



TECHNICAL SUPPLEMENT

ELECTRICAL SAFETY FCX-HS03 | SWITCHING FOR NON-ELECTRICAL PERSONNEL

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GENERAL INFORMATION

- This technical supplement covers the requirements for allowing qualified, non-electrical personnel at Freeport-McMoRan Operations to work in a safe manner when switching/operating designated electrical equipment.
- The process of operating electrical switches or disconnects has significant hazards associated with it. The potential for electrical arc, flash and blast hazards is always present and these conditions can cause severe damage, injury or even death.

Requirements

- Unless specifically trained and authorized employees will not operate any disconnecting means rated greater than 300V voltage level.
- Area manager approval is required for non-electrical personnel who operate disconnect switches.
- Qualified non-electrical personnel, who are trained and authorized may operate a disconnecting means which meets all of the following conditions:
 - Is a disconnect switch or safety switch.
 - Voltage level above 300V and below 1000V.
 - Continuous current rated 200 Amperes or less.
 - Not located within an MCC room, control room, or switch room.
 - Marked with a "Label."
 - The equipment has been properly installed.
 - The equipment has been properly maintained in accordance with manufacturer recommendations and documented on a three year cycle.
 - The equipment has no evidence of impending failure.
- Properly maintained means that the equipment has been maintained in accordance with the manufacturer's recommendations and applicable industry codes and standards.
- Evidence of impending failure means there is evidence such as arcing, overheating, loose or bound equipment parts, visible damage, deterioration, etc., that may indicate a likelihood of impending failure.

Labeling

- Any disconnecting means which trained and authorized non-electrical personnel are allowed to operate shall be labeled.
- The integrity of the disconnecting means (door latching mechanisms) must be verified by an electrician prior to placing the label.
- Each area will be responsible for identifying appropriate disconnecting means and applying the labels.

Training

- Non-electrical personnel must be tasked trained regarding the type of disconnecting means they will be required to operate.
- The 600V Switch/Reset training shall contain elements consisting of the following:
 - Recognize and avoid specific hazards associated with electrical energy.
 - Safety-related work practices and procedural requirements to provide protection from the electrical hazards associated with their respective job or task assignments.
 - Identify and understand the relationship between electrical hazards and possible injury.
 - Identify disconnecting equipment they are qualified to operate.
 - Demonstrate the ability to perform operation of the disconnecting means.
 - Recognizing signs of potential failure