

STANDARDS PRESENTATION  
TO  
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

Attachment No. 1  
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PROPOSED STATE STANDARD,  
TITLE 8, CHAPTER 4

Add new Article 40 to read:

**Title 8, Division 1, Chapter 4, Subchapter 5,  
Group 2, High-Voltage Electrical Safety Orders**

**Article 40. Electronic News Gathering**

§ 2980. Definitions.

Electronic News Gathering (ENG). A task or series of tasks applied to capturing news, sporting or other live events on location using cameras and support equipment and using recorded media for live transmission and/or reception. For the purposes of this regulation, ENG includes Satellite News Gathering (SNG), Electronic Field Production (EFP), and other activities which are functionally similar to ENG.

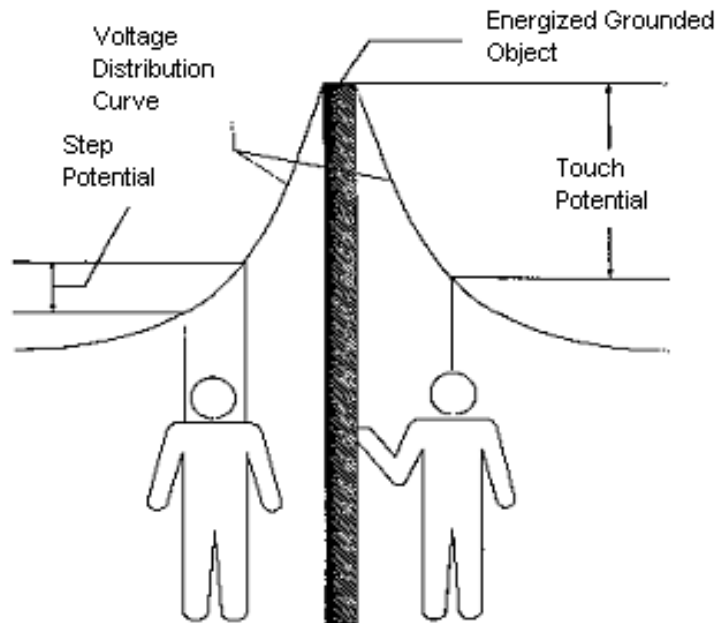
ENG Vehicle. An ENG vehicle has a transmitter and may also have a receiver. An ENG vehicle employs an elevating antenna, dish, laser, or similar device or structure in order to transmit, receive, or relay video, audio, or data signal to or from a broadcasting station, fixed or mobile relay point, including satellite or other spacecraft, or other facility for immediate or delayed processing for use in broadcasts or closed circuit transmission. Excluded from this Article are mobile cellular telephone sites, sometimes referred to as cells-on-wheels (COWS) used exclusively for cellular telephone communications.

Step potential. "Step potential" is the voltage between the feet of a person standing near an energized grounded object. It is equal to the difference in voltage, given by the voltage distribution curve, between two points at different distances from the "electrode." A person could be at risk of injury during a fault simply by standing near the grounding point.

Touch potential. "Touch potential" is the voltage between the energized object and the feet of a person in contact with the object. It is equal to the difference in voltage between the energized object and a point some distance away. It should be noted that the touch potential could be nearly the full voltage across the grounded object if that object is grounded at a point remote from the place where the person is in contact with it.

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Step and touch potentials are illustrated in Figure 1.



**Figure 1 – Step and Touch Potentials**

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§2981. Provisions for Preventing Accidents Due to Operation of Electronic News Gathering Vehicles in Proximity of Overhead Power Lines.

- (a) Positive means, such as momentary contact (continuous pressure) switches, shall be used to raise or rotate elevating antennas, such as microwave masts, dishes, or similar structures. The switch shall be located to assure that personnel operating the elevating antenna will be where they can continuously and responsibly observe the environment overhead during the raising or rotating operation.
- (b) Level indication devices shall be provided in an observable location on the ENG vehicle to indicate the level of the vehicle front to rear and across the width.

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- (c) A spotlight or functionally equivalent means of illumination shall be provided on all ENG vehicles equipped with an elevating antenna, such as a microwave mast, dish, or similar structure. Illumination shall be adequate to assist operating personnel in locating overhead hazards, such as power lines within the proximity of the elevating device during periods of darkness or reduced available light.
- (d) Audible and visual warnings shall be provided to warn the driver when movement of the ENG vehicle is attempted while the mast, dish, or similar structure (antenna) is not stowed. A visual warning readily observable to the driver shall occur when the engine is running and the antenna is not stowed. A non-cancelable audible alarm with a nominal sound loudness of 80-85dB at the driver's position shall occur when movement of the vehicle is attempted unless the elevating antenna is stowed.
- (e) Warning Signs. Each ENG vehicle equipped with elevating mast, dish, antenna, or similar apparatus, shall be posted with durable, permanent warning signs.
- (1) A warning sign shall be posted in plain view of the mast operator's position with lettering not less than ½ inch in height on a contrasting background reading: "Unlawful to operate this equipment within 10 feet of high-voltage lines of 50,000 volts or less."
- A) In addition to the above wording, the following statement in small lettering shall be provided on each mast operator warning sign: "For minimum clearances of high-voltage lines in excess of 50,000 volts, see California Code of Regulations, Title 8, Article 37, High-Voltage Electrical Safety Orders."
- (2) A warning sign shall be posted in plain view of the mast operator and the ENG vehicle driver with lettering not less than ¼ inch in height on a contrasting background listing the vehicle heights with the antenna in the raised and stowed positions.
- (f) ENG Vehicle Safety Manual:
- (1) The owner, agent, or employer responsible for the operations of ENG vehicles shall maintain a durably bound document in each vehicle containing the following information:
- A) How to safely operate the elevating mast or antenna.  
B) Original equipment manufacturer (OEM) vehicle owner/operator's manual.  
C) Predictable hazards associated with ENG vehicles.
- (2) Prior to permitting an employee to operate an ENG vehicle, the employer shall ensure that the vehicle operator is familiar with the Vehicle Safety Manual specific to the vehicle they will be operating.
- A) EXCEPTION: Service personnel performing vehicle maintenance functions.
- (g) Work performed as described in this Article shall be in accordance with Article 37 of the High-Voltage Electrical Safety Orders.
- (h) Effective dates:
- (1) Provisions of this Section (2981(a)-(f)) shall apply to all ENG vehicles manufactured on or after [date one year from the effective date of these orders], which are operated in California.

