FREEPORT-
MCMORAN

FACILITATOR GUIDE

SFT FCX1015C
WORKPLACE EXAMINATIONS

AUGUST / 2018

VERSION 1.1

TABLE OF CONTENTS

COURSE OVERVIEW

The following is basic information about this course.

COURSE DESCRIPTION

Through this course, employees will be trained, qualified, and able to follow the appropriate requirements to conduct a workplace examination. Each employee must have an understanding of the overall hazards, equipment necessary and required procedures that are directly related to his/her work duties in his/her work space.

COURSE OBJECTIVES

Upon completion of this course, students will be able to

- Module 1: Workplace Examination Compliance
  - Explain the purpose of workplace examinations
  - Describe the qualifications and training level necessary to conduct one
- Module 2: General Hazard Identification
  - Conduct a workplace examination by assessing a scenario for general hazards

COURSE PRE-REQUISITES

There are no pre-requisites for this course.

COURSE LENGTH

This course takes approximately 4 hours to complete.

CLASS SIZE

This course is designed to have a 14:1 student: facilitator ratio. Class size may be less depending on each site's needs, as well as the student's skill and experience level.

TARGET AUDIENCE

This training is intended to satisfy the minimum training requirements for a Competent Individual.

FACILITATOR QUALIFICATIONS

Facilitators should be well versed in the Freeport-McMoRan policies, guidelines, and expectations.

REGULATIONS/POLICIES/PROCEDURES

This course teaches the compliance guidance for workplace examinations outlined by MSHA.

FACILITATOR PREPARATION

The following information will help the facilitator prepare for the course.

ABOUT THIS GUIDE

This guide is intended to give the facilitator a general outline of the flow of the course. It is designed to assist the facilitator in presenting content, conducting classroom activities, and managing time in order to meet the learning objectives. This Facilitator Guide (FG) is intended to be used in conjunction with the Student Guide (SG) and the PowerPoint (PPT).

SAFETY

Safety must be a fundamental component of this course. Students must adhere to safety information in the SG and from the facilitator, and safety procedures must be focused on throughout the training. Equipment may not be operated without facilitator authorization.

ACTIVITIES

Students will participate in many hands-on activities designed to give students time to practice the knowledge learned throughout the course. They also provide the facilitator with opportunities to give immediate feedback on what each student does/does not do well. Facilitators must review each activity's directions in the FG before guiding students through the learning activities.

GENERAL MATERIALS

The following is a list of materials that are consistently needed for courses:

- Attendance sign-in sheets
- Name cards – 1 per student
- Pens and/or pencils
- Push pins and/or tape such as painter's tape
- Sticky Notes
- Easel and Flipchart
- Markers of various colors
- Student Guide (SG) – 1 per student
- Projector and sound system for PPT and/or videos
- Laptop with access to the internet
- Assessments
- Course evaluations
- Appropriate Personal Protective Equipment (PPE)

ACTIVITY MATERIALS

The following is a table of the materials needed for the activity in each module:

Module	Activity Materials
Introduction	• Activity 1: Icebreaker o Choose an icebreaker. Depending on the selection, gather the appropriate materials.
Module 1: Workplace Examination Compliance	• Activity 2: Stump Your Neighbor o Markers o Flip chart or whiteboard for discussion
Module 2: General Hazard Identification	• Activity 3: Hazards in the Workplace o Worksheet located in the SG • Activity 4: Teach Me o Worksheet located in the SG
Conclusion	o None

FG CUES

Throughout the FG, cues are used to help the facilitator quickly identify slides that have unusual but important features. The purpose of these symbols is explained below.

Description	Symbol	Purpose
Audio Link		The speaker icon indicates when a PPT slide links to an audio file.
Video Link		The director's clapboard indicates when a PPT slide links to a video file.
Animated Slide		The star indicates when an animation appears on a PPT slide and requires more than one click to view all slide content.
Note		The notepad indicates the PPT slide or FG include a note relating to the slide but not necessarily found in the SG.
Incidents		The first aid symbol indicates when the PPT slide or FG addresses a PFE, testimonial, or other safety-related incidents.
Flipchart		The marker indicates when a facilitator writes down responses given by students on a flipchart or whiteboard.
Discussion		The question mark indicates when students need to participate in a discussion either as a class or in small groups.
Example		The hand indicates when the facilitator holds up an item or passes an example around the class.
Facilitation Tip (FT)		The podium indicates a facilitation technique used by the facilitator to enhance the presentation. A corresponding red box with white text appears near this cue to explain the tip.
Site Specific		The yellow arrow indicates a place where the facilitator needs to prepare and add site-specific information before class starts.

USING THE POWERPOINT PRESENTATION

When preparing to facilitate the course, there are several ways to integrate the PowerPoint (PPT) with the FG.

1. The facilitator can project the PPT and use the paper copy of the FG to walk around the room.
2. The facilitator can begin the PPT in presentation mode on their computer. This displays only the slide to the class on the projection screen, but shows the facilitator a different view on their computer. The facilitator's screen shows a notes screen that has the same information for that slide that is included in the FG. This view also shows the next slide and lets you use the marker tools to write on slides and emphasize teaching points.
3. The facilitator can also choose to do both. This is the preferred method for facilitating this course. Moving around the room helps the facilitator engage more participants and keeps the students' brains stimulated, thus promoting learning.

NOTE: The FG follows the PPT presentation slide by slide. Each page is designed with the information the instructor needs and the image of the slide. The FG should be used as a roadmap to guide the facilitator through the course.

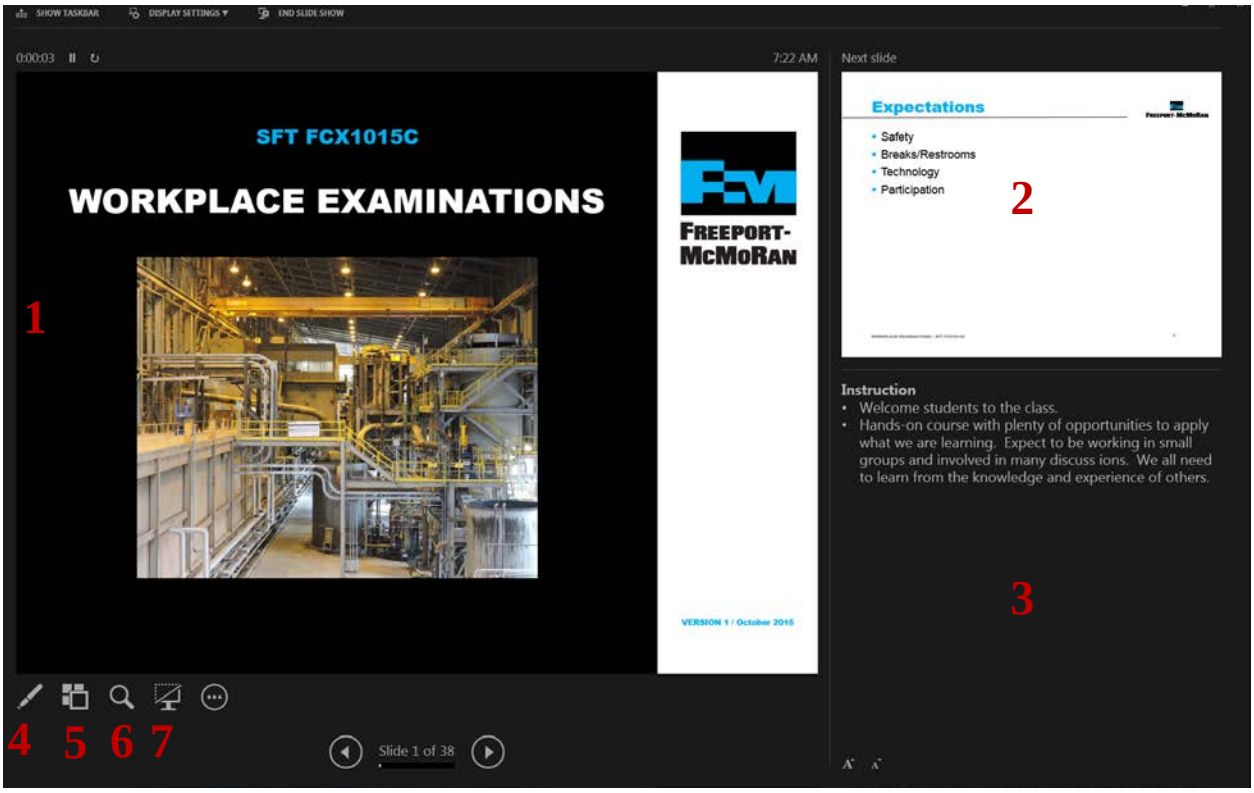
SETTING THE PRESENTATION MODE

To initiate the presentation mode, do the following:

Step	Action
1	Open the PPT presentation.
2	At the bottom of the screen is a colored bar (The look or color may vary depending on the version of PPT used).
3	Select the icon that is noted in the image below. 

PRESENTATION MODE FEATURES

Once you are in presentation mode, the students will only see the slide displayed, but the facilitator will see the layout below. Some of the commonly used features available from this view are numbered in red and identified in the image.



