safety harness and lanyard) until the exposure (guarding installed or hole covered) has been eliminated.</p>
Permit Requirements	<p>An Open-Hole Permit found in Appendix A of this policy must be completed for:</p> <ul style="list-style-type: none"> • All non-routine work • Routine work where an engineered solution has not been developed <p>For routine open-hole tasks, permanent engineered solutions to protect personnel from fall hazard should be put into place.</p> <p>Employees who enter a red-flagged open-hole work area must sign the Open-hole Permit prior to entering.</p> <p>Display the Open-hole Permit in a prominent location at the workplace for access to employees working around the hazard.</p> <p>Upon completion of open-hole work, the permit will be filed according to the FCX Records Retention Policy and/or with the work packet.</p>
Risk Assessment Requirements	<p>Conduct a risks assessment for open-hole tasks to identify significant risks and critical controls.</p> <p>Review the risks and critical controls of the task with employees.</p> <p>Verify the effectiveness and use of the critical controls.</p> <p>Display the completed risk assessment in a prominent location at the workplace for access to employees working around the hazard.</p>
Pre-release inspection	<p>Prior to removal of flagging or guarding, the following site pre-release inspection shall take place:</p> <ul style="list-style-type: none"> • Ensure all work associated with the exposure is complete • Ensure all personnel wear fall protection while re-installing grating, handrails and/or cover floor openings prior to • Remove flagging, tagging and/or guarding and ensure the work area is safe for re-entry

Fall Protection Requirements	<p>When personnel are required to work inside the flagged area where an opening has been exposed and no guarding is in place, fall protection is required 100% of the time according to the FCX – Working at Heights Policy (FCX-02).</p> <p>Once guarding is installed, fall protection is only required for those individuals working inside the guarded area.</p>
Inspections	All equipment used for barricading and guarding shall be inspected according to manufacturer and regulatory requirements.
Exemptions	<p>There may be difficulties with the application of this policy to non-work platform type hazards such as those found while working on mobile equipment, machinery, or near roadways, underground raises, ore passes, etc. Such hazards may require a separate risk assessment to determine appropriate critical controls and for compliance to regulatory standards.</p> <p>Where this policy cannot be followed, for both routine and non-routine work, an exemption form (see Appendix A) must be completed, approved and kept on file with an SOP or other work procedure established for future work.</p>

3.0 Training

Awareness Training will be provided to all employees and contractors who may work near or be exposed to an open-hole.

Awareness Training Requirements	<ul style="list-style-type: none"> • Inform employees that a policy and procedure exist and must be followed. • Explain that additional training is necessary to perform work around open-holes. • Educate in the recognition of open-hole work and the risks for exposed personnel. • Provide resources for further information.
--	---

Open-Hole Training shall be provided to all employees and contractors who will perform work where open-holes are created or perform maintenance work that requires the removal of handrails or guarding. All training shall be documented and contain the key elements listed below.

Open-hole Worker Training Requirements	<ul style="list-style-type: none"> • General Hazards associated with open-hole work • Review of this policy, procedure and an explanation of permit requirements • Emergency procedures and response • Significant risk identification and critical and mitigating controls
---	---

	<ul style="list-style-type: none"> ○ Flagging, barricading, guarding, tagging ○ Fall protection and fall arrest • Relevant regulations and standards • Duties and responsibilities of all involved in open-hole work • General Site Specific Training requirements • Review of “red flags” that could indicate unsafe conditions or behaviors
Attendant Training Requirements	<ul style="list-style-type: none"> • Open-hole Worker training requirements • Responsibilities of an Open-hole Attendant • Duties, responsibilities and procedures for both routine and emergency operations • General Site Specific Training requirements

4.0 Definitions

Open-Hole Definitions

Attendant	A qualified person designated by the supervisor, responsible for ensuring that personnel within the exposed area use the proper PPE (safety harness) and that no unauthorized personnel enter into the area during the time prior to completion of the guarding. This individual must be equipped with a radio or cell phone for emergency communication, and be outfitted with a safety harness at all times.
Guarding	A handrail with a toe-board that meets regulatory regulations. Guarding may be of a temporary or permanent nature (Note: flagging shall not be used as guarding).
Opening (horizontal)	An opening measuring 12 inches or more in its least dimension, in any floor, walkway or platform, through which persons may fall to a lower level.
Opening (vertical)	A gap or void 30 inches or more high and 18 inches or more wide, in a wall, partition, or handrail, through which a person can fall to a lower level.
Qualified Person	An individual who, through combined education, training, experience, and process knowledge, has demonstrated that he/she is capable of recognizing, evaluating, and effectively identifying controls.

