BEFORE THE IOWA DIVISION OF LABOR SERVICES

In re Petition by the Iowa Association of Electric Cooperatives Declaratory Order

for a Declaratory Order on 29 CFR 1926.960(g)(5) }

and 1910.269(l)(8)(v)

PETITION

The Iowa Association of Electric Cooperatives (IAEC) petitioned the Labor Commissioner for a Declaratory Order concerning the use of short-sleeved fire-resistant shirts to be worn under electric linemen's protective rubber sleeves. The Petition states that the IAEC is currently made up of 34 distribution and 7 generation and transmission rural electric cooperatives (RECs) that serve more than 650,000 Iowans in more than 200,000 rural homes, farms and businesses in all 99 counties. Members of the association are subject to the Iowa Occupational Safety and Health Act.

The question presented was: "Will Iowa's rural electric cooperatives be in compliance with 29 CFR 1910.269(l)(8)(v) and 29 CFR 1926.960(g)(5) if they adopt a heat stress program which includes a requirement that linemen exposed to electric arcs wear properly arc-rated FR short-sleeved shirts and the class of rubber insulating gloves with protectors and rubber insulating sleeves (Classes 0-4) appropriate for the voltages present and which cover the entirety of a linemen's arms?"

DISCUSSION

The applicable regulations are as follows:

29 CFR 1926.960(g)(5) Arc rating. The employer shall ensure that each employee exposed to hazards from electric arcs wears protective clothing and other protective equipment with an arc rating greater than or equal to the heat energy estimated under paragraph (g)(2) of this section whenever that estimate exceeds 2.0 cal/cm2. **This protective equipment shall cover the employee's entire body**.....(emphasis added).

29 CFR 1910.269(l)(8)(v) The employer shall ensure that each employee exposed to hazards from electric arcs wears protective clothing and other protective equipment with an arc rating greater than or equal to the heat energy estimated under paragraph (l)(8)(ii) of this section whenever that estimate exceeds 2.0 cal/cm2. **This protective equipment shall cover the employee's entire body**.....(emphasis added).

Both NFPA 70E and ASTM F 1506 are referenced as source documents for 29 CFR 1926.960 and 1910.269.

NFPA 70E 2009 Table 130.7(C)(10) Protective Clothing and Personal Protective Equipment (PPE) indicates that long-sleeved shirts need to be worn for Hazard/Risk Category 0 and Arc-rated long-sleeved shirts must be worn for Hazard/Risk Categories 1-4). In addition, under 130.7(C)(12)(d), clothing shall cover potentially exposed areas as completely as possible. Shirt sleeves shall be fastened at the wrists, and shirts and jackets shall be closed at the neck.

A meeting was held on July 13, 2015 at the Iowa Division of Labor to discuss the Petition by IAEC. Representatives from IAEC, IBEW, and Mid American Energy were present. In addition, MidAmerican Energy and Alliant Energy filed written responses to the Petition. Copies of their responses were made available to all parties present, as was the Petition.

IAEC brought personal protective equipment (ppe) to view, including gloves, sleeves, long- sleeved and short-sleeved FR (fire-resistant) shirts. IAEC also brought some photos to show how the ppe was worn on the jobsite.

All parties had the opportunity to express their opinions about this issue. IAEC, MidAmerican Energy and Alliant Energy all indicated their employees do wear short-sleeved FR shirts under their sleeves. IBEW stated they did not condone that their members wear the short-sleeved FR shirts, but they know some members do. However, the majority of their membership wear long -sleeved FR shirts. IBEW believes the long-sleeved shirts provide the best protection. In addition, the IBEW representative present at the meeting demonstrated how wearing the short-sleeved FR shirt underneath the rubber sleeves actually exposed a worker to a hazard of the underarm being exposed, as the short-sleeved shirt "rode up" on the worker when his arms were raised overhead, which is a position that workers are in a good percentage of their time when they are working on overhead power lines. In other words, the short- sleeved FR shirts did not protect the entire body as the IOSHA standards require.

In addition, it was determined that the rubber sleeves do not have an arc rating, and the standard requires this. Apparently no manufacturer makes arc-rated rubber sleeves at this time.

A discussion was also held on the cost of the long-sleeved v. short-sleeved FR shirts. There was general agreement that there was approximately a $50 difference between the short and long-sleeved shirts, with the long-sleeved shirts costing more. It was agreed that the total cost of "gearing the guys up" with the appropriate ppe was at least $2,000.00 per worker for 5 sets of shirts/pants.

The IAEC expressed its concern that workers will suffer more from heat stress with long-sleeved FR shirts. In the summer months in Iowa, temperatures can rise to over 100 degrees and the heat index can make it seem even hotter. Electric linemen have to wear heavy, rubber and leather ppe as well as heavy FR shirts. This can be extremely hot and can create the hazards of heat stress.

OSHA recognized the hazards of heat stress in the preamble to the standards in question, but also provided a range of measures that employers can take to mitigate heat-stress hazards, including: rest breaks, supplying sufficient amounts of water, using cooling vests, supplying ambient cooling, providing shade, and acclimatizing employees to the heat, if possible. (Federal Register, Volume 70 , Page 20,492).

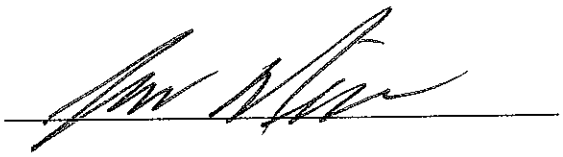
In other words, heat stress can be managed by administrative controls. Electrical hazards such as flames and electric arcs cannot, but employers can provide the necessary ppe to cover the entire body to protect workers.

Everyone agrees that heat stress hazards are a real concern for electric linemen workers in this industry. However, the hazard of arc flash is also very real and involves temperatures over 10,000 degrees. At this level of heat, rubber sleeves may melt, and if there is not a long-sleeved FR shirt underneath, the rubber will melt directly onto the worker's skin. For the best protection and what industry recommends, long-sleeved FR shirts should be required of all electric linemen.

ORDER

Iowa's rural electric cooperatives will not be in compliance with 29 CFR 1910.269(l)(8)(v) and 29 CFR 1926.960(g)(5) if they adopt a program which allows linemen exposed to electric arcs to wear properly arc-rated FR short-sleeved shirts and the class of rubber insulating gloves with protectors and rubber insulating sleeves (Classes 0-4) appropriate for the voltages present and which cover the entirety of a linemen's arms. The rubber insulating sleeves are not arc rated, so the FR short-sleeved shirts underneath are not sufficient protection for linemen when the protective equipment shall cover the entire body. Linemen must wear long-sleeved FR shirts underneath for the safest and best protection per the OSHA standards.

Dated this 10th day of August, 2015.



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USDOL-OSHA

CERTIFICATE OF SERVICE

The undersigned certifies that this Order was served on all above-designated persons or entities on the 10th day of August, 2015 by U.S. Mail.

Gail A. Sheridan-Lucht
Attorney for the Labor Commissioner