



February 27, 2019

Cal/OSHA Research & Standards Safety Unit
2000 E. McFadden Avenue, Suite 203,
Santa Ana, California 92705

Subject: Work Near Overhead Power Lines

To Cal/OSHA:

The San Francisco Public Utilities Commission is seeking clarification/advice regarding working under and near overhead powerlines in the streets of San Francisco. Such overhead power lines may be electrical power or transit power lines, and the power lines that we are seeking clarification on are typically 600V or less. We believe the applicable Cal/OSHA regulations for working near power lines 600V or less are Electrical Safety Orders §2946 and Construction Safety Orders for Cranes & Derricks §1612.1. Our questions to Cal/OSHA are as follows:

1. **If the overhead power line is insulated, does the minimum clearance of 10' for operating boom type or hoisting equipment in Table 2 of §2946 and Table A of § 1612.1 still apply?** In S.F., there are insulated 600V DC overhead transit power lines and 120/240V insulated service drops to residences, that are situated relatively lower than other higher voltage power lines, and as such, come into closer proximity with construction work.
2. **If the Cal/OSHA 10' clearance applies to insulated power lines, please clarify if boom type or hoisting equipment still need to meet the 10' clearance per Electrical Safety Orders §2946 when operating near insulated 120/240V service drops since Table 2 of §2946 only covers power lines from 600V to 50kV.** If there is no radial clearance requirement for working around 120/240V or power lines less than 600V, then we still expect contractors to exercise caution to not damage the low voltage lines.
3. **If the Cal/OSHA 10' clearance applies to insulated power lines, please clarify if cranes and derricks still need to meet the 10' clearance for Construction Safety Orders § 1612.1 when operating near insulated 120/240V service drops.** Our interpretation is that per §1612.1.(d)(2)(A), the Electrical Safety Orders would govern work of cranes and derricks operating around 600V-50kV power lines as the hoisting equipment in Electrical Safety Orders §2946 should cover cranes and derricks based on definitions of "hoisting equipment" from OSHA such as OSHA 1926.751 – Definitions. If the Electrical Safety

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Orders §2946 apply to cranes and derricks working around 600V – 50kV, then it appears there is no requirement for working around 120/240V insulated service drops similar to our Question #2 above.

4. **Have there been any Cal/OSHA decisions which granted reduction of the 10' working clearance from 600V-50kV power for boom type or hosting equipment? If so, could Cal/OSHA share these variances with the SFPUC?**

The SFPUC endeavors to fully understand the Cal/OSHA requirements to ensure work is safely performed near overhead power lines. Your advice on the above is much appreciated. If you need to contact me, please email at bleung@sfgwater.org or call me at 415-554-1887. Thank you for your time.

Sincerely,



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