1. **Current slide** – This is the same slide that students see on the projection screen.
2. **Next slide** – A visual preview for the next slide is shown.
3. **Notes** – These notes match the talking points available in the FG. The notes match the current slide projected to the students.
4. **Pens** – This icon gives the user access to a laser pointer, pen, highlighter, and arrow options. Whichever tool is used on the facilitator's screen will show on the projection screen for the students and allows for specific points on the PPT to be emphasized. This helps the facilitator customize the PPT presentation to better suit the needs of the site and students.
5. **All slides – This will show small images of all of the slides on the facilitator's screen.**
6. **Zoom** – This icon lets the facilitator zoom in on specific aspects of the PPT.
7. **Black screen** – If the facilitator would like to explain content further, but feels the PPT slide shown on the screen may distract from learning, the screen can be blacked out to help focus the students.

INTRODUCTION TO WORKPLACE EXAMINATIONS

Mining is a dynamic industry where things often change, such as environment, equipment, personnel, and work areas. It is critical that each employee is alert and aware of any hazard that may affect his or her safety, and the safety of others. Safe Production is the ultimate goal, and the first step in reinforcing this awareness begins with the employee. Through appropriate training, the employee can build the skills necessary to identify, avoid, and mitigate hazards.

A workplace examination is also referred to as an area inspection, pre-shift inspection, and workplace inspection. These procedures or processes are created by each site to identify hazards prior to the beginning of and throughout the shift. They are the first line of defense in protecting our most valuable asset – you.

The backbone of an effective workplace examination is hazard recognition. Hazards generally fall under one of three categories:

- Chemical (e.g., H_2S, lime, solvents)
- Biological (e.g., bacteria, animal waste, venom)
- Physical (e.g., noise, radiation, impact injuries)

Depending on your work area, the hazards to which you are exposed can fall under one or all three of these categories. Being skilled at recognizing hazards associated with your work area is a lifelong pursuit.

Never assume that you are automatically aware of all the hazards around you. Changing environmental conditions can affect existing workplace hazards. Temperature changes, noise levels, illumination, and weather conditions are all environmental factors that can greatly alter your work area, and in turn, the associated hazards.

LEARNING OBJECTIVE

Upon completion of the Introduction, the students will be able to:

- Understand the overview of the course

ACTIVITIES

- Activity 1: Icebreaker

Please refer to Activity Materials in *Facilitator Preparation* for further details.

TOTAL TEACHING TIME

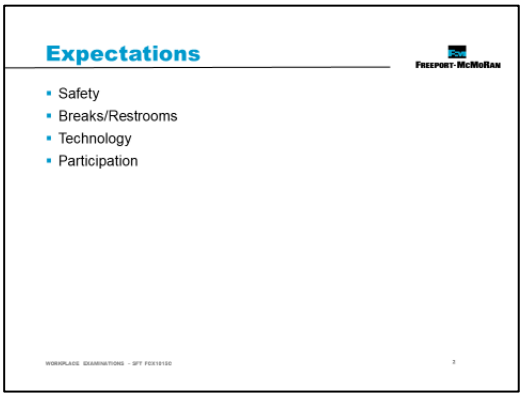
Approximately 30 minutes

PPT slide 1

Instruction

- Welcome students to the class
- Facilitator introduces self by stating position at FCX, how long you've been with the company and how long you've been in mining.
- This is a hands-on course with plenty of opportunities to apply what we are learning. Expect to be working in small groups and involved in many discussions. We all need to learn from the knowledge and experience of others.

PPT slide 2

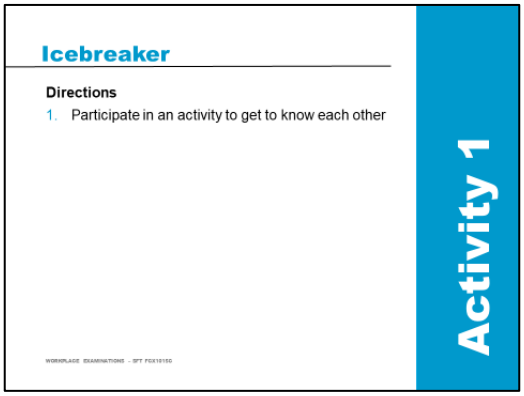


Instruction

- Explain your expectations of them as students and how the breaks will be scheduled.
- Administrative/Classroom policies
  - Safety
    - Identify the appropriate evacuation procedures, gathering areas, and emergency exits and fire extinguisher locations, etc.
  - Breaks and Restrooms
    - Establish a break schedule and announce it to the class. Suggested break times are included throughout the FG and occur approximately every hour and often occur at the end of each module. Breaks should last 5-10 minutes to give students time to rest and relax before beginning the next learning session.
    - Identify the location of the nearest restroom and smoking areas.
  - Technology policy
    - Please review your policy on the use of cell phones and laptops during the training.
  - Participation
    - This course requires significant participation. Students should be prepared for discussion and small group activities.

ACTIVITY 1: ICEBREAKER

PPT slide 3



Time
Approximately 10 minutes

Materials

- Chose icebreaker. Gather appropriate materials.

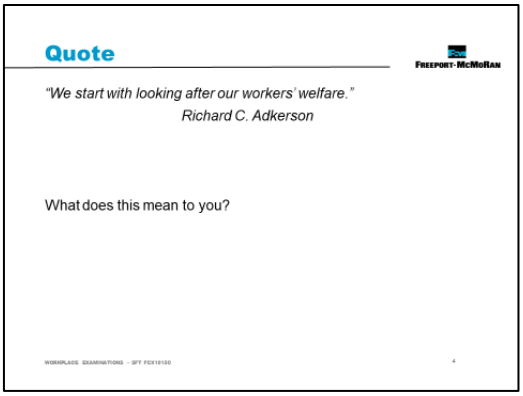
Purpose

- Successful icebreakers encourage students to contribute their ideas and experiences thus increasing motivation and engagement in the class.
- Below is an assortment of icebreakers that the facilitator can incorporate at the beginning of the course as well as after breaks

Icebreaker	Instructions
Dodgeball *(10-15 minutes)*	1. Give students a piece of paper. 2. Students write two questions they can ask another student on the paper. 3. Students crumble their paper into a ball and split them into two teams. 4. On cue, students play dodgeball (throw their balls at members of the opposing team) for 30-60 seconds. 5. When time is up, tell students to pick up one ball (not their own) and find a partner. 6. Students read and answer their questions with their partner. 7. Partners introduce each other to the class. *Alternative idea: Instead of playing dodgeball, students throw their ball to another student and they become partners.*

Icebreaker	Instructions
Stranded on an Island *(10-15 minutes)*	1. Divide the class into groups of three to five students. 2. Students think of three items to take with them if they knew they would be stranded on an island. 3. Students take turns sharing their items with the group explaining why they chose each item. *NOTE: With a larger group, have students choose less items.*
Coin Picker *(5-10 minutes)*	1. Students take a coin out of their pocket or borrow one from somebody. 2. Students introduce themselves by stating their name, the year on the coin, and something that happened that year. *NOTE: If students do not have coins, assign them a year.*
The Pocket/Purse Game *(5-10 minutes)*	1. Give students one minute to find an item with significance they carry on them in their pocket, purse, backpack, etc. 2. Students introduce themselves by showing the item, telling about it and explaining why they chose it.
Three of Anything *(10-15 minutes)*	1. Divide the class into groups of four to five students. 2. Give students one minute each to share their three favorite (or least favorite) movies, children's books, vacations, etc. 3. Ask a volunteer from each group to share anything that was common between any of the students.
Phrases that Fit *(10-15 minutes)*	1. Give students two minutes to think about a slogan, commercial, poem, song, etc. that describes his or her life. 2. Students introduce themselves to the class by sharing the slogan and explaining why they chose it.

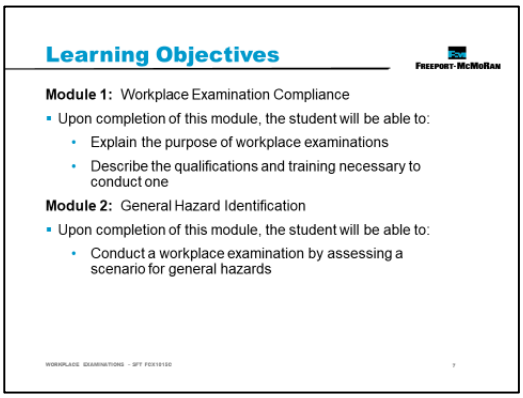
PPT slide 4, SG p. i



Instruction

- Introduce the student guide as a resource.
- Read or have a student read the quote by Richard Adkerson. Read it aloud.
- As a class, discuss what the quote means.

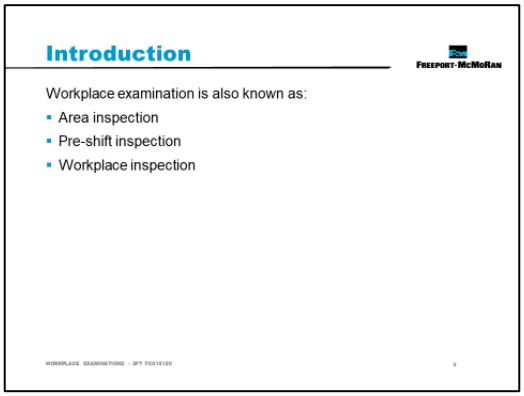
PPT slides 5, SG p. v



Instruction

- **Before beginning these next two slides:**
  - Ask the Students what they would like to get out of this course, or what they think about it? Then go into each slide.
- You will want to read the following two slides to explain the objectives for each module. This information can be found on p. vii in their Student Guides.
- They may also find the module objectives listed on the first page of each module.

