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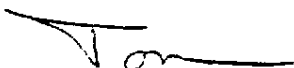
FROM: T. G. Grumbles
DATE: November 2, 1990

XF: 381

VISTA

SUBJ: OSHA STANDARD ON ELECTRICAL SAFETY RELATED OWRK PRACTICES

This final rule was distributed to you on August 23. Attached is a good summary of the rule that may assist you in developing compliance activities. Initial compliance is required by December 4.



T. G. Grumbles

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Attachment

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ALERT

**Compliance
Assistance
Program**October 1, 1990

ALERT

THE SOCIETY OF THE PLASTICS INDUSTRY, INC. 1275 K ST., N. W. WASHINGTON D.C. 20006 (202)371-8200 FAX (202)371-1022

OCCUPATIONAL HEALTH AND SAFETY

ELECTRICAL SAFETY-RELATED WORK PRACTICES

-FINAL RULE-

This electrical safety-related work practice standard is a general industry standard. It includes requirements for work performed on or near exposed energized and de-energized parts of electrical equipment.

AFFECTED SPI FACILITIES

All SPI member facilities who have employees who work on, near or with electrical equipment will be covered by this standard.

COMPLIANCE DEADLINES

December 4, 1990 except for the training requirements, which become effective on August 6, 1991.

REGULATORY SUMMARY

This rule is directed toward workers in the manufacturing and transportation sectors who face a high risk of injury through electrical shock.

The performance-oriented standard differentiates between workers such as electricians and linemen who have received extensive training in working with electrical equipment, and others, such as painters and crane operators, who might encounter electrical hazards occasionally.

The standard requires employers to de-energize electrical equipment, if possible, to protect employees. It sets forth lockout and tagging procedures to prevent re-energizing the equipment and thus exposing employees to the hazard. Where de-energizing is impractical, protective guarding methods may be used. The performance-oriented approach gives employers maximum flexibility in choosing the most appropriate protection for workers to fit the specific circumstances of their workplace.

Beyond guarding employees working near electrical hazards, the standard requires employers to alert employees to danger by the use of signs, barricades, and, if necessary, an attendant stationed near the hazard.

- Prohibits the use of portable metal ladders around exposed energized parts.
- Requires removing or covering conductive articles that may contact live parts.
- Requires employees cleaning up near exposed energized parts to use appropriate safeguards to prevent contact.

USING ELECTRICAL EQUIPMENT

PORTABLE ELECTRICAL EQUIPMENT

- Requires special protective measures for portable electrical equipment
 - Sets forth criteria for handling to prevent damage to equipment and cords.
 - Requires visual inspection on each shift for damage, correction before use, and proper connection between plugs and electrical outlet before use.
 - Mandates grounding conductors on extension cords used with grounding-type equipment, forbids altering plugs or outlets to prevent proper grounding, prohibits use of adapters that interrupt the grounding conductor.
 - Requires portable equipment and cords used in highly conductive work locations (such as flood areas) to be approved for these locations.
 - Specifies employees are to have dry hands when connecting equipment and plugs and to secure locking-type connectors properly.

ELECTRIC POWER AND LIGHTING CIRCUITS.

- Provides guidelines for electric power and lighting circuits.
 - Requires load-rated switches, circuit breakers or the equivalent to be used if load current is to be interrupted; prohibits nonloadbreak cable connectors, fuses, terminal lugs and cable splice connections under load conditions.
 - Mandates that circuits automatically de-energized by circuit breaker be checked for safety before re-energizing.
 - Forbids modification of overcurrent protection of circuit conductors.

TEST EQUIPMENT

- Details handling of test equipment
 - Permits only qualified persons to perform testing on electrical circuits or equipment.
 - Mandates visual inspection of test equipment and cords before use and correction of any problems.
- Provides requirements for the use of equipment in the presence of flammable or ignitable materials.
 - Prohibits use of electrical testing equipment in the presence of flammable or ignitable materials unless special precautions are taken to prevent hazardous conditions from developing.

SAFEGUARDS FOR PERSONNEL

- Requires appropriate protective equipment for employees for job and anticipated exposure.
 - Calls for appropriate maintenance of protective gear.
 - Requires outer covering for insulating equipment if necessary to avoid damage.
 - Specifies head, eye, and face protection when risks are present.
- Mandates use of insulated tools and materials near exposed energized parts including: fuse handling equipment, conductive ropes and handlines, and protective shields and barriers.
- Specifies warning system to alert employees to electrical hazards.
 - Requires safety signs and tags.
 - Calls for barricades in addition to signs under certain conditions.
 - Requires an attendant stationed to warn employees if signs and barriers are insufficient.

