



TRAINING OUTLINE

COURSE TITLE: _____ **DATE:** _____ **INSTRUCTOR:** _____

LOCATION: _____ **TIME:** _____ **COMPANY:** _____

Safety training was conducted on the above date by the instructor indicated. The following line items identify the topics covered during the training session.

SUMMARY OF TRAINING

1) Introduction

- a) Standards
- b) Why Training
- c) Definitions

2) Controls

- a) Hierarchy of Controls
- b) Elimination & Substitution
- c) Administrative Controls
- d) Training
- e) Engineering Controls
- f) PPE
- g) Lockout/Tagout
- h) Employee Training
- i) Authorized Employees
- j) Affected Employees
- k) Other Employees
- l) Other Training Program Criteria
- m) Periodic Inspections
- n) Energy Control Procedures
- o) Contractors
- p) LOTO Device Requirements
- q) General Purpose
- r) Durable
- s) Substantial
- t) Identifiable
- u) Standardized
- v) LOTO Process
- w) Shutdown Planning
- x) Employee Notification
- y) Equipment Shutdown



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- z) Device Application
- aa) Verification of Isolation
- bb) Machine Restart
- cc) Shift Changes
- dd) Reporting Changes
- ee) Guarding Live Parts
- ff) Types of Grounds
- gg) Fixed Guards
- hh) Shields or Enclosures
- ii) Insulating Covering
- jj) Mats
- kk) Guarding Principles
- ll) Guard Zones & Clearances
- mm) Guarding Locations
- nn) Live Parts Below Supporting Surfaces
- oo) Removing & Replacing Guards
- pp) Grounding
- qq) Fault Currents & Shock Factors
- rr) Fault Currents
- ss) Fault Current Contact
- tt) Contributing Shock Factors
- uu) Protective Grounding Equipment
- vv) Grounding Cables
- ww) Clamps
- xx) Ground Electrodes
- yy) Ground Rods
- zz) Grounding Grid
- aaa) Vertical Ground Wires
- bbb) Communication Sheaths & Shields
- ccc) Guy Wires
- ddd) Grounding Tools
- eee) Cluster Bars
- fff) Live-Line Tools
- ggg) Safe Grounding Practices
- hhh) Pre-Grounding Measures
- iii) Identifying Objects to be grounded
- jjj) Selecting Grounding Equipment
- kkk) Deenergizing & LOTO



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III) Testing for Energization
mmm) Ground Installation
nnn) Installing an Electrode
ooo) Applying a Cluster Bar
ppp) Cleaning the Conductor
qqq) Applying Grounding Cables
rrr) If Using a Cluster Bar
sss) Grounding Work Vehicles
ttt) Establishing Barricades
uuu) Grounding Removal
vvv) Temporary Ground Removal
www) Case Study
xxx) PPE
yyy) Arc Rated Clothing
zzz) PPE Categories
aaaa) Head & Neck Protection
bbbb) Eye & Hearing Protection
cccc) Hand & Arm Protection
dddd) Sleeves
eeee) Body & Foot Protection
ffff) Fall Protection
gggg) Fall Protection Program & Plan
hhhh) Equipment & Inspection
iiii) Fall Protection Categories
jjjj) Positioning System
kkkk) Testing
IIII) Personal Fall Protection Systems
mmmm) Body Wear
nnnn) Full Body Harness
oooo) Body Belts
pppp) Body Belt Inspection
qqqq) Anchorages
rrrr) Inspecting Anchorages
ssss) Prohibited Anchorages
tttt) Connective Devices
uuuu) Snap Hooks
vvvv) Lanyards
wwww) Non-Shock-Absorbing Lanyards



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- xxxx) Inspecting Lanyards
- yyyy) Self-Retracting Lifelines
- zzzz) Inspecting SRLs
- aaaaa) Donning & Doffing
- bbbbb) Donning: Body Wear
- ccccc) Donning: Body Belt
- ddddd) Using Connective Devices
- eeee) PFPS Storage

