

## COURSE OVERVIEW

### PURPOSE

On April 9, 2016, Bryan Ortiz - a 25 yr. old EW operator with 5 years of work experience - was fatally injured while working below the cell line at our Safford Electrowinning facility. The medical examiner determined that the probable cause of death was the fibrillation of the heart due to electric shock.

This tragedy has led to a renewed determination towards identifying potential risks and hazards and to focus in on what we must do to ensure safe work practices and access for maintenance and operation of the Electrowinning and Electrorefining processes.



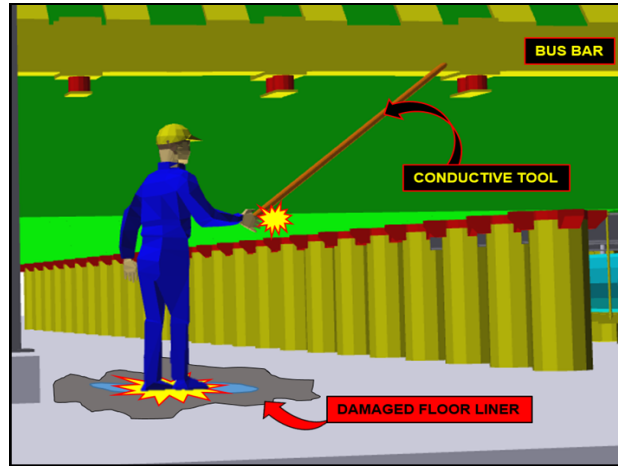
### DESCRIPTION

This course – *Tankhouse Electrical Safety* – has been developed and will be presented to help meet the needs of all tankhouse personnel by recognizing and assessing the risks and hazards around EW/ER facilities, and understanding and implementing the safe work behaviors and critical controls necessary to safely carry out our EW/ER operations and maintenance.

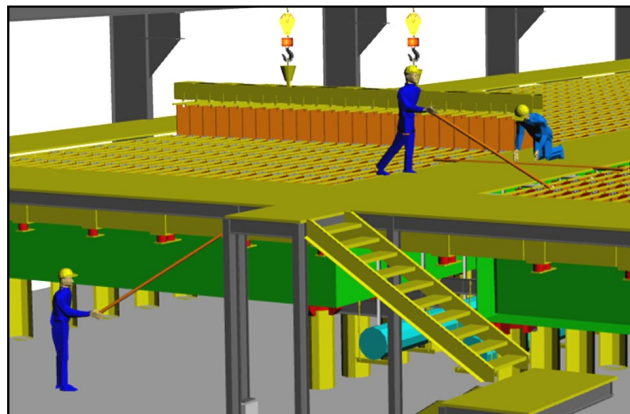
### LENGTH OF COURSE\*

- 8 hours - In class

\*Based on a 15:1 student teacher ratio.



There are many types of potential electrical hazards in and around the EW/ER tankhouses. These dangers can be mitigated, even eliminated, by the implementation and compliance of appropriate procedures, safeguards, and safety controls.



## COURSE CONTENT

- Module 1: Introduction to the Course**
- Module 2: Tankhouse Electricity Basics**
- Module 3: Tankhouse Design Features**
- Module 4: Modifications to the Tankhouse**
- Module 5: Tankhouse Processes**
- Module 6: Personal Protective Equipment (PPE)**
- Module 7: Course Summary**

### COURSE MATERIALS:

- Student Guide
- Facilitator Guide
- PowerPoint Presentation
- Classroom Activities
- Tankhouse Benchtop Model (simulator)
- Knowledge Assessment
- Formal Train-the-Trainer

## COURSE AUDIENCE

This training is mandatory for all Freeport-McMoRan employees, contractors, vendors, and visitors to our EW/ER tankhouses and surrounding areas and includes all hazards associated with the current EW/ER Electrical Safety Policy, and how to identify areas of risk in need of electrical testing and mitigation.



## ADDITIONAL COURSES OFFERED

- EW Basics HYD FCX1005C
- SX Basics HYD FCX1006C
- Leaching Basics HYD FCX1007C
- EW Cell Maintenance HYD FCX1008C



**FREEPORT-McMoRAN**

## CONTACT INFORMATION

For technical information on this course or any other courses MTI offers follow the link below:

<https://fcx365.sharepoint.com/Sites/LearningContent/MTI/SitePages/Home.aspx>

Or you can contact:

For technical information:

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To request course materials please contact:

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**FREEPORT-McMoRAN**

**HYD FCX2025C**  
**TANKHOUSE**  
**ELECTRICAL SAFETY v.2**