

Workgroup #1

Arc Flash

Subgroup 2

Arc Flash Training Requirements Sub
Group

July 31, 2008

Arc Flash Training Content

- NFPA 70E Content
 - Label Interpretations
 - PPE Requirements
 - Approach Boundaries
- Arc Flash Characteristics
 - Short Circuit Current
 - Clearing Time
 - Affect on Equipment
- Understanding the Calculation Process

NFPA 70E Content

- Labels
 - Interpretations
 - Requirements
 - Understanding
 - Difference when door open / closed
 - Maintenance versus Operation

NFPA 70E Content

- PPE
 - Requirements
 - Inspection / Testing / Use
 - Maintenance / Care / Cleaning
 - Owned versus Service Contract
 - Tools, etc.
 - Labeling
 - Understanding
 - Requirements
 - Storage

NFPA 70E Content

- Approach Boundaries
 - Shock versus Arc Flash
 - Relationship to Equipment
 - Responsibilities
 - Authorized Access
 - Boundary Demarcation / Barrier

Arc Flash Characteristics

- Short Circuit Current
- Upstream Clearing Time
- Affect on Equipment
- Arc Flash / Arc Blast Effects
 - Thermal
 - Expansion
 - Shock Wave
- Video Demo
- Anatomy of an Arc Flash

Understanding Arc Flash Calculations

- Calculation Process
- Minimum Data Required
- Work Through Examples
 - 208 Volt
 - 480 Volt
- K.I.S.S.

Arc Flash Training Content Determination

- Training Needs to Cover:
 - Qualified Electrical Worker
 - Planners of Electrical Work
 - Non-Electrical Worker
 - Specific Task Qualified Worker
 - Subcontractor
 - Electrical
 - Non-Electrical
 - Second Person (Buddy)

Arc Flash Training Content by Worker Type

- Qualified Electrical Worker (Facility & R&D)
 - NFPA 70E Content
 - Label Interpretations
 - PPE Requirements
 - Approach Boundaries
 - Arc Flash Characteristics
 - Short Circuit Current
 - Clearing Time
 - Affect on Equipment
 - Understanding the Calculation Process

Training Content by Worker Type

- Planner of Electrical Work (Facility)
 - NFPA 70E Content
 - Label Interpretations
 - PPE Requirements
 - Approach Boundaries
 - Arc Flash Characteristics
 - Short Circuit Current
 - Clearing Time
 - Affect on Equipment

Training Content by Worker Type

- Subcontractor Electrical Worker (On or Near)
 - NFPA 70E Content
 - Label Interpretations
 - PPE Requirements
 - Approach Boundaries
 - Arc Flash Characteristics
 - Short Circuit Current
 - Clearing Time
 - Affect on Equipment
 - Understanding the Calculation Process

Training Content by Worker Type

- Non-Electrical Worker (Site & Subcontractor)
 - NFPA 70E Content
 - Approach Boundaries
 - Arc Flash Characteristics
 - Short Circuit Current
 - Clearing Time
 - Affect on Equipment

Training Content by Worker Type

- Second Person (Site & Subcontractor)
 - NFPA 70E Content
 - Label Interpretations
 - PPE Requirements
 - Approach Boundaries
 - Arc Flash Characteristics
 - Short Circuit Current
 - Clearing Time
 - Affect on Equipment

Training Content by Worker Type

- Specific Task Qualified Worker (Site & Sub)
 - NFPA 70E Content
 - Label Interpretations (As Needed)
 - PPE Requirements (As Needed)
 - Approach Boundaries
 - Arc Flash Characteristics
 - Short Circuit Current
 - Clearing Time
 - Affect on Equipment
 - Understanding the Calculation Process (As Needed)