3) Equipment

- a) Heavy Equipment
- b) Pre-Shift Inspection
- c) Key Off (exterior)
- d) Key On (interior)
- e) Modifications
- f) MADs
- g) Communication
- h) Hand Signals
- i) Stability
- j) Dynamic Conditions
- k) Ground Conditions
- l) Outriggers & Stabilizers
- m) Aerial Lifts (MEWPs)
- n) Grounding
- o) Boom Current Test
- p) Bushings or Insulator Strings
- q) Handlines
- r) Passing Objects to Workers
- s) Digger Derricks
- t) Wire Rope & Rigging
- u) Case Study
- v) Insulated Tools & Equipment
- w) Insulated Tools
- x) Testing Tools
- y) Cleaning & Storage
- z) Insulating Protective Equipment
- aa) Inspection
- bb) Mats
- cc) Line Hose



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- dd) Blankets
- ee) Bucket
- ff) Care & Maintenance
- gg) Re-Testing
- hh) Portable Generators
- ii) Inspection
- jj) Shock & Electrocution
- kk) Grounding Generators
- ll) Carbon Monoxide
- mm) Fueling
- nn) Noise & Vibrations
- oo) Distribution Box
- pp) Hand & Power Tools
- qq) Grounding
- rr) Testing
- ss) On/Off Switches
- tt) Lock On Control
- uu) Constant Pressure Switch
- vv) Cords
- ww) Batteries
- xx) Water & Moisture
- yy) Hydraulic & Pneumatic Tools
- zz) Hydraulic Tools
- aaa) Pneumatic Tools
- bbb) Connections
- ccc) Hydraulic Hoses
- ddd) Pneumatic Hoses
- eee) Cleaning
- fff) Other Considerations
- ggg) Walking Surfaces
- hhh) Passageways
- iii) Stairs
- jjj) Ladders
- kkk) Inspection
- lll) Ladder Cages & Wells

4) Field Work I: Overhead

- a) Overhead Lines
- b) Wood Poles



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- c) Pole Inspection
- d) Shell Rot & Decay
- e) Depth of Setting & Soil Conditions
- f) Cracks
- g) Holes & Knots
- h) Burn Marks
- i) Testing Wood Poles
- j) Hammer Test
- k) Climbing Equipment
- l) Body Belt
- m) Safety Strap
- n) Gaffs & Climbers
- o) Cutout Test
- p) Climbing Techniques
- q) Two Point Technique
- r) Three Point Technique
- s) Setting & Moving Poles
- t) Heavy Equipment
- u) Working Beneath Towers & Structures
- v) Working Near Live Lines
- w) Placing Wet Poles
- x) Holes
- y) Tag Lines
- z) Adverse Weather
- aa) Loading Poles
- bb) Hauling Poles
- cc) Unloading Poles
- dd) Installing & Removing Lines
- ee) Working Safe
- ff) Bracing
- gg) Guys
- hh) Insulators
- ii) Load Rating
- jj) Inspecting Lines
- kk) Testing Lines
- ll) Pulling Lines
- mm) Conductor Grips
- nn) Induced Voltage



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- oo) Tension Stringing Method
- pp) Pullers & Tensioners
- qq) Reels
- rr) Grounding
- ss) Clearance
- tt) Suspension Strand
- uu) Disabling the Automatic Reclosing Feature
- vv) Tension & Sag
- ww) Catenary & Parabolic Sag Equations
- xx) Clipping-In or Tying Wires
- yy) Secondary Lines
- zz) Removing Lines
- aaa) Live-Line Work
- bbb) Existing Conditions
- ccc) Insulated Tools & Equipment
- ddd) Bucket Liners
- eee) Bonding Workers
- fff) Approach Distances
- ggg) Cable Fault Locating & Testing
- hhh) Working Position on Poles
- iii) Adverse Weather
- jjj) Tree Trimming
- kkk) Deenergize Lines
- III) Inspection
- mmm) Minimum Working Distances
- nnn) Safe Operations
- ooo) Storm Work
- ppp) Saws
- qqq) Chainsaws
- rrr) Kickback
- sss) Pole Saws
- ttt) Work Safe
- uuu) Tree Climbing
- vvv) Other Considerations
- www) Lead Work
- xxx) Towers
- yyy) Portable Power Equipment
- zzz) Vehicle Mounted Generators