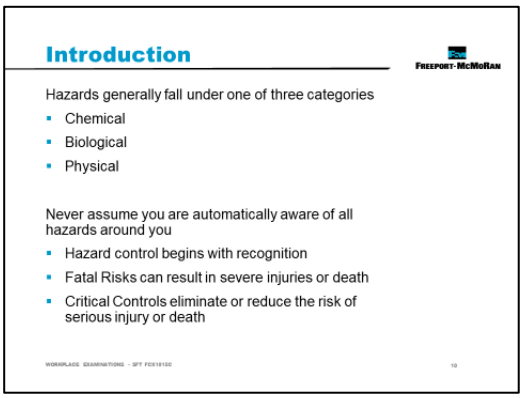
PPT slide 6, SG p. vi



Instruction

- A workplace examination is also referred to as an area inspection, pre-shift inspection, and workplace inspection. These procedures or processes are created by each site to identify and immediately control any hazards prior to the beginning of and throughout the shift. Make sure that the workplace is adequate for you to perform your regular job duties. Workplace examinations are the first line of defense in protecting our most valuable asset – you.

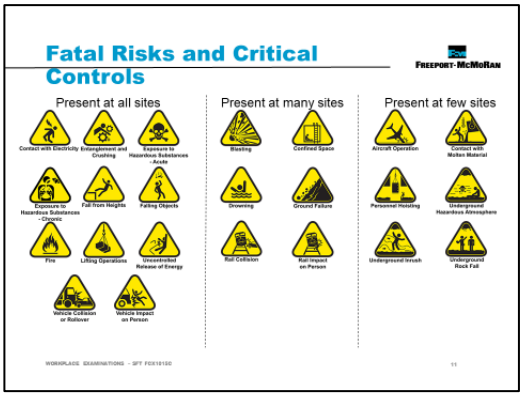
PPT slide 7, SG p. vi



Instruction

- Depending on your work area, the hazards to which you are exposed can fall under one or all three of these categories. Being skilled at recognizing hazards associated with your work area is a lifelong pursuit.
- Never assume that you are automatically aware of all the hazards around you. Changing environmental conditions can affect the associated risk of existing workplace hazards. Temperature changes, noise levels, illumination, and weather conditions are all environmental factors that can greatly alter your work area, and in turn, the associated hazards.
- Explain the first bullet
    - Even though there are specific processes in place for risk analysis, every employee must be able to evaluate the risks associated with any given hazard
    - It is difficult to be knowledgeable in all workplace hazards, so ask questions of your coworkers, supervisors, safety professionals, and other area experts
- Explain the second bullet (Fatal Risks are listed on slide 5)
- Explain the third bullet
    - Identify and inspect existing critical controls to see if they are in working order
    - If the effectiveness of any controls cannot be validated, take the necessary steps to control the risk before starting work

PPT slide 8, SG p. vii-viii



Instruction

- Fatal Risks are based on industry data, where specific risk exposure has resulted in catastrophic events such as severe injury or death.
    - While all risks have a degree of danger, Fatal Risks are those risks that, when left uncontrolled, will kill you.
    - After identifying a Fatal Risk, Critical Control(s) are implemented and verified with standard verification questions, to prevent death as a result of the exposure to the Fatal Risk.
    - **In the event of an absent or failure of a Critical Control, the job must be stopped as it significantly increases the risk of severe injury or death despite the existence of other controls.**
    - In short, Critical Controls help keep you from being killed.
- **Clarify that every Fatal Risk is not present at each site. However, during a workplace examination, the Critical Controls for relevant Fatal Risks should be assessed.**
- Remember, Fatal Risk Management assists in:
    - Identifying the risks that will kill you
    - Implementing the controls that will keep you safe
    - Verifying that Critical Controls are in place
    - Empowering you to stop the job if the Critical Controls are missing or not implemented correctly
- Some examples of Critical Controls for various Fatal Risks that may be assessed during a workplace examination:
    - Entanglement and Crushing – guards, barriers, barricades
    - Exposure to Hazardous Substances - Acute – mechanical integrity of storage and distribution
    - Lifting Operations – mechanical integrity of equipment
    - Drowning – barriers and segregation
    - Contact with Molten Material – access integrity
    - Underground Hazardous Atmosphere – refuge chambers

MODULE 1: WORKPLACE EXAMINATION COMPLIANCE

Policies, guidelines, and procedures are typically created as a result of an incident or near miss. Injury or loss of life is often the driving force behind the establishment of Health and Safety rules under which we work. Performing a job in a safe manner is not only a matter of compliance to regulations, but is your means of returning home safely.

Freeport-McMoRan requires a competent person to perform a workplace examination before work begins or as miners begin work in that area for any conditions that could negatively affect health and safety.

LEARNING OBJECTIVES

Upon completion of Module 1, the students will be able to:

- Explain the purpose of workplace examinations
- Describe the qualifications and training level necessary to conduct one

ACTIVITIES

- Activity 2: Stump Your Neighbor

Please refer to Activity Materials in *Facilitator Preparation* for further details.

TOTAL TEACHING TIME

Approximately 45 minutes

PPT slide 9

Instruction

- Upon completion of Module 1, the students will be able to:
    - Explain the purpose of workplace examinations
    - Describe the qualifications and training level necessary to conduct one

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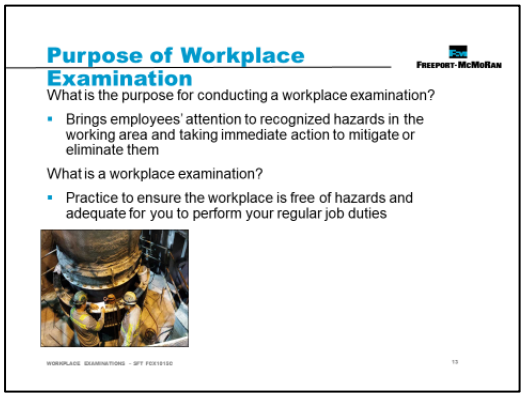
PPT slide 10, SG p. 5

Instruction

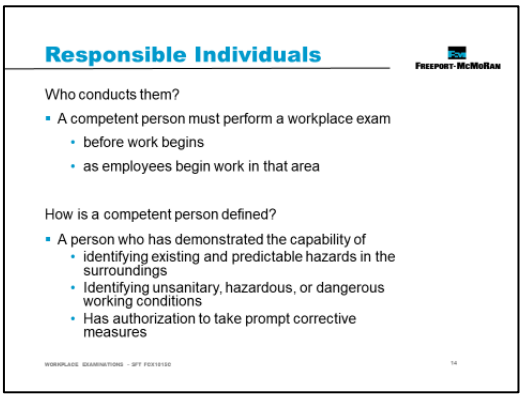
- Explain why workplace exams are conducted.
- Explain what a workplace exam is.
- Emphasize that doing workplace exams as a group or with coworkers strengthens the workplace exam.



PPT slide 11, SG p. 5

Instruction

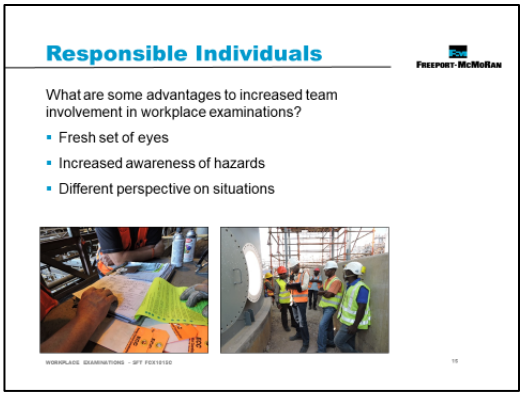
- Discuss the bullet points under each question.
- Freeport-McMoRan requires a competent person perform the exam
- Explain how someone is deemed competent
- A workplace examination cannot be performed by just anyone



PPT slide 12, SG p. 5

Instruction

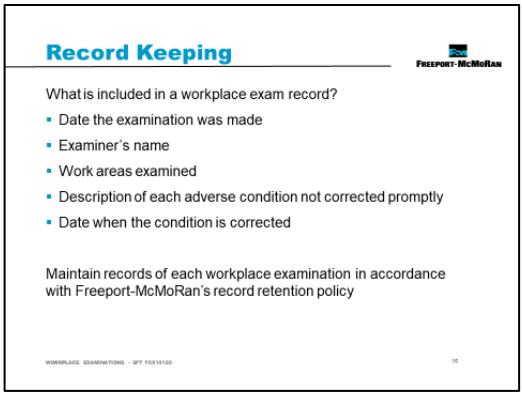
- Discuss the bullet points under each question.
- Varied backgrounds will bring a new perspective to a workplace examination
- Whether the additional person is a new hire, from a different culture, or even from a different industry, he or she can possibly note new hazards that were otherwise not noticed.



