TRAINING OVERVIEW

GENERAL SAFETY

WHY WORRY ABOUT ELECTRICITY?

MAIN CAUSES OF ELECTRICAL ACCIDENTS

ELECTRICAL EMERGENCIES - WHAT TO DO
LONG RECOGNIZED AS A SERIOUS WORKPLACE HAZARD

EXPOSES EMPLOYEES TO:

- ELECTRICAL SHOCK
- ELECTROCUTION
- FIRES
- EXPLOSIONS

ELECTROCUTIONS RANK FOURTH (9%) IN CAUSES OF INDUSTRIAL FATALITIES
LEADING CAUSES OF ELECTRICAL ACCIDENTS

- UNSAFE WORK PRACTICES
- UNSAFE EQUIPMENT
- HAZARDOUS ENVIRONMENTS
UNSAFE WORK PRACTICES
FAILURE TO DE-ENERGIZE

LOCKOUT & TAG OUT
HAZARDS DURING
MAINTENANCE, REPAIR OR INSPECTIONS
USE OF DEFECTIVE OR UNSAFE TOOLS

IMPROPER TOOL FOR THE JOB
A missing third prong from an electrical plug resulted in the electrocution death of a worker. He was climbing a ladder to hand a power drill to another worker when he received a fatal shock.

Investigators found the extension cord was missing its grounding prong. The grounding wire and the frame of the drill were being electrified off and on by the energizing wire. The drill was not double insulated.
OVERLOADING OUTLETS WITH TOO MANY APPLIANCES
NOT VERIFYING POWER IS OFF WHEN MAKING REPAIR

DRILLING INTO A 110 VOLT A.C. LINE CAN KILL!
WORKING IN AN ELEVATED POSITION NEAR OVERHEAD LINES
FAILURE TO READ AND FOLLOW ALL SAFETY SIGNS, SYMBOLS, AND BARRIERS
FAILURE TO USE GOOD HOUSEKEEPING WITH RESPECT TO TOOLS AND WORK AREAS
USING ATTACHED ELECTRICAL CORD TO RAISE OR LOWER EQUIPMENT

THIS IS NOT A SUPPORT CABLE
UNSAFE EQUIPMENT
INSPECT ALL ELECTRICAL TOOLS

INSPECT PORTABLE EXTENSION CORDS

INSPECT ALL EQUIPMENT, CORDS, SWITCHES, AND COMPONENTS PRIOR TO EACH USE

LOOK FOR FAULTY ELECTRIC CORDING, WIRING OR CONDUIT

LOOK FOR IMPROPER GROUNDING (REMOVAL OF 3RD PRONG)

LOOK FOR OTHER DEFECTIVE PARTS
BE EXTREMELY CAREFUL AROUND UNFAMILIAR EQUIPMENT AND AREAS

DO NOT OVERLOAD OUTLETS
GROUNDING

THE FOLLOWING MUST BE GROUNDED:

- Lab equipment
- Refrigerators
- Washing machines
- Sump pumps
- Hand-held appliances
- Power tools
- Any equipment used in damp or wet locations
- Portable hand-held lamps
ALL PULL BOXES, JUNCTION BOXES, AND FITTINGS MUST BE PROVIDED WITH COVERS

IN COMPLETED INSTALLATIONS, EACH OUTLET BOX MUST HAVE A COVER, FACEPLATE, OR Fixture CANOPY
Unsafe Environments
FLAMMABLE FUMES, COMBUSTIBLE DUST, OR EXCESS OXYGEN CAN BE IGNITED BY A SPARK. USE VENTILATION TO MINIMIZE HAZARD.

POOR HOUSEKEEPING CAN CREATE UNSAFE ENVIRONMENTS

- BLOCKED ELECTRICAL BOXES
- FLAMMABLE MATERIALS STORED IN EQUIPMENT ROOMS
- LACK OF PROPER HAZARD SIGNS
- EXCESS CLUTTER
WET WORKING CONDITIONS CAN CREATE AN UNSAFE ENVIRONMENT

CHECK YOUR SURROUNDINGS

NEVER WORK WITH ELECTRICITY IF YOU OR THE WORK AREA HAVE BEEN EXPOSED TO WET WEATHER
PAY ATTENTION!

MAKE SURE ENERGIZED ELECTRICAL PARTS CANNOT COME IN CONTACT WITH YOU OR ANYTHING THAT MAY COME IN CONTACT WITH YOU

MAKE SURE THERE ARE NO TRIP HAZARDS
REPORT SAFETY PROBLEMS IMMEDIATELY TO YOUR SUPERVISOR

OR TO
EH&S (575-5448)
ELECTRICITY
THE INVISIBLE KILLER

WHAT TO DO IN AN EMERGENCY
Electricity’s Effects

1000: Will light 100-watt bulb
900: Severe burns
300: Breathing stops
200: Heart stops beating
100: Suffocation possible
90: Muscle contraction
60: Cannot let go
30: GFCI will trip
10: Mild shock
9: Threshold of sensation
5: Mild shock
2: Cannot let go
1: GFCI will trip

Milliamperes
PROTECT YOURSELF!

- DO NOT TOUCH THE PERSON - THEY MAY BE ENERGIZED
- DO NOT USE A CONDUCTIVE TOOL TO FREE THE PERSON

NEVER USE YOUR BARE HANDS TO FREE A VICTIM FROZEN BY ELECTRIC SHOCK!
CALL 911

SHOCK VICTIMS MAY SUFFER:

- BURNS OR OTHER OBVIOUS INJURIES
- LOSS OF CONSCIOUSNESS OR ALTERED MENTAL STATUS
- DISTURBANCES IN HEART RHYTHM THAT MAY NOT BE APPARENT OR MAY BE DELAYED
WHAT TO DO UNTIL HELP ARRIVES

• CHECK FOR PULSE - IF A PERSON’S HEART HAS STOPPED, START CPR IF YOU ARE TRAINED

• BREATHING - IF THE PERSON ISN’T BREATHING, BEGIN MOUTH TO MOUTH RESUSCITATION IF YOU ARE TRAINED

• TREAT FOR SHOCK - KEEP PERSON LYING DOWN IF UNCONSCIOUS, TURN ON SIDE SO FLUIDS CAN DRAIN

• DO NOT MOVE THE PERSON IF NECK AND SPINE INJURIES ARE POSSIBLE

• STAY WITH THE PATIENT UNTIL HELP ARRIVES

• INFORM MEDICAL PERSONNEL OF PATIENT CONDITION

Pulitzer Prize photograph, "Kiss of Life"
Lineman Randall Champion receives mouth-to-mouth resuscitation from apprentice lineman J.D. Thompson after receiving an electrical shock that stopped his heart. He later died in 2002 at 64 years old of congestive heart failure. The photo was taken in 1967
QUESTIONS ?
THE END