



**ARCADIA FIRE DEPARTMENT
STANDARD OPERATING GUIDELINE**

**SUBSTATION AND UNDERGROUND
ELECTRICAL EQUIPMENT**

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Approved: _____
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PURPOSE

This guideline establishes a standard approach and response to substation or underground electrical equipment incidents.

Electricity will seek the lowest level or a ground and will travel any path necessary as it seeks a ground. A direct path to ground occurs when contact is made between something energized and a portion of the body such as a hand, arm, head or other body part. An indirect path to ground occurs when contact is made with something that is energized, including equipment or a straight stream hose line.

Personnel should use caution when spraying water on or around energized electrical equipment. Hose streams conduct electrical currents and should not be sprayed directly into manholes or energized equipment. A fog pattern should be used and efforts should be made to protect the surrounding area and exposures.

Incidents that require Fire Department personnel to enter electrical substations or underground vaults to rescue and remove persons in need of assistance, present very serious potential dangers. In order to operate safely in these situations, special actions must be addressed prior to rescue.

POLICY

Personnel should take all necessary precautions and follow procedures as stated in this document when responding to incidents involving underground electrical equipment.

PROCEDURE

Manhole Incidents:

- Request utility company to respond
 1. Give address or location
 2. Obtain ETA
- Request Arcadia Police Department for possible evacuation and street closures
- Secure area and deny entry
- If rescue is needed
 1. Follow Arcadia Fire Department SOG # 125, *Confined Space Rescue Operation Guideline*
 2. Determine if additional resources are necessary
 3. Effect rescue upon conformation that the equipment is de-energized from a utility company representative
 4. Department personnel will be in full PPE per SOG # 101, *Personal Protective Equipment*
 5. A charged hose line will be deployed and manned

- Be aware of explosion potential
 1. Protect exposures from a safe distance
 2. Stay clear of manhole covers over electrical vaults, manhole covers can blow off and fly as far as 150 feet
- Extinguish fire upon conformation that the equipment is de-energized from a utility company representative

Sub-Station Incidents:

- Request utility company to respond
 1. Give address or location
 2. Obtain ETA
- Request Arcadia Police Department for possible evacuation and street closures
- Secure area and deny entry
- Perform reconnaissance from safe distance
 1. Equipment inside fenced area is energized
- Be aware of explosive potential
- If rescue is needed
 1. Establishment of the Incident Command System, with an established Incident Commander is required to avoid premature commitment to unknown risks
 2. Make sure utility representative deems area is safe prior to entry if risks are unknown
 3. Determine if additional resources are necessary
- Place apparatus in a safe location and away from overhead wires
- Protect exposures from a safe distance
- Extinguish fire upon confirmation that the equipment is de-energized from utility company representative