

Lakewood, CO | Grand Junction, CO Office: 303-325-3460

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BENEFITS OF ARC FLASH HAZARD ANALYSIS

- Compliance with federal and state regulations
- · Adherence to industry standards
- Follows insurance companies requirements
- Enhances workplace safety and educates employees
- · Identifies and corrects safety issues and prioritizes upgrades
- Optimizes electrical protection and operation
- Documents and updates your electrical system
- Avoids fines and operational downtime



CITRINE'S TOTAL ARC FLASH SOLUTION



O.4
Cal/cm² © 18"
(Incident Energy)
Arc Flash PPE: Arc-Rated:

Nominal System Voltage 288 V Arr. Flash Boundary 9 in. Limited Approach Boundary 42 in. lestricted Approach Boundary 12 in. long-Steve Shirt & Pants, or Coverall, or Suit; Face Hood; Heavy-Duty Leather Gloves, or Arr-Rated

Gloves (Rating must be greater than or equal to listed incident Energy)
Shock PE: Class 00 or Higher Voltage Gloves, Voltage flated Tools
Other PE: Head Hat, Safety Glosses, in Canal Hearing Protection,
Leather Footwear
Always refer to NFPA 70E for PEP details.

Equipment Name: HTP-42
Lockout Device: ELLA-MCC-42042
Reference: IEEE 1384 (2002) & NFPA 70E (2018)
Date: Aug-14-2020

- Our Lead Electrical Engineer has over 24 years' experience in performing arc flash analysis, diagnosing technical issues, and implementing solutions.
- We create in-house, customized arc flash labels that exceed NFPA 70E requirements suitable for high temperature, corrosive, or high UV environments.
- We identify and provide appropriate Personal Protective Equipment (PPE). Citrine is an authorized distributor of American-made PPE such as arc-rated clothing, suits, hoods, and gloves.
- We provide updates to existing facility documentation.
- We provide on-site customized NFPA 70E training by instructors qualified by the NFPA as Certified Electrical Safety Compliance Professionals (CESCP).
- We create customized safety procedures such as Lock-Out Tag-Out (LOTO) and safety assessments.

RELEVANT REGULATIONS, STANDARDS AND COMPLIANCE DIRECTIVES

- NFPA 70E Electrical Workplace Safety
- IEEE 1584 Arc Flash Analysis
- NFPA 70 110.16 (National Electrical Code) Arc Flash Hazard Warning
- OSHA Part 1920.132.(d)(1) "The employer shall assess the workplace to determine if hazards are present..."
- OSHA Part 1920.132.(d)(1)(l) Select, and have each affected employee use, the types of PPE that will protect the affected employee..."
- OSHA Part 1920.132.(d)(1)(l) "The employer shall assess the workplace to determine if hazards are present..."





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TOTAL ARC FLASH SOLUTION

Electrical Studies

We have successfully completed hundreds of electrical studies including arc flash hazard analysis, short-circuit, protective device coordination, harmonics, power flow, and dynamic power systems. Our average electrical engineer has over 16 years of experience.

Hands-On Experience with Electrical Equipment and Safety Procedures

We have has extensive experience in the design and construction of small to large generation facilities. Projects have included the detailed design and development of electrical energy safety processes involving Lock Out /Tag Out (LOTO) procedures, associated labeling, training, project documentation, and compliance record keeping.

Software

Our team are experts in all industry accepted software including ETAP, and SKM PowerTools. Citrine has active software licenses for ETAP and SKM PowerTools and has obtained training certifications from software suppliers.

Safety Professionals

We have certified safety professionals that are knowledgeable of the requirements of National Fire Protection Association (NFPA) 70E. In addition to arc flash studies, we are also experienced in preparing safety plans and risk assessments that are NFPA 70E and OSHA 29 CFR1910.147 compliant. Furthermore, we have staff trained in OSHA 10, OSHA 40, OHSA 500, OSHA 510, NFPA 70, and NFPA 70E.

Tagging and Labeling

We create and manufacture customized labels for arc flash assessments, OSHA signage requirements, and projects involving NFPA regulations. Our labels can withstand extreme temperature conditions, corrosive environments, high UV areas, and wet conditions.

Training

Our staff are certified training professionals and have established an NFPA 70E training program presented by the engineers performing electrical studies. Our in-house arc flash trainers are certified by the NFPA as certified electrical safety compliance professionals (CESCPs). We train hundreds of students each year on arc flash safety.

Personal Protective Equipment (PPE)

Citrine is an authorized distributor of American-made Personal Protective Equipment (PPE) such as arc-rated clothing, suits, hoods, and gloves.