5.0 References

The following sources were used in the development of this document

- FCX Flagging, Guarding, and Barricading Guidelines
- FCX Working at Heights Policy
- FCX Records Retention Policy

6.0 Records

Records Retention

The following records must be retained according to the FCX Records Retention Policy:

- Employee Training Records
- Annual program review
- Open-hole Permits
- Exemption Documents

7.0 Revision History

2009 Rev 1	Initial Release	
2013 Rev 2	This update includes many changes from the previous version, some minor and some significant. As a result, it should be considered a complete re-write of the document. Users should review it in its entirety.	<ol style="list-style-type: none"> 1. Changed from a guideline to a policy. 2. Removed the Barricading and Flagging and created a FCX Flagging, Barricading and Guarding Guideline. 3. Moved Definitions to Appendix C 4. Added an Exemption Request Process and Form 5. Added requirement for warning signs and barricading on levels below an open-hole where personnel may be exposed to falling objects 6. Added a significant risk assessment to the Appendix.

Appendix A – Forms and Permits

FCX – Department of Occupational Health and Safety		Policy NO.	FCX 01 - A
		REVISION NO.	0
		SUPERSEDES	
OPEN-HOLE PERMIT		TASK CLASSIFICATION	<input checked="" type="checkbox"/> Highly Critical
			<input checked="" type="checkbox"/> Critical
			<input type="checkbox"/> Non-Critical
APPROVAL DATE – 11/06/13		ORIGINAL DATE – 03/30/2009	
RELEVANT SOPS –			

Date: _____

YES	N/A	FLOOR OPENINGS AND HANDRAIL REMOVAL PERMIT
		Has a Job Safety Analysis, Risk Analysis or equivalent assessment or this permit been reviewed by crew and completed JSA displayed in a prominent location at the work place?
		Has appropriate flagging been obtained prior to work commencing?
		Are substantial barricades available and present at the work location to enclose the opening prior to removal of floor grating or handrails?
		Is it possible to install barricades prior to removing grating, handrails or opening?
		Is red flagging in place and tags attached as per FCX Barricading and Flagging Guideline?
		Are proper fall protection anchor points identified and adequate? Fall protection is required by anyone inside barricade or open-hole with NO guarding.
		Is a dedicated attendant assigned prior to installation of barricades until job is complete?
		Have all employees been instructed to tie off before exposing opening/hazard?
		Is area below opening barricaded, flagged and/or properly tagged or signed?
		Is the work area free from tripping hazards?
		Is an access point required for safe access?
		Are rigid guards constructed and installed properly?
		Is there adequate illumination? (In some areas additional guarding may be needed to work safely.)

Pre-released completed by: _____ **Date:** _____

Work Supervisor Signature: _____ **Date:** _____

Employee Signature: _____ **Date:** _____

Dedicated Attendant Signature: _____ **Date:** _____

(Other Employee Signatures on Back of this Page)