PPT slide 13, SG p. 6

Instruction

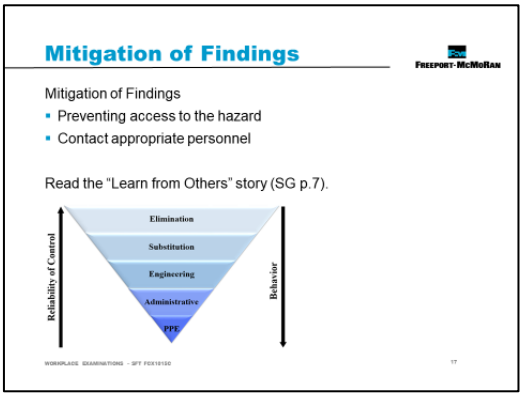
- Discuss each bullet point.
- It is important that students understand what is required within their workplace examination record.
- Records are retained in accordance with Freeport-McMoRan's record retention policy.



PPT slide 14, SG p. 6

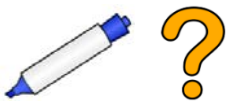
Instruction

- Discuss each bullet point.
- As the control becomes more reliant on behavior, it becomes less reliable at protecting the employee.
- Direct students to the "Learn from Others" story on p. 7 of the SG.

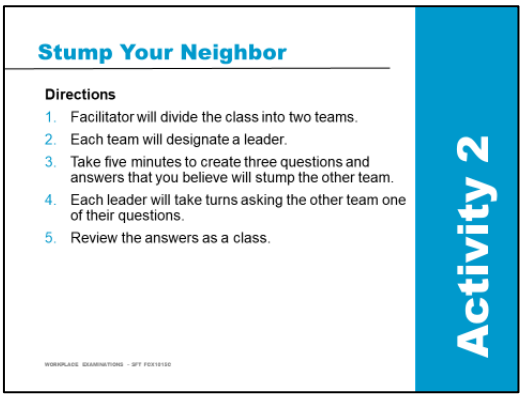


ACTIVITY 2: STUMP YOUR NEIGHBOR

PPT slide 15



Time: Approximately 20 minutes



Materials

- Flip chart
- Markers

Purpose

- This activity draws out the students' existing knowledge on workplace examination compliance.

Directions

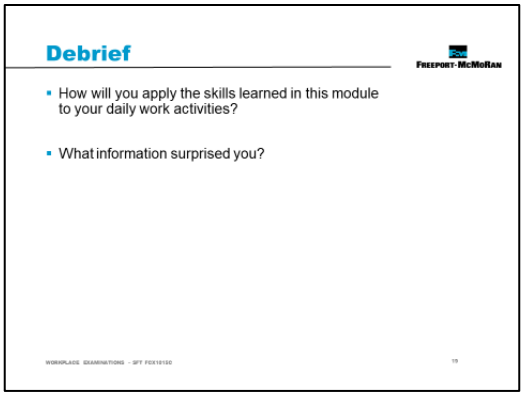
1. Divide the class into two teams.
2. Each team will create three questions and answers about this module that they believe will stump the other team. Designate one person as the leader. Allow 5 minutes to complete.
3. After 5 minutes, teams will take turns with the leader asking the other team one question and allowing them to answer it. Rotate between the two teams until all questions have been asked and answered.
4. The flip chart can be used to capture questions that generate a discussion.
5. Discuss the responses as a class.

Note: If there are not any questions generated regarding the qualifications of a competent person, be sure to include those questions on your own. It is important that this information is reiterated to the class.

PPT slide 16

Instruction

- Review the questions on the slide.
- This helps to review and refresh the information that was covered in this module.
- By asking the students to apply the information, they are further retaining the lesson.

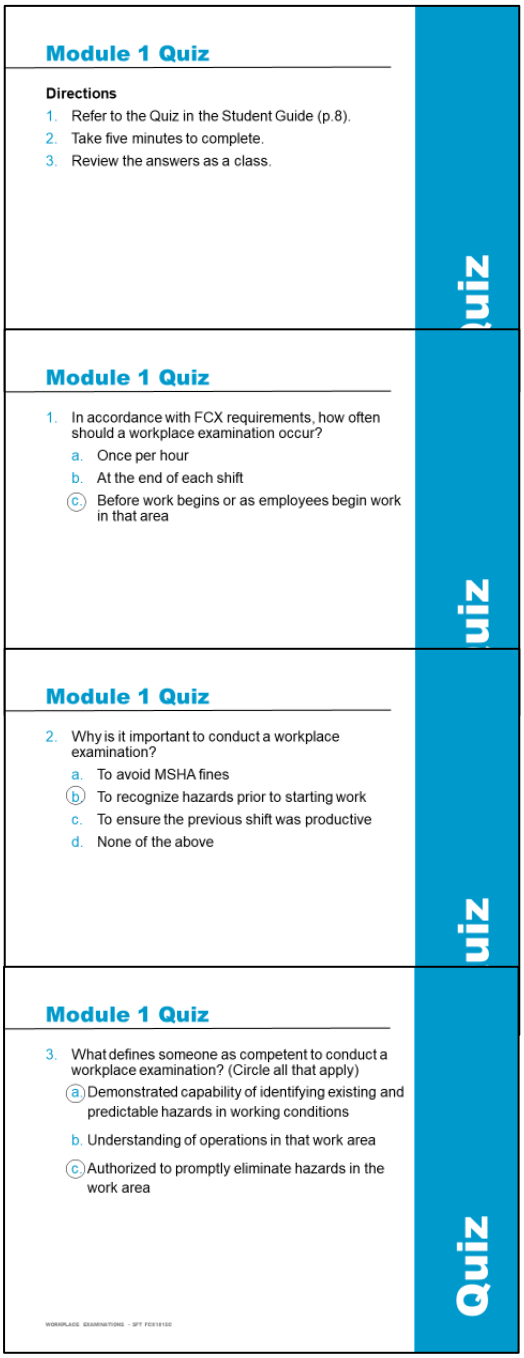


MODULE 1 QUIZ

PPT slides 17-20, SG p. 9

Instruction

1. Students will complete the answers to the quiz questions in the SG.
2. Review the answers as a class (See the following page for answers)



Quiz Answers

Question	Answer
1	c, SG p. 5
2	b, SG p. vii, 5
3	Answer a, c, SG p. 5

Break

- We recommend taking a 5 to 10 minute break after this module. Allow students to stand up, stretch, use the facilities, etc. Make sure you clearly communicate what time you expect them to return and start the next module.

MODULE 2: GENERAL HAZARD IDENTIFICATION

The keys to an effective workplace examination are strong hazard recognition skills along with personal accountability to the task. While the workplace examination is the first line of defense against hazards, it is only as effective as the person conducting it. Someone may be well versed in the hazards of a job, but if they do not take the time to perform a proper examination, then the workplace exam becomes ineffective.

The following guidelines are necessary for performing an effective workplace examination:

- Ensure the appropriate form is being used
  - Different tasks/departments at your site may require the use of a different form
- Include as many people from your team as possible
- Begin by defining the boundaries of your work area
- Talk through the tasks being performed in the defined work area
- Survey the work area from a distance
  - Large hazards can be identified, such as an open hole, a suspended load, or moving equipment
  - This may be easier from elevated vantage point
- Survey the work area from a closer standpoint
  - Look for housekeeping issues, tripping hazards, electrical issues, etc.
- Examine specific pieces of equipment relative to your job

This module will provide examples of common hazards that exist on Freeport-McMoRan's properties. Note this is not an all-encompassing list of hazards you can expect to find in your work area. Refer to your site-specific Health and Safety Specialist or Supervisor for further clarification.

LEARNING OBJECTIVES

Upon completion of Module Two, the student will be able to:

- Conduct a workplace examination by assessing a scenario for general hazards.

ACTIVITIES

- Activity 3: Hazards in the Workplace
- Activity 4: Teach Me

Please refer to Activity Materials in *Facilitator Preparation* for further details.

TOTAL TEACHING TIME

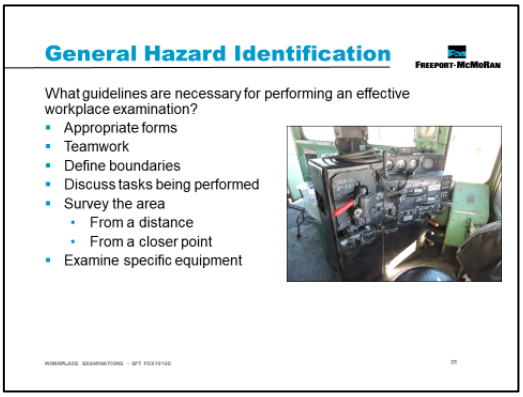
Approximately 60 minutes

PPT slide 21

Instruction

- Upon completion of Module Two, the student will be able to:
    - Conduct a workplace examination by assessing a scenario for general hazards.