ELEMENTS OF THE STANDARD

(This ALERT generally summarizes the requirements of the standard and should not be relied on in lieu of the standard)

APPROACH

Based on Part II of the National Fire Protection Association's "Electrical Safety Requirements for Employees Workplaces" (NFPA 70E voluntary consensus standard).

SCOPE

- Covers most "qualified" and all "unqualified" employees working on/near/with electrical circuits and equipment.
- Does not apply, however, to "qualified persons" - those "familiar with construction and operation of the equipment and the hazards involved" performing work on installations and equipment used exclusively for electric power generation, transmission and distribution or for telecommunications.

TRAINING (Compliance deadline- August 6, 1991)

- Required in 1) safety-related work practices prescribed by the standard and 2) safety-related elements of the work environment.
- May be in the classroom or on the job.
- Limits training to employees who may reasonably be expected to face a risk of injury from electric shock, such as: electricians, mechanics and repairers, and electrical and electronic technicians.
- Spells out requirements for "qualified persons."

PRESCRIBED WORK PRACTICES

- Calls for de-energizing equipment as a primary method to protect employees.
- Requires lockout and tagging at electrical source to prevent re-energizing equipment where employees may be exposed to electric shock.
 - requires both lock and tag, except for:
 - * Tags may be used alone if locks cannot be used or employer demonstrates tagging alone is equally safe. Tags must be supplemented by an additional safety measure, such as the opening of an extra disconnecting device.
 - * Locks may be used alone for a simple circuit when the lockout period is no more than one workshift provided employees are trained in and familiar with this procedure.
 - mandates verification by a qualified person that circuits have indeed been de-energized.
 - Sets forth requirements for re-energizing the circuits:
 - * A qualified person must verify that it is safe to re-energize.
 - * Employees notified to stay clear.
- Permits only qualified persons to defeat interlocks.
- Limits work on energized equipment to qualified persons.
- Requires overhead lines to be de-energized and grounded or other protective measures to be taken. Specifies distances unqualified persons must maintain from overhead lines.
- Requires qualified persons working closer than minimum distances to be protected through insulation.
- Specifies minimum distances for vehicles operating near energized overhead lines and prescribes additional safe work practices for workers near the equipment.
- Prohibits employees from working near exposed energized parts without illumination.
- Details protective measures for employees working in confined or enclosed spaces containing exposed live parts.
- Requires work practices, such as carrying conduits horizontally, to prevent employees from inadvertently contacting energizing parts with long conductive objects.

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This standard is the second in a planned four-part standard covering electrical hazards. The remaining two parts are to cover safety-related maintenance and safety requirements for special equipment. As it did this time, OSHA plans to base these two parts on standards developed by the National Fire Protection Association.

**SUGGESTED
COMPLIANCE
APPROACH**

Attached with this ALERT is a summary of the requirements of the standard. Because electrical work is a universal activity, SPI recommends that you obtain a copy of the complete standard and to review your facility against them.

**STATE AND
LOCAL
CONCERNS**

Twenty-three states and two territories have their own OSHA-approved job safety and health plans. They are: Alaska, Arizona, California, Connecticut*, Hawaii, Indiana, Iowa, Kentucky, Maryland, Michigan, Minnesota, Nevada, New Mexico, New York*, North Carolina, Oregon, Puerto Rico, South Carolina, Tennessee, Utah, Vermont, Virginia, the Virgin Islands, Washington and Wyoming.

*These plans cover only state and municipal employees.

It is recommended that those facilities required to implement this standard review their current and pending State compliance program(s) for additional requirements prior to designing their own programs.

**REFERENCE
DOCUMENTS
AVAILABLE FROM
SPI**

- o Final Rule: Electrical Safety-Related Work Practices (55 FedReg 31984 August 6, 1990)
- o OSHA NEWS: Secretary Dole Announces Final Electrical Safe Work-Practice Rules That Are Expected To Save 78 Lives Annually USDL: 90-404

CITATIONS

Statutory: Occupational Health and Safety Act of 1970
Regulatory: 55 FedReg 31984 (August 6,1990)
CFR Code: 29CFR 1910 Subpart S

Should you need any assistance regarding your compliance obligations relative to the above or have any comments or questions, please address them to Richard H. LaLumondier, Associate Technical Director, Compliance and Regulatory Assistance (202-371-5223).

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