

DEPARTMENT OF INDUSTRIAL RELATIONS
DIVISION OF OCCUPATIONAL SAFETY AND HEALTH
Headquarters Office
1515 Clay Street, Suite 1901
Oakland, CA 94612
(510) 286-7000 Fax: (510) 286-7037



Juliann Sum, Chief

June 04, 2015

Ralph Morales, Safety & Security Manager
Safework, Inc.
ralph.morales@safeworkinc.com

Re: Title 8 Section 2340.17(a) Guarding of Energized Parts

Dear Mr. Morales;

This letter is provided in response to your inquiry to the Division of Occupational Safety and Health (Cal/OSHA) regarding the guarding of energized parts in electrical boxes. 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.

Scenario Presented:

You provided the following scenario in your letter:

A Controlling Contractor on a Multi-Employer worksite is installing multiple subsurface structures that require a dewatering systems within an engineered support of excavation system consisting of sheet Piles, beams and struts. The depth of the excavations range from 14' to 25+'.

To maintain sub-surface water to an acceptable workable level while performing operations within the support of excavation; Single phase 240V electrical pumps are being used at strategic locations per the dewatering plan to maintain water levels. The power to support this system is fed by temporary trailer mounted generators. Each individual dewatering pump has its own (single phase 240V) electrical box to support it. Each trailer mounted generator feeds power to about 3 pumps each – dependent of the size of the generators.

The individual (240V) electrical boxes that feed electricity to each pump have a standard door and latch and a sticker identifying the voltage. The Controlling Contractor in question prefers to keep these boxes unsecured (not locked or tagged) during and after shifts. Often times the doors to boxes have been found wide open, but as of recent days are now not being locked out or tagged out at all to control hazardous energies within. The electrical conductors within the boxes are exposed and are energized during operation. All of the boxes within the dewatering electrical system do not have dead front panels to separate live electrical conductors from authorized users as well as unauthorized personnel. As these boxes are not locked out or tagged out, this leaves the potential for unauthorized entry as well by others within a Multi-Employer Worksite condition.

Boxes are being accessed to reset the breakers throughout the work day and authorized personnel are subjected (exposed) to live unprotected electrical wiring and parts.

Concerns:

- 1) All single phase 240 V electrical pump boxes on the Multi-Employer Worksite do not have a dead front panel within the box and are not locked or tagged. Authorized personnel are exposed to live energized wiring while accessing these boxes to reset breakers.
- 2) Other trades and contractors can be exposed to live electrical wiring as these boxes are not locked and tagged and allow the potential for unauthorized entry as well as accidental contact if doors are not closed.
- 3) The Controlling contractor has been informed of this condition on multiple occasions and chooses to continue to not lock or tagout out of convenience.

Question 1.

Is this controlling contactors condition and action described in this letter compliant to the Cal/OSHA Standards?

Response to Question 1:

No, in the above scenario, the controlling employer is not in compliance with Title 8 regulations. Energized electrical parts in the electrical box must be guarded by approved cabinets or other forms of approved enclosures or by any of the means required under Title 8 section 2340.17(a). The condition described in the scenario is in violation of the aforementioned standard as energized parts in electrical box are not properly guarded against accidental contact. The contractor must guard energized parts so that only qualified persons will have access to the energized parts. Qualified Person is defined in Title 8 section 2300(b) as follows:

Qualified Person. A person, designated by the employer, who has received training in and has demonstrated skills and knowledge in the construction and operation of electric equipment and installations and the hazards involved.

NOTES:

1. Whether an employee is considered to be a "qualified person" will depend upon various circumstances in the workplace. For example, it is possible for an individual to be considered "qualified" with regard to certain equipment in the workplace, but "unqualified" as to other equipment.
2. An employee who is undergoing on-the-job training and who, in the course of such training, has demonstrated an ability to perform duties safely at his or her level of training and who is

under the direct supervision of a qualified person is considered to be a qualified person for the performance of those duties.

Question 2.

Can this controlling contractor be cited under any of the Cal/OSHA Standards, and if so what standards might this contractor be in violation of?

Response to Question 2:

Yes, the controlling contractor could be cited for a violation of Title 8 section 2340.17 during a Cal/OSHA inspection. Guarding of live parts energized at 50 to 600 volts is covered in Title 8, Low Voltage Electrical Safety Orders, section 2340.17 as follows:

2340.17. Guarding of Energized Parts.

(a) Except as elsewhere required or permitted by these orders, energized parts of electric equipment operating at 50 volts or more shall be guarded against accidental contact by use of approved cabinets or other forms of approved enclosures or by any of the following means:

- (1) By location in a room, vault, or similar enclosure that is accessible only to qualified persons.
- (2) By suitable permanent, substantial partitions or screens so arranged that only qualified persons will have access to the space within reach of the energized parts. Any openings in such partitions or screens shall be so sized and located that persons are not likely to come into accidental contact with the energized parts or to bring conducting objects into contact with them.
- (3) By location on a suitable balcony, gallery, or platform so elevated and otherwise located as to prevent access by unqualified persons; or
- (4) By elevation of 8.0 feet (2.44 m) or more above the floor or other working surface.

Question 3.

If this contractor can be cited under the Cal/OSHA Standards, what type of citation would be issued?

Response to Question 3:

There is a realistic possibility of serious injury from contact with 240 volts. Since each electrical box carries 240 volts, the contractor could be issued a serious citation for violating Title 8 section 2340.17(a).

Please note that additional citations may be issued if other violations are observed during an inspection.

Question 4.

Am I compliant in my thought process by stating that if the boxes were to simply have dead front panels with them, LOTO is not necessary?

Response to Question 4:

Yes, the electrical boxes would be compliant if they had a proper dead front which prevents contact with live electrical parts. It is not necessary to place a lock on the electrical box to prevent unauthorized access to the panel during the normal operation as long as energized parts are guarded properly as required by section 2340.17(a). However, since the electrical box supplies the power to dewatering pumps, it may need to be locked out and tagged out to control hazardous energy during cleaning, repairing, servicing, setting-up, and adjusting operations of dewatering pumps as required by Title 8 section 3314. If work needs to be done on electrical equipment or system then work procedures must comply with requirements of Title 8 sections 2320.1 through 2320.7 (procedures for working on energized equipment) as well.

To help you understand the hazardous energy control procedures regulations better, we have included links to Cal/OSHA regulation section 3314, Lockout/Blockout Methods and Sample Procedures and the Cal/OSHA Lockout/Tagout etool:

<http://www.dir.ca.gov/Title8/3314.html>

http://www.dir.ca.gov/dosh/dosh_publications/lockout.pdf

<https://www.dir.ca.gov/dosh/etools/08-003/>

We hope this provides you with information you need. If you have any further questions regarding this or related safety concerns, please contact me at 925-270-9791 or eberg@dir.ca.gov.

Sincerely,



Eric Berg
Acting Deputy Chief
Research and Standards