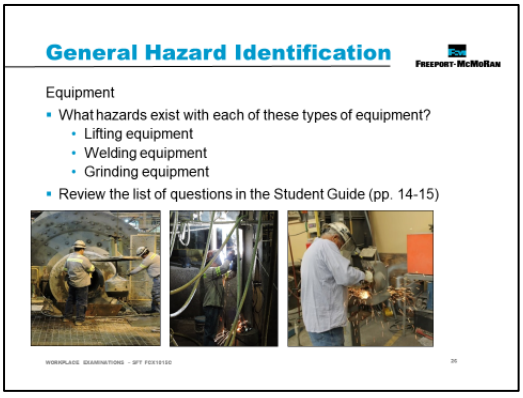
PPT slide 22, SG p. 13



Instruction

- Review the guidelines for performing an effective workplace examination.
- Ensure the appropriate forms are being used
- Include as many people from your team as possible
- Begin by defining the boundaries of your work area
- Talk through the tasks being performed in the defined work area
- Survey the area from a distance and a closer point
- Examine specific pieces of equipment pertinent to your job

PPT slide 23, SG pp. 14-15



Instruction

- Review the list of questions in the SG you should ask yourself when lifting, welding, and grinding equipment are in your work area

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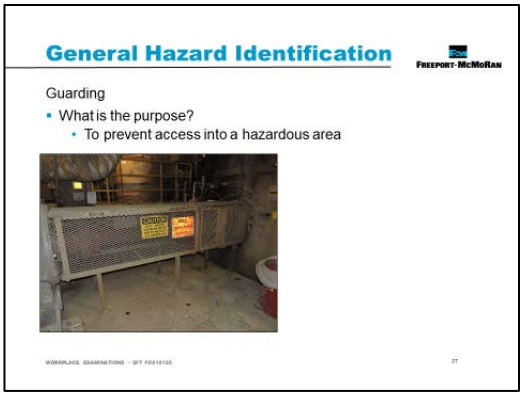
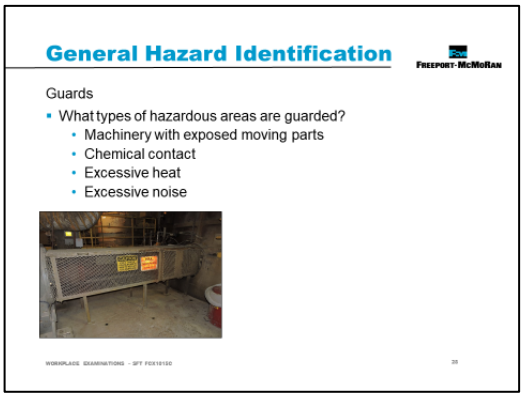
PPT slide 24, SG p. 15



Instruction

- Review the question and bullet on the slide.

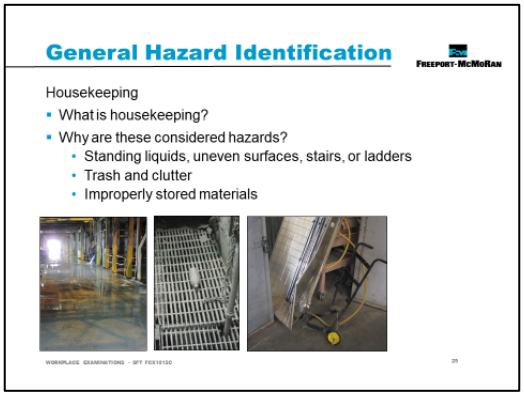
PPT slide 25, SG p. 15



Instruction

- Review the question and bullet on the slide.
  - Ask the students why they think guarding is necessary for each of the bulleted items.
- Emphasize that if guarding deficiencies are discovered through a workplace exam, stop working until the guarding is repaired or reinstalled.

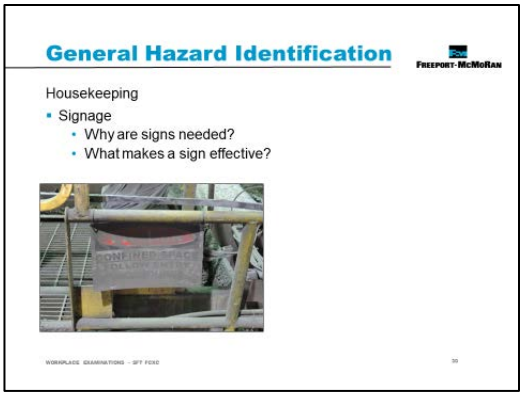
PPT slide 26, SG pp. 16-18



Instruction

- Standing liquids, uneven surfaces, hoses or electrical cords, or stairs and ladders can result in slipping and tripping hazards.
- Trash and clutter can impede escape routes and provide a fuel source, in the event of a fire.
- Improperly stored materials can obstruct travelways, exceed the weight limits or a shelving system, or have illegible/missing labels.

PPT slide 27, SG p. 18



Instruction

- Signs are needed to understand the hazards and adhere to proper precautions while working.
- An effective sign must be positioned in an obvious location, be clean and legible, posted in the common language for that property, and oriented properly

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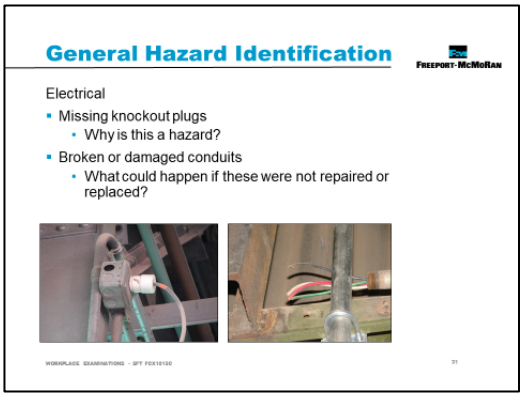
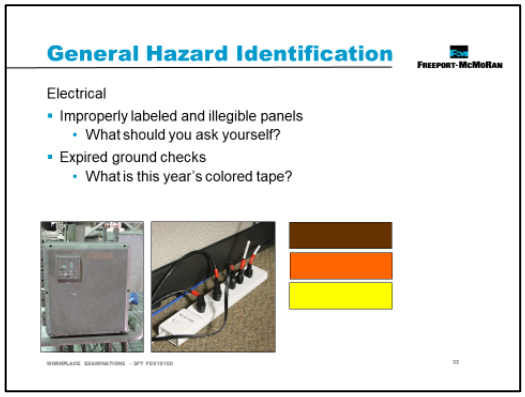
PPT slide 28, SG p. 19



Instruction

- Conduit is attached to electrical boxes at small pre-cut holes. When a knockout plug is missing, it leaves the electrical box exposed to external elements.
- Broken or damaged conduit can lead to exposed wiring, which is a shock/electrocution hazard.

PPT slide 29, SG pp. 20-21



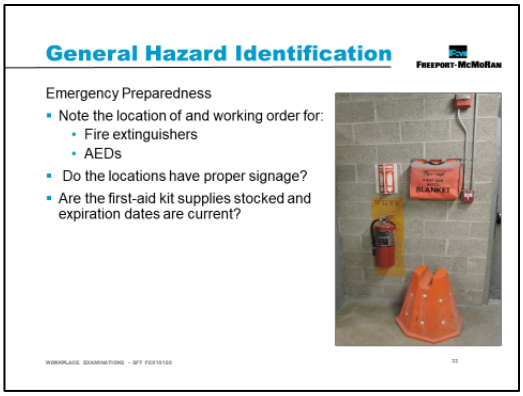
Instruction

- Review the list of questions you should ask yourself.
- Proper labeling of all electrical panels is critical to the safety of personnel.
- Ground checks test the continuity and resistance of the grounding system.

PPT slide 30, SG pp. 21-22

Instruction

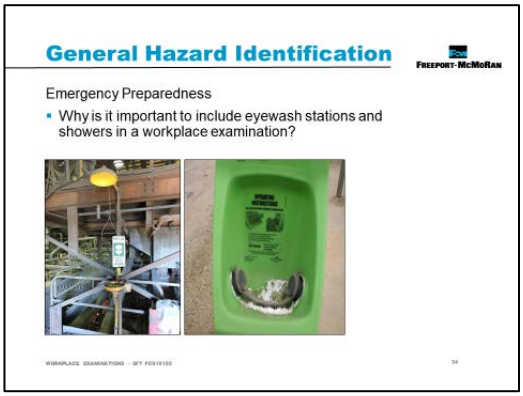
- Review the questions you should ask yourself when working with fire extinguishers.
- Locating fire extinguishers, first-aid kits, and AEDs can be extremely important during a health emergency.
- Explain how to ensure proper working order of an AED.
- This is an opportunity to demonstrate how to operate a fire extinguisher.



PPT slide 31, SG p. 23

Instruction

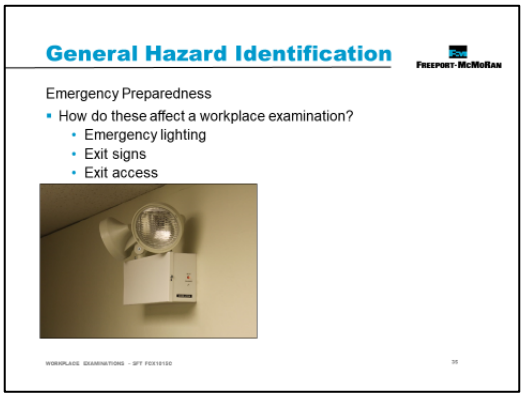
- Emergency eyewash stations and showers are often the difference between life-altering exposure events and a recoverable injury.
- Waiting for an event that requires the use of either an emergency eyewash station or shower, is not the time to learn where they are located or if they are operational.



