2011 OSHA Susan Harwood Capacity Building Grant
(SH22297-SH1)

Electrical Safety Lesson Plan

Course Time: 120 Minutes

Course Description:
This course is taught in accordance with Controlling Electrical Hazards, OSHA Publication 3075, (2002). Electricity is accepted as a source of power without much thought to the hazards encountered. Some employees work with electricity directly. OSHA's electrical standards address this serious workplace hazard which exposes employees to such dangers as electric shock, electrocution, fires and explosions. Upon successful completion of this course the participant will receive a course certificate. **Course Requirements**: Full attendance

Step 1: Planning the Lesson

Instructional Materials:

- Power point presentation
- Student Hand outs
  - Handout #1: Power Point Presentation
  - Handout #2: Controlling Electrical Hazards, OSHA Publication 3075, (2002).
- Instructional Notes
- Audio-visual equipment
- Arc Flash Video
- Lock out Tag Out Video
- Certificate of Completion

Learning Objectives:

- Interpret OSHA's role and standards regarding electrical safety / hazards
- Define the basic fundamentals of electricity
- Identify and recognize safety hazards
- Describe protection methods against electrical hazards
- Analyze and discuss case studies

Step 2: Presenting the Lesson

Introduction: (10 minutes)

- Introduce yourself
  - Include name
  - Title & Experience / Credentials
  - Explain facility emergency action plan procedures
  - Discuss classroom rules
  - Start the lesson with an "ice breaker" such as an applicable story to capture the participant's attention, etc.

Class Power Point Presentation: (45 Minutes)

- Discuss OSHA and how the agency is there to help the employer and workers.
- OSHA Standards
- Discuss electricity basics
- Hazards
- ARC Flash Video
- Protection against hazards
- Unexpected equipment start-up
  - Lock out Tag out (LOTO): Lightning in a Bottle Video
  - Show & tell of the "LOTO kit"

Classroom Participant Discussion Activity: (40 Minutes)

- Analyze case study on local fatality incident
- Show OSHA E-Tool

Course Review: (15 Minutes)

- Electricity will try to reach ground even if it means going through a person
- Even the "small" voltage from your home can cause serious injury
- Always inspect power tools and cords and do not use them if damaged
- Do not attempt to repair electrical equipment unless trained and qualified

Participant Critiques & Evaluation: (10 Minutes)

- Students will complete a course critique
- Evaluation: Monitor participant non-verbal and verbal reactions

References

OSHA Publication 3075: Controlling Electrical Hazards
29 CFR1926.417, Lockout and Tagging of Circuits
OSHA E-Tool:

- *http://www.osha.gov/SLTC/etools/construction/electrical_incidents/powerlines.html*

- LOTO Plus Expert Advisor
- ➢ http://www.osha-slc.gov/dts/osta/oshasoft/lotoplus.html
- Self-Inspection Checklists
- ➢ http://www.osha-slc.gov/SLTC/smallbusiness/chklist.html#Electrical
- • Self-Inspection Checklists – Lockout/Tagout Procedures
- ➢ http://www.osha-slc.gov/SLTC/smallbusiness/chklist.html#Lockout

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