



Non-Hazardous, Non-QEW Switching Requirements

Switching is the manual operation (opening or closing) of any electrical isolation on energized equipment. Manual operation includes the operation of through-the-door breaker handles or other dead-front switching.

Non-hazardous switching is switching where there is no shock or arc flash hazard, and the conditions for normal operation are satisfied.

Normal Operation Parameters

- Equipment is properly installed, per NEC and the manufacturer's recommendations.
- Equipment is properly maintained by QEWS.
- Equipment doors are closed and secured.
- Equipment covers are in place and secured.
- There is no evidence of impending failure (See ESM 10.4.10 and 10.4.11)

1 Determine if a shock hazard exists

- The equipment must be fully enclosed and in good repair. There can be no visible exposed live parts. Covers must be latched tight and all fasteners must be in place.

2 Determine if an arc flash hazard exists

Equipment is Labeled

- Where equipment is labeled with an arc flash label, check the arc flash energy (cal/cm²). **Non-QEW switching is allowed where the incident energy is 4 cal/cm² or less.**

WARNING	
Arc Flash and Shock Hazard	
Appropriate PPE Required	
72 inch	Flash Hazard Boundary
2 cal/cm ²	Flash Hazard at 18 inches
Category 1	Cotton Underwear, FR Shirt & Pant, FR Coverall, Flash Hood, Hardhat, Hearing Protection, Heavy Leather Workboots
208 VAC	Shock Hazard when cover is removed
00	Class Glove with Leather Protectors
42 Inch	Limited Approach (Fixed Circuit)
Avoid Contact	Restricted Approach
Avoid Contact	Prohibited Approach
Location:	E47A2A

Equipment is **NOT** Labeled

- If the equipment is not labeled with an arc flash label, check the voltage and main circuit breaker or fuse amp ratings. **Non-QEW switching is ONLY permitted where:**
 - 120 Volts AC or less – all cases
 - Panels less than 250 VAC and main is less than 250 A.
 - Local disconnects less than 750 VAC and main is less than 60 Amps.

3 Minimum PPE

- Minimum PPE for non-hazardous switching is a leather glove on the switching hand and safety glasses.



208V Panel,
225A Main,
All Covers in Place



480V, 60A
Disconnect Switch,
All Covers in Place

4 Performing Switching

The worker will take the following standard precautions:

- Stand to the side. Where possible, do not reach across the panel to the switch handle, instead stand on the same side of the panel as the switch handle.
- Place hand on the switch handle but do not operate.
- Face away from the switch, close the eyes, take a deep breath and hold it.
- Forcefully throw the switch in a complete full motion.
- Verify system response.

EHS0536 – Electrical Switching Safety for non-QEW training is required if switching a device rated at 15 A or greater.