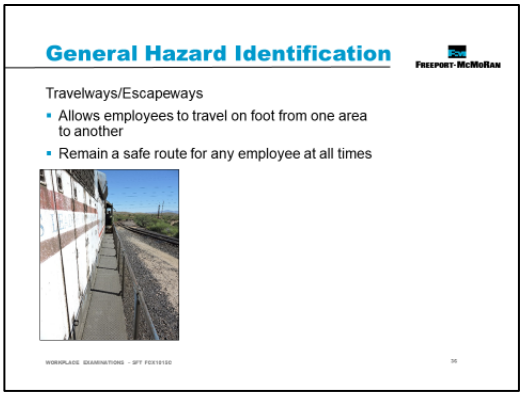
PPT slide 32, SG p. 23

Instruction

- A successful evacuation is partially dependent upon emergency lighting, exit signs, and clear access to all routes.
- Familiarize yourself with evacuation routes and location of exit signs.



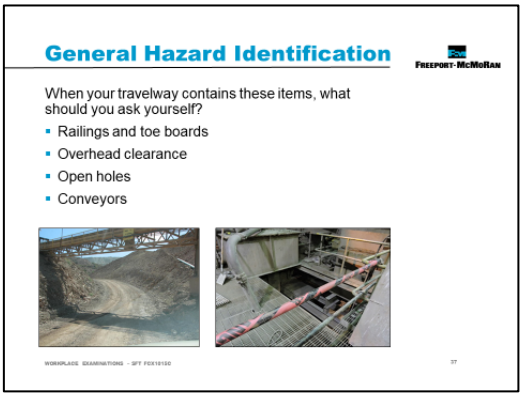
PPT slide 33, SG p. 24



Instruction

- Safe access along any path that is traveled for work, repair or maintenance should be kept free of debris or obstruction, be easily accessible, and well lit.

PPT slide 34, SG pp. 24-26



Instruction

- Review the questions you should ask yourself.
- Handrails, midrails, and toe boards are provided to protect employees from falling to a lower level, or protect those working or traveling beneath the elevated walkway.
- Be aware of any overhead hazards from infrastructure or equipment, as well as any associated warning devices
- The presence of an unguarded/non-barricaded open hole along any travelway or escape route is considered an imminent danger
- To be considered an open hole
    - A person can fall through the opening to a lower level
    - Horizontal opening must measure 12 inches (30 cm) or more in its least dimension
    - Vertical opening must be at least 30 inches (76 cm) tall and 18 inches (46cm) wide
- If a person cannot accidentally walk to the hole due to fixed machinery, equipment, or walls, a secure cover that supports at least twice the expected load and leaves no more than 1 inch (2.5cm) openings must be used and labeled “Hole” or “Cover”
- When examining travelway along conveyors, be sure to look for material build-up and any gaps that may exist in the guarding

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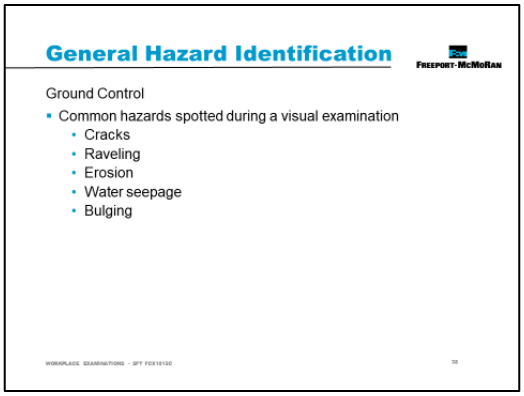
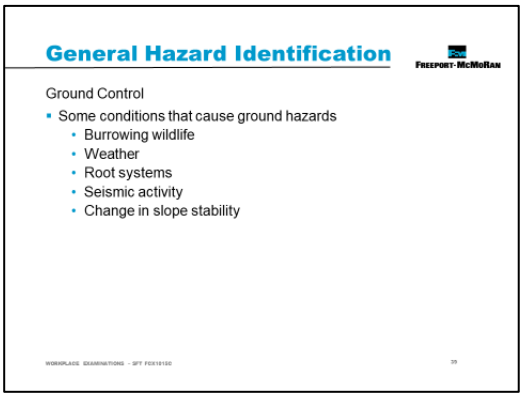
PPT slide 35, SG p. 27



Instruction

- Review the list of common hazards noted during a visual examination.
- Define each bullet listed.

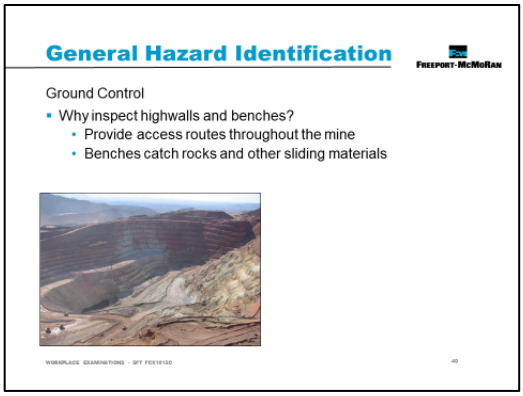
PPT slide 36, SG p. 27



Instruction

- Review the conditions that may lead to the common hazards listed in the previous slide.
- Burrowing wildlife
- Weather
  - Precipitation
  - Freeze/thaw cycles
  - High speed winds
- Root systems
- Seismic activity
  - Blasting
  - Vehicle movement
  - Earthquakes
- Change in slope stability
  - Large scale – from bench to bench
  - Small scale – stockpiles
- When an unsafe condition is noted, stop work immediately and contact your Health and Safety Professional or Supervisor.

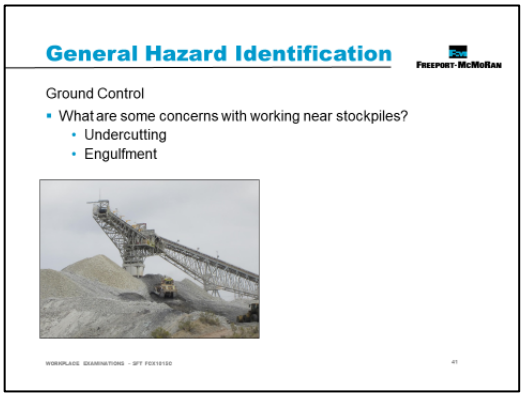
PPT slide 37, SG p. 28



Instruction

- Maintaining highwalls and benches is critical to the stability of the pit.
- When examining benches, begin by focusing on the level on which you are standing or driving. Benches need to be clean of debris, rocks, and boulders.
- When examining high walls, watch for rocks, boulders, or large masses of material that could loosen or dislodge from the face or crest. Scan the levels above and below you.

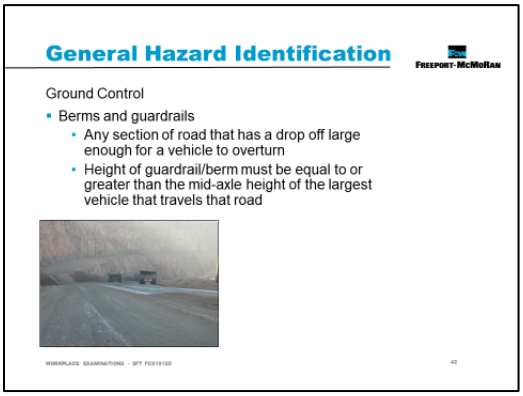
PPT slide 38, SG p. 28



Instruction

- Undercutting occurs when the ore is removed from the bottom of the pile, and will cause a change in the angle of repose. By changing the angle of repose (the natural angle at which the material settles when deposited), stockpiles are made substantially less stable.
- If ore is being actively deposited, be aware of any personnel or equipment near the bottom of the pile that could be engulfed or crushed if a shift in the stockpile was to occur.

PPT slide 39, SG p. 29

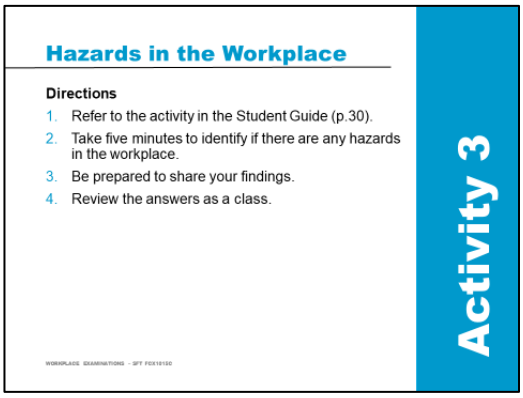


Instruction

- While gaps are permitted for drainage purposes, they should not be large enough that a vehicle can pass through them.
- If you see insufficient berms or guardrails while driving on any part of our properties, notify a supervisor immediately.