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aaaa) Portable Lights & Equipment

bbbb) Tent Heaters

cccc) Case Study

5) Field Work II: Underground

a) Confined Spaces

b) Permit Requirements

c) Equipment

d) Ventilation

e) Respirators

f) Inspection

g) Training

h) Safe Operations

i) Public Work Areas

j) Cones

k) Entrant

l) Attendant

m) Entry Supervisor

n) Others

o) Employer

p) Safe Ingress & Egress

q) Signage & Barricades

r) Permit Program

s) Hot Work

t) Ladders

u) Lighting

v) Fire Extinguisher

w) Testing

x) Oxygen

y) Displacement & Reaction

z) Toxicity

aa) Sample Draw

bb) Diffusion

cc) Measuring & Other Limits

dd) When & How to Test

ee) Other

ff) Case Study

gg) Excavation & Trenches

hh) Soil Classification



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- ii) Soil Testing
- jj) Test Methods
- kk) Trench Precautions
- ll) Water Removal
- mm) Wellpoints
- nn) Direct Plumbing
- oo) Protective Systems
- pp) Trench Shoring
- qq) Pre-Installation Inspection
- rr) Shoring Installation
- ss) Shoring Removal
- tt) Shields
- uu) Shield Inspection
- vv) Shield Installation
- ww) Trench Access, Egress
- xx) Hazardous Atmospheres
- yy) Job-Specific Considerations
- zz) Inspection
- aaa) Sheaths
- bbb) Multiple Cables
- ccc) Moving Cables
- ddd) Ducts & Joints

6) Facility Considerations

- a) Electric Supply Stations
- b) Engineering Controls
- c) Exterior Protections
- d) Perimeter Barrier
- e) Safety Signs
- f) Entrance Guarding
- g) Interior Protections
- h) Electric Supply Equipment Rooms & Spaces
- i) Access & Working Spaces
- j) Guarding
- k) Safe Work Practices
- l) Training
- m) Daily Job Briefings
- n) Entrance Attendants
- o) LOTO



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- p) Inspections
- q) Protective Grounding
- r) Minimizing Ignition Sources
- s) Classified Location Procedures
- t) Coal-Handling Areas
- u) Equipment & PPE
- v) Grounding for Coal-Handling Areas
- w) Additional Trainings
- x) Boilers
- y) Boiler Fuel Handling
- z) Restricting the Worksite
- aa) Required PPE
- bb) Pre-Work Inspections
- cc) Precautions for Boilers in Operation
- dd) Chlorine System Precautions
- ee) Gaseous Hydrogen Systems
- ff) Hydroelectric Plants
- gg) Storage Batteries
- hh) Working Spaces
- ii) Location
- jj) Ventilation
- kk) PPE
- ll) Battery Handling
- mm) Additional Safety Features
- nn) Case Study
- oo) Communication Facilities
- pp) High-Band Radio Antennas
- qq) Ionizing vs. Non-Ionizing Radiation
- rr) Effects of RF Energy
- ss) Exposure Limits
- tt) Specific Absorption Rate
- uu) Exposure Controls
- vv) Antenna Types
- ww) Yagi & Microwave Antennas
- xx) Panel & Whip Antennas
- yy) Additional Safety Guidelines
- zz) Clearance
- aaa) RF Categories



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- bbb) Lockout/Tagout
- ccc) PPE
- ddd) Personal Protection Monitors
- eee) Microwave Transmission Facilities
- fff) Applying Grounds: Transmitting Antenna
- ggg) Other Considerations
- hhh) Hazardous Materials
- iii) Support Structures
- jjj) Compressed Gases
- kkk) Light & Illumination
- III) Conductive Materials & Apparel
- mmm) Interlocks
- nnn) Testing & Test Facilities
- ooo) Grounding
- ppp) Applying Grounds: Test Facilities
- qqq) Housekeeping & Janitorial

7) Emergency Response

- a) Emergency Action Plans
- b) Medically Trained Personnel
- c) First Aid Kits
- d) Confined Space Rescue
- e) Evaluate
- f) Initial Evaluation
- g) Training
- h) Rescue by Non-Entry
- i) Rescue by Trained Employees
- j) Rescue by Others
- k) Rescue Roles
- l) Assessment of the Situation
- m) Determining the Rescue Type
- n) Develop a Rescue Plan
- o) Plan for Responder Safety
- p) Planning for Victim Safety
- q) Planning for Public Control
- r) After the Rescue
- s) Pole Top Rescue
- t) Evaluate
- u) Protect Yourself



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- v) Equipment
- w) Communication devices
- x) Handline
- y) Climbing
- z) Evaluate the Victim
- aa) Lowering the Victim
- bb) First Aid
- cc) Aerial Bucket Assist
- dd) MEWP Rescue
- ee) Dump Feature

8) Conclusion