

DEPARTMENT OF INDUSTRIAL RELATIONS
DIVISION OF OCCUPATIONAL SAFETY AND HEALTH
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September 22, 2015

Mr. Terry Crowley, PE
Utility Director
City Of Healdsburg
401 Grove Street
Healdsburg, CA 95448

Re: Title 8 section 2940: Inspection of High Voltage Equipment

Dear Mr. Crowley:

This letter is provided in response to your inquiry to the Division of Occupational Safety and Health regarding the visual inspection of high voltage cables and equipment. The content and conclusions of this letter are based only on the facts described below and responsive only to the initial requester. They may not be construed as a statement of general Division policy or general interpretation of the regulations referenced in this letter.

In your letter dated August 27, 2015 you asked whether persons trained as "Qualified Persons" may be assigned to visually inspect high-voltage equipment and substructures containing fully insulated cables, connectors and splices, instead of "Qualified Electrical Workers" (QEWs)..

The work you describe is regulated by the High Voltage Safety Orders sections 2940 and 2943 of Title 8, California Code of Regulations. Section 2940(c) specifies that only QEWs shall work on energized conductors or equipment connected to energized high-voltage systems as follows:

2940(c) Qualified Electrical Workers. Only qualified electrical workers shall work on energized conductors or equipment connected to energized high-voltage systems. Except for replacing fuses, operating switches, or other operations that do not require the employee to contact energized high-voltage conductors or energized parts of equipment, clearing "trouble" or in emergencies involving hazard to life or property, no such employee shall be assigned to work alone. Employees in training, who are qualified by experience and training, shall be

permitted to work on energized conductors or equipment connected to high-voltage systems while under the supervision or instruction of a qualified electrical worker.

In addition section 2943 applies to work on or in proximity to underground high-voltage cables, conductors or equipment such as subsurface or pad mounted high-voltage equipment.

Section 2700 of the High-Voltage Safety Orders also defines the following:

Qualified Electrical Worker. A qualified person who by reason of a minimum of two years of training and experience with high-voltage circuits and equipment and who has demonstrated by performance familiarity with the work to be performed and the hazards involved.

Qualified Person. A person who by reason of experience or instruction is familiar with the operation to be performed and the hazards involved.

The work allowed to be done by Qualified Persons is subject to different restrictions and limitations depending on whether the work is in subsurface structures or in pad mounted equipment.

Subsurface structures

The safety orders permit a Qualified Person to open the covers of subsurface structures containing high voltage insulated cables and equipment provided:

- The qualified person's work is limited to a visual inspection only
- The qualified person does not enter the subsurface structure
- The qualified person does not come into contact with and does not work on the insulated energized cables or equipment

Work on or near the insulated energized subsurface cables or energized equipment connected to high-voltage systems may only be done by a QEW.

Pad mounted equipment

Only QEWs may work on energized high voltage pad mounted equipment. The safety orders permit the opening of pad mounted equipment for a visual inspection by a Qualified Person only when:

- The energized high-voltage cables, parts or conductors are protected by an inner cover or barrier
- The worker does not reach into or place any tools or items into the enclosure.

The orders permit a Qualified Person to work on the low voltage portion of such equipment when the high-voltage portion is completely covered, protected and isolated by a secure barrier. Only a QEW may work on near the exposed energized high-voltage cables or equipment using insulated tools and equipment maintaining the minimum approach distances in section 2940.2.

Training

An effective training program needs to be established for workers to be considered Qualified Persons to perform visual inspections of such equipment. The workers would need to be authorized and trained by Healdsburg Electric to understand the entry/work restrictions and limitations, to identify the equipment that can be safely opened for inspection and to identify potential hazards.

I hope this information is useful to you. Feel free to contact me if you have any additional questions.

Sincerely,



Eric Berg
Acting Deputy Chief
Research and Standards

LM/EB

File: HVESO 2943