ACTIVITY 3: HAZARDS IN THE WORKPLACE

PPT slides 40-48, SG pp. 30-33



Time: Approximately 10 minutes

Materials

- Worksheet (located in the SG pp. 30-33)

Purpose

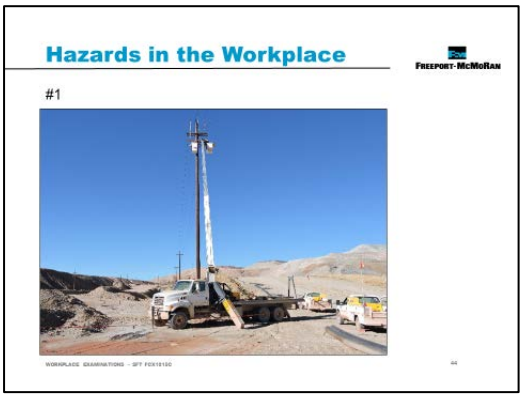
- This activity reinforces this module's lesson on workplace examinations.

Directions

1. Direct the class to the activity worksheet in the Student Guide (pp. 30-33).
2. Each student will identify if there are any hazards in the workplace photo. Allow five minutes to complete.
3. After five minutes, progress through the slides and review the answers as a class. Proposed answers are provided as a guideline.

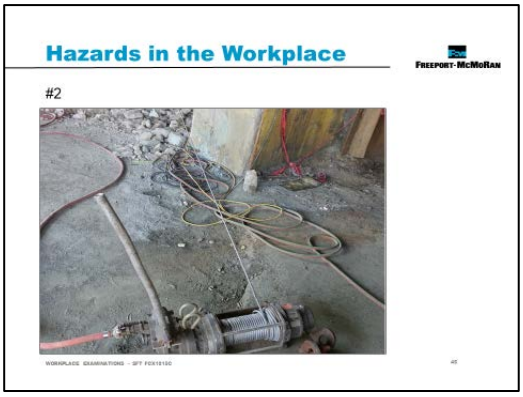
#1
Hazards:

- Working with energized power lines
- Fall out of bucket truck
- Uneven ground
- HDPE pipes on the ground (tripping hazard)
- Potential for tools to fall from bucket
- Pedestrians and light vehicle traffic



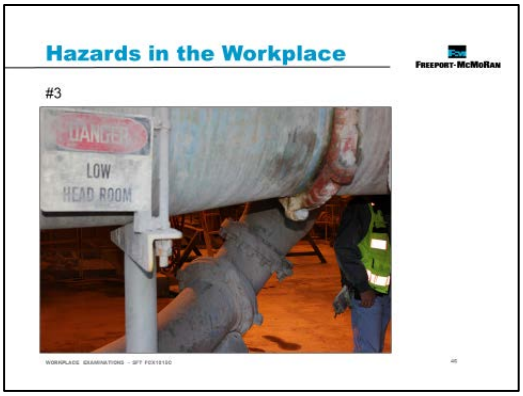
#2
Hazards:

- Tripping
- Uneven grounds, rock underfoot
- Red flagging fallen down and why is it there?
- Wench line under tension
- Air lines under pressure
- Broken handle, potential for cuts
- Missing guarding on wench



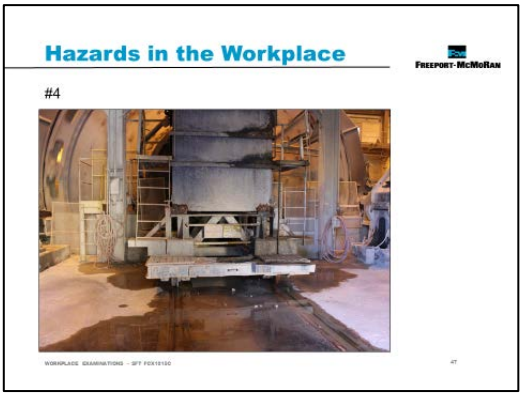
#3
Hazards:

- Trip hazards
- Low overhang or head clearance
- Poor lighting



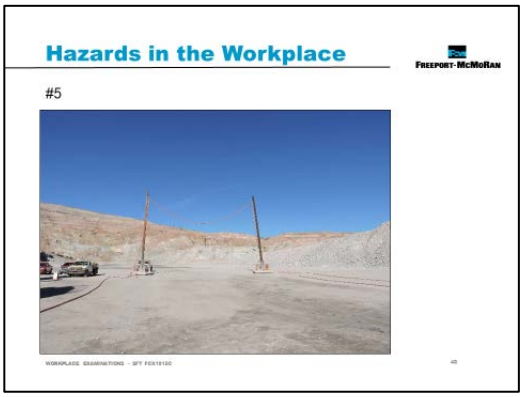
#4
Hazards:

- Slipping hazards
- Overhead clearance
- Uneven surfaces
- Missing mid-rail
- Elevated platform
- No catch chain visible



#5
Hazards:

- Electrical lines on the ground
- Sagging electrical lines (overhead clearance)
- Loose material
- Light trucks and heavy equipment in the same area
- Pedestrian traffic

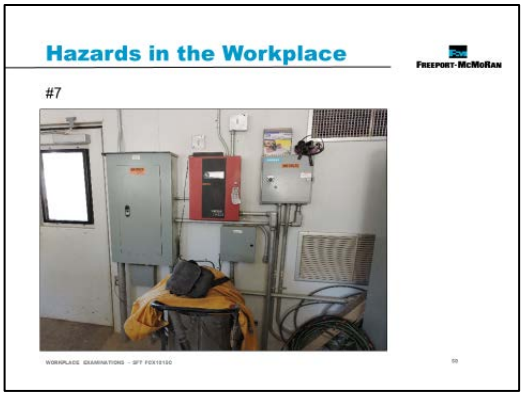


#6
Hazards:

- Suspended load
- Propane gas is highly flammable and displaces oxygen
- Forklift and pedestrian traffic
- Sharp edges and corners on cathodes

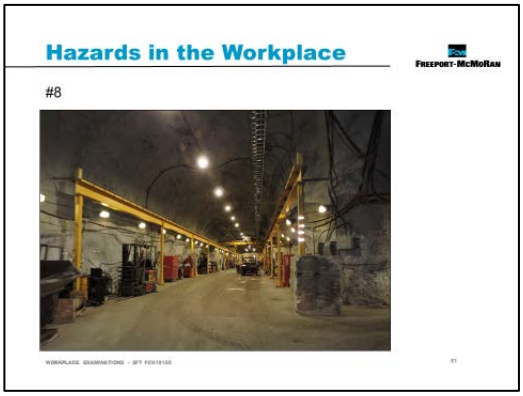
#7
Hazards:

- Housekeeping issues
- Shop vac stored less than 3 feet from electrical box



#8
Hazards:

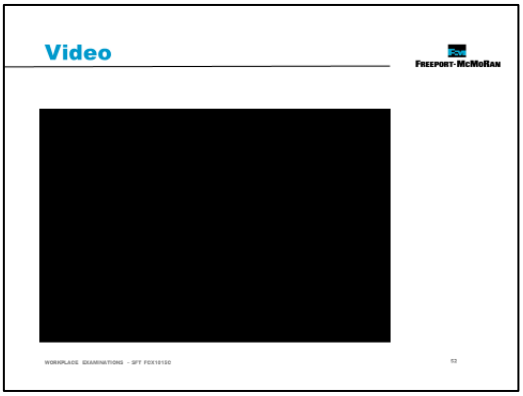
- Overhead crane
- Vehicle and pedestrian traffic
- Blind turn
- Noise exposure



PPT slide 49

Instruction

- Play the 5 minute video. This is a brief overview of this module and visually shows examples of areas across the mine that could be examined.



- https://web.microsoftstream.com/video/ad611d5d-2234-4413-8a6e-8a44e2a3830f

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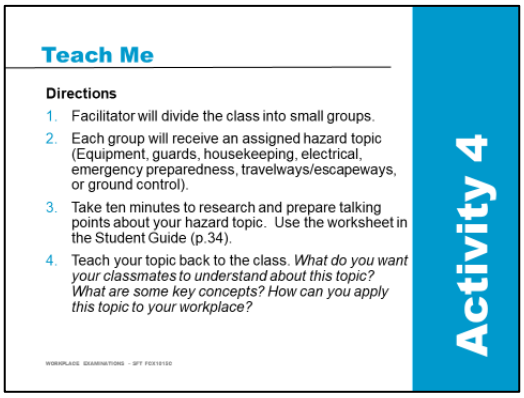
ACTIVITY 4: TEACH ME

PPT slide 50, SG p. 34



Time: Approximately 20 minutes

Materials

- Worksheet (located in the SG p. 34)

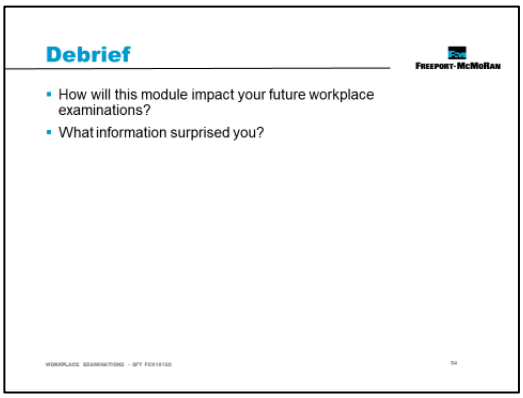
Purpose

- This activity reinforces this module's lesson on the different kinds of hazards present on our properties.