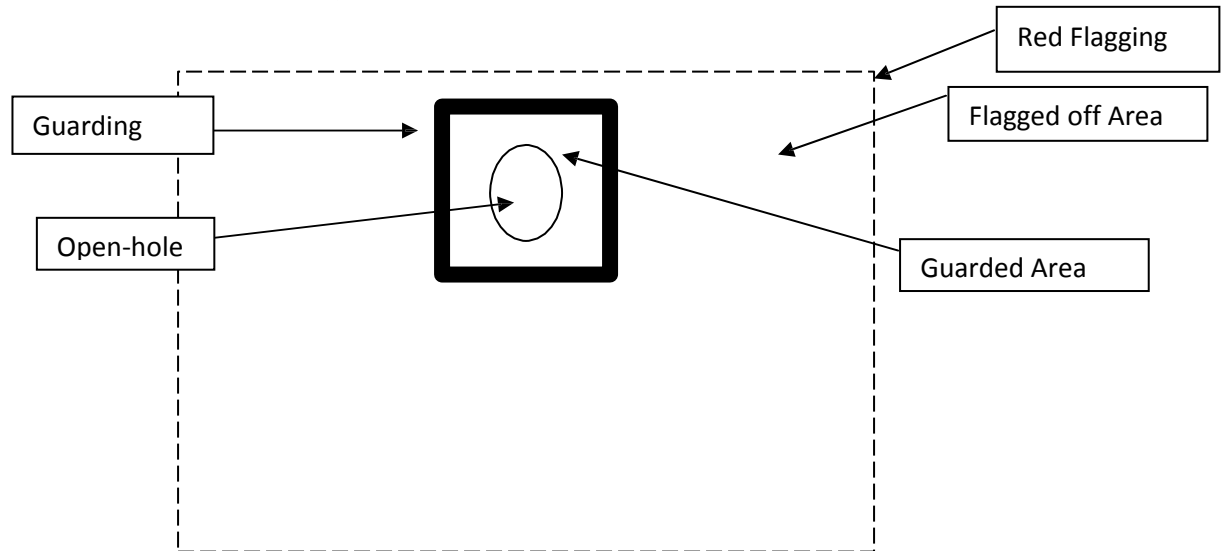
Open-hole Exemption Request Form

When any portion of this policy cannot be met, an exemption must be completed. Complete this form with a detailed description of the area and reason for an Open-hole exemption request. A task review by an engineer or other qualified individual to consider other controls must be completed prior to submitting to the division manager. Approval from the division manager or higher is required prior to proceeding with the Open-hole work.

Date:	Time:	Division Manager:
Location of Activity:		
Purpose of Activity:		
Description of Request:		
Justification:		
Control Measures:		
Signature of Requestor:		
Signature of Division Manager or Delegate:		

*When completed give a copy of all related documentation to the division record keeper for filling purposes.

Significant Risk Assessment – Open-hole



Potentially Fatal Risk	Critical Controls to Reduce or Eliminate
Fall of Personnel Completing the Work to Level Below	Substantial barricades around the open-hole
	Properly completed Open-hole Permit
	Fall arrest systems - 100% tie off when inside the guarding or where substantial guarding cannot be utilized
	Clean work area free of tripping hazards
	Attendant posted at Open-hole to keep workers in the area from getting too close to the space
	Barricading, flagging and tagging the open-hole
	Pre-shift risk and critical control review
	Critical Behaviors – reviewing the Open-hole Permit and understanding the critical controls prior to starting work; stopping any unsafe act or fixing unsafe conditions in the work area; warning unauthorized personnel to stay out of the open-hole area
Fall of Other Personnel in the Area to Level Below	Barricading, flagging, tagging
	Attendant posted at Open-hole to keep unauthorized personnel from entering the open-hole area
	Substantial barricades to keep people from getting close to open-hole
	Clean work area free of tripping hazards
	Signs posted to keep unauthorized personnel out of area
	Communication with all workers in the area of planned open-hole work
	Critical Behaviors – refraining from going into barricaded or flagged areas unless authorized; use of proper fall arrest protection if authorized to enter into the open-hole area; listening to the attendant or other workers in the area when told to no enter; reporting any non-marked open-holes and ensuring controls are put in place to warn employees and prevent fall
Falling Objects hitting Personnel Working or Passing through Level Below	Signs posted on the level below – Caution Work Above
	Barricading and/or flagging the area around the exposed area to protect personnel on lower level
	Clean work area
	No tools or other objects left close to the open-hole
	Communication with all workers in the area of planned open-hole work
	Maintenance or repair or any openings in flooring and grating
	Critical Behaviors – staying out of barricaded and flagged areas; being observant of work being performed when working or walking through an area; stay out of unauthorized work areas

Red Flags – Indicate potential unsafe behavior or lack of controls
Discovering an open-hole in grating or flooring that is not barricaded and there is no flagging or warning
Observing people working near an open-hole with no signs of barricading or fall protection systems
People working on an open-hole with no permit
No attendant present where substantial barricades are not in place
Open-hole on level above with no warning signs below
Employees performing open-hole work do not understand the critical controls
All employees working near open-hole have not signed off on permit
Supervisor or other lead has not verified critical controls or periodically checked in on the open-hole work
No pre-task risk review or critical control evaluation has been conducted
Tags on flagging missing or not legible
Lack of signs or other warning of work being performed in area