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(2) Provisions of this Section (2981(a)-(f)) shall apply to all ENG vehicles manufactured prior to [date one year from the effective date of these orders], which are operated in California on or after [date two years after the effective date of these orders].

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§ 2982. Employee Training.

(a) Scope and Application:

- (1) The requirements of this Section shall apply in addition to training required by General Industry Safety Orders, Section 3203(a)(7).
- (2) Safety training shall be conducted not less than annually for all personnel employed in electronic news gathering operations, including, but not limited to, all elements described in subsection 2982(b).
- (3) Safety training shall be given to:
  - A) Field personnel. All employees, including reporters, assigned to operate ENG vehicles or work in the proximity of ENG vehicles under field conditions.
  - B) Supervisory personnel. All employees who assign or supervise field personnel, and those with field personnel under their immediate and direct control.
- (4) Prior to permitting an employee to operate or work in the proximity of an ENG vehicle under field conditions, the employer shall ensure that such employee has successfully completed training required by this Section, including, but not limited to all elements described in Section 2982(b).
  - A) EXCEPTION: Supervised operations performed during the actual training required by this Article.
- (5) Prior to permitting an employee to assign or supervise field personnel as defined above, the employer shall ensure that such supervisory personnel has successfully completed training required by this Section including, but not limited to, all elements described in Section 2982(b).
  - A) EXCEPTION: The requirements for training of supervisory personnel, as defined in subsection 2982(a)(3)(B), may be suspended during a major natural disaster or major civil emergency as necessary to permit compliance with Penal Code Section 409.

(b) Training.

- (1) Employees shall be trained to understand the specific hazards associated with electrical energy in relationship to ENG vehicle operations. They shall be trained in safety-related work practices and procedural requirements as necessary to provide protection from electrical hazards. Employees shall be trained to identify and understand the relationship between electrical hazards and possible injury.
- (2) The employer shall establish, implement, and maintain a written Code of Safe Practices for ENG operations. The written Code of Safe Practices shall include, but not necessarily be limited to, the following elements:
  - A) Hazards common to ENG vehicles

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1. Overhead power lines.
  2. Downed power lines.
  3. Step potential and touch potential.
  4. Generators.
  5. Carbon monoxide poisoning.
  6. Wind, lightning, and other severe weather conditions.
- B) Safe ENG vehicle operation.
1. Pre-operation equipment inspection criteria.
  2. Vehicle controls and equipment indicators.
  3. Mast warning alarms required by Section 2981(d).
  4. Operating instructions, warnings, and precautions for the types of ENG vehicles to be used.
  5. Differences between the ENG vehicle and an automobile.
    - (a) Steering and maneuvering.
    - (b) Vehicle stability.
    - (c) Affect of hazardous or abnormal weather conditions.
- C) Operating limitations.
1. Vehicle capacity and load limitations.
- D) Set-up procedure, including:
1. Site selection.
  2. Hazards associated with vehicular or pedestrian traffic.
  3. Preliminary site inspection (walk-around, walk away, look up).
  4. Hazards associated with reduced visibility due to environmental conditions such as fog, smoke, snow, and darkness.
  5. Environmental hazards including, but not limited to, harmful substances, and animal, insect, or plant life.
  6. Mast and/or antenna operation, including instructions on safe mast deployment.
- E) Tear-down (pre-departure) procedure, including:
1. Lowering the mast/stowing the antenna.
  2. Mast problems.
  3. Storing and equipment tie-down.
  4. Pre-departure site inspection (walk-around, walk away, look up) before moving the vehicle.
- F) Emergency protocol.
1. Emergency operation procedure.
- (3) All training and evaluation shall be conducted by persons who have the knowledge, training, and experience to train ENG employees and to evaluate their competence.
- (c) Documentation of employee training shall be maintained as required by Section 3203 of the General Industry Safety Orders.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

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§ 2983. Safety Inspections.

Periodic inspections required by Section 3203(a)(4) shall be conducted not less than quarterly and shall include in-the-field safety inspections of the operation of ENG vehicles.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.