Directions

1. Divide the class into small groups.
2. Assign each group a hazard topic (Equipment, guards, housekeeping, electrical, emergency preparedness, travelways/escapeways, or ground control).
3. Direct each small group to the worksheet in the Student Guide. Allow ten minutes for each group to research and prepare talking points about their assigned topic.
4. They will teach back their topic to the class. Their presentation should cover the following questions: ***What do you want your classmates to understand about this topic? What are some key concepts? How can you apply this topic to your workplace?***

PPT slide 51



Instruction

- Review the questions on the slide.
- This helps to review and refresh the information that was covered in this module.
- By asking the students to apply the infor mation, they are further retaining the lesson.

MODULE 2 QUIZ

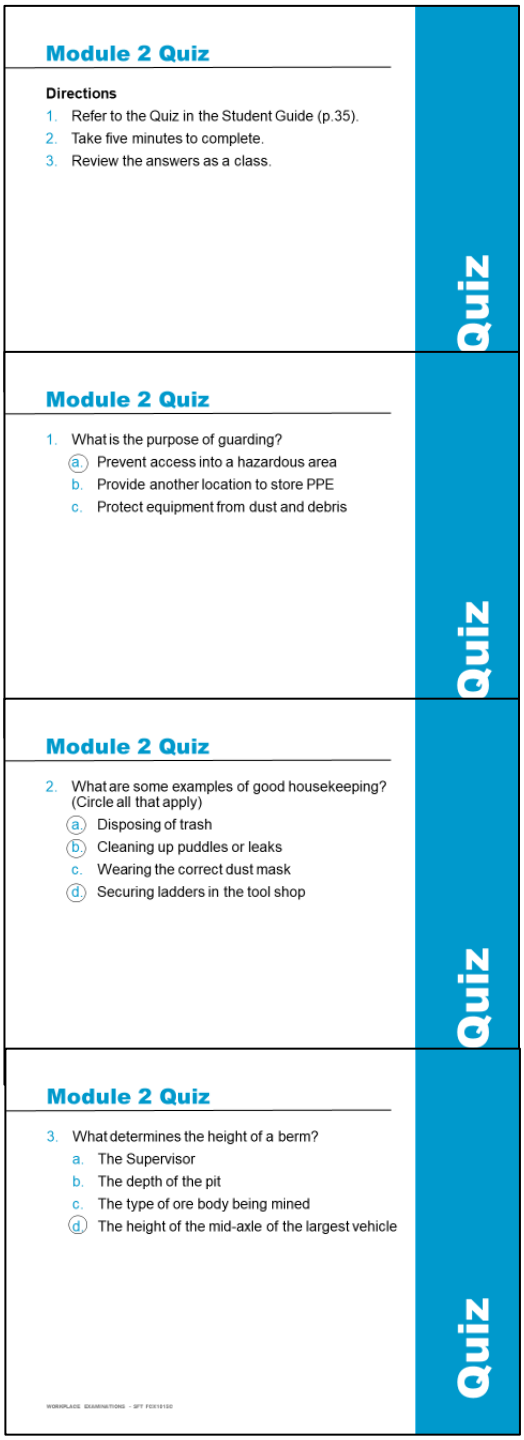
PPT slides 52-55, SG p. 35

Instruction

1. Students will complete the answers to the quiz questions in the SG.
2. Review the answers as a class (See the following page for answers)

Quiz Answers

Question	Answer
1	a, SG p. 15
2	a, b, d, SG pp. 16-18
3	d, SG p. 29



Break

- We recommend taking a 5 to 10 minute break after this module. Allow students to stand up, stretch, use the facilities, etc. Make sure you clearly communicate what time you expect them to return and start the next module.

CONCLUSION

The importance of a good workplace examination cannot be understated. This is the first step, taken every shift, which leads to a safe return home. Every one of us has worked a job where complacency to hazardous conditions is witnessed. For some of us, this behavior has resulted in an incident where an injury occurred. For others, perhaps luck was on their side. The mining industry, and the work we perform every day, does not lend itself to the lucky ones of the group. Safety on a mine site is an actively achieved task, and it starts with the workplace examination.

As your career in mining progresses, do not forget that examining a working area is a fluid process. Good hazard recognition skills in conjunction with a strong understanding of how to implement critical controls are the backbone of a workplace examination. Knowledge of the processes performed in the area plays a significant role as well. Unfortunately, none of this means much if even the most experienced employee does not take the examination seriously.

PURPOSE

During the conclusion, the students will be able to:

- Demonstrate their knowledge through a performance and knowledge based assessment

ACTIVITIES

- Knowledge Assessment (one copy per student)
- Performance Assessment (make appropriate number of copies)
- Student Course Evaluation (located in SG)

TOTAL TEACHING TIME

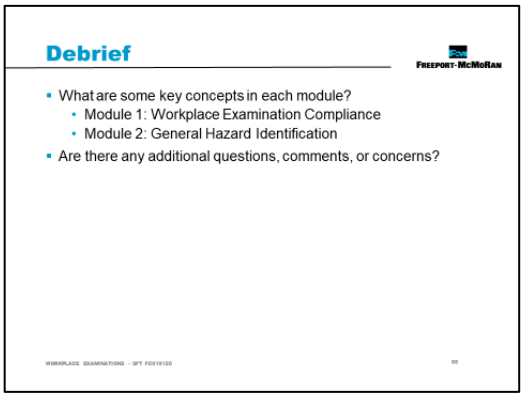
Approximately 75 minutes

PPT slide 56

Instruction

- Complete a final review session

PPT slide 57



Instruction

- As the objectives for each module are reviewed, ask if there are any lingering questions, comments, or concerns.
- Module 1
  - Explain the purpose of workplace examinations
  - Describe the qualifications and training level necessary to conduct one
- Module 2
  - Conduct a workplace examination by assessing a scenario for general hazards

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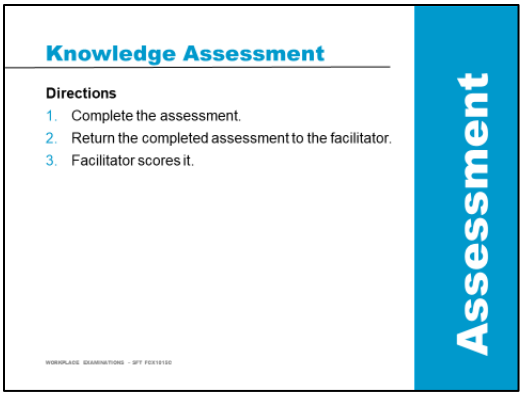
PPT slide 58

Instruction

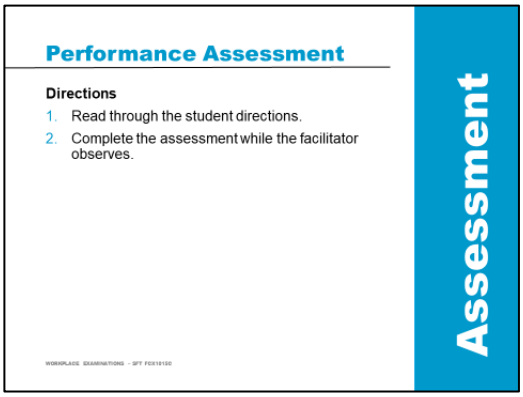
- Have students complete the knowledge assessment.



PPT slide 59

Instruction

- Have students complete the performance assessment in small groups (see the assessment for further details)

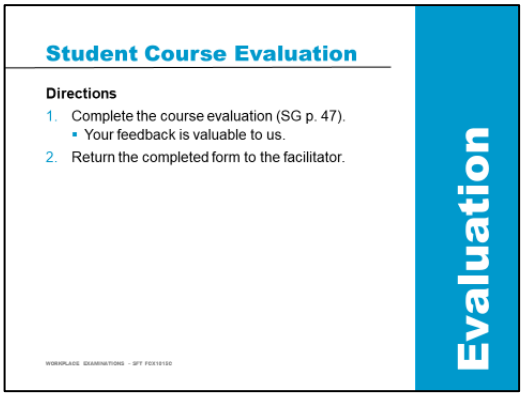


Note: For a portion of the performance assessment, you will need to have a workplace scenario set up, create posters of different workplaces, or be prepared to take the class to an actual workplace.

PPT slide 60, SG p. 47

Instruction

- Have students complete the Student End of Course Questionnaire (located in the SG)



FACILITATOR COURSE EVALUATION

Course Name	
Facilitator Name	

1. What worked well in the course? Please explain.
2. Were the topics effectively sequenced? If not, please provide suggestions for change.
3. Was the content up-to-date with current processes, equipment, etc.? If not, please provide specific examples.
4. Was the content at the appropriate level of difficulty? If not, please provide examples.
5. What in the course needs improvement? Please provide specific examples.
6. Were the course materials (PPT, FG, etc.) of high quality? If not, please provide examples.
7. Were there any inaccuracies or missing content? If so, please provide examples.
8. Do any of the issues you've identified need to be addressed immediately? If so, please list which ones.

Thank you for taking the time to complete the survey.

Please mail to: Mine Training Institute, Attention: Suzanne Anderson, 18550 S. La Canada Drive, Sahuarita, AZ 85629
Or scan and email to: sanderso2@fmi.com