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Secretary of Labor,  
Complainant,

v.

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The Boeing Company, d/b/a  
Boeing Commercial Airplane Group -  
Wichita Division,  
Respondent.

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OSHRC Docket No. **97-1007**

Appearances:

Oscar L. Hampton, III, Esquire  
U. S. Department of Labor  
Office of the Solicitor  
Kansas City, Missouri  
For Complainant

Douglas L. Stanley, Esquire  
Boeing Company Airplane Group -  
Wichita Division  
Wichita, Kansas  
For Respondent

### **DECISION AND ORDER**

The Boeing Company, d/b/a Boeing Commercial Airplane Group--Wichita Division, contests a citation issued to it by the Secretary on May 12, 1997. The citation resulted from an inspection conducted by the Occupational Safety and Health Administration (OSHA) from April 18 to April 22, 1997, in response to an electrical accident in which two Boeing employees sustained burns. Item 1 of the citation alleges a serious violation of § 1910.303(b)(1) for failure to keep electrical equipment free from recognized hazards. Item 2 of the citation alleges a serious violation of § 1910.305(e)(1) for failure to install cabinets so as to prevent moisture from entering and accumulating in them.<sup>1</sup>

Boeing argues that the cited standards do not apply to the cited conditions. A hearing was held in this matter on November 25 and 26, 1997. Each party filed a post-hearing brief. For the reasons stated, the violations are vacated.

### **Background**

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<sup>1</sup> The citation originally cited §1926.305(e)(1) for this item. At the hearing, the Secretary moved to amend the citation to allege a violation of §1910.305(e)(1), which contains the same language as the §1926 standard. The Secretary's motion was granted (Tr. 5-6).

Boeing operates a large aircraft manufacturing facility in Wichita, Kansas. Boeing maintains an extensive electrical transmission and distribution system. Boeing accepts power from Kansas Gas & Electric (KG & E) at 138,000 volts (138 kv) at two of its substations: the Boeing Substation and the Stearman Substation (Exh. R-2, R-3). The Stearman Substation operates as the primary supplier of electricity to the Boeing transmission and distribution system, and the Boeing Substation operates as a back-up substation to Stearman. The Boeing and the Stearman Substations transform the power from 138 kv to 69 kv and transmit the 69 kv power to six primary substations. Boeing owns and maintains the 138 kv to 69 kv transformers at the Boeing and Stearman Substations (Tr. 298-301, 318).

The six primary substations are the High Bay Substation, the MPF Substation, the MacArthur Substation, the Generator Substation, the BCS Substation, and the Engineering Substation. These six substations transform the power received at 69 kv to 12.47 kv and transmit the 12.47 kv to over 160 secondary substations located throughout the Boeing facility. The secondary substations transfer the power from 12.47 kv to electrical loads that are usable for equipment, typically 480 volts, and distribute that power to buildings located throughout the Boeing facility (Tr. 302-303, 321).

The High Bay Substation contains five banks of switchgear. The High Bay Substation Bank No. 5 serves twenty secondary substations, which ultimately supply usable electrical power to four separate buildings within the Boeing facility (Tr. 320-324).

On February 27, 1997, Michael Felix, Boeing's facilities manager in the power distribution organization, assigned an electrical crew to inspect the High Bay Substation. The crew consisted of maintenance electricians Douglas Binns and Paul Golden, and electrician specialist James Bazzelle (Tr. 23, 136-138, 178). As specialist, Bazzelle was the supervisor of the group (Tr. 126). Felix assigned the crew to look for moisture that might have accumulated in the switchgear (Tr. 136).

The crew arrived at the High Bay Substation and held a tailgate session (Tr. 67-68). Binns and Bazzelle visually inspected the switchgear. Binns noticed that the door to the E-4 cabinet of the switchgear was rusted and there was water on the inside of the viewing window of the E-4 door (Exh. C-1; Tr. 76, 147).

After completing their visual inspection of the switchgear, Binns and Bazzelle asked Golden to unbolt the door of the E-7 cabinet. Golden did this using a cordless drill (Exh. C-10; Tr. 69).

Binns and Bazzelle noted an accumulation of dirt and dust in the cabinet, which had not been cleaned in six years (Tr. 72).

Golden next used the cordless drill to unbolt the door to cabinet E-4 (Tr. 69). Bazzelle opened the cabinet door with his left hand, pulling the door open from left to right. Bazzelle stood at the edge of the door, which was fully extended. Binns stood behind and to the right of Bazzelle (Tr. 75-76, 78). Binns tapped Bazzelle on the shoulder with his right hand and started to gesture towards the inside of the cabinet. At that moment, the switchgear blew and sent a fireball out towards Binns and Bazzelle (Tr. 79-80).

Bazzelle sustained second-degree burns to his face and neck (Tr. 150). Binns sustained second-degree burns on his right hand and wrist (Tr. 80-81).

#### The Citation

The Secretary alleges that Boeing violated §§ 1910.303(b)(1) and 305(e)(1), which are found in subpart S (“Electrical”) of the § 1910 standards. Item 1 alleges a serious violation of § 1910.303(b)(1), which provides in pertinent part:

Electrical equipment shall be free from recognized hazards that are likely to cause death or serious physical harm to employees.

Item 2 alleges a serious violation of § 1910.305(e)(1), which provides:

Cabinets, cutout boxes, fittings, boxes, and panelboard enclosures in damp or wet locations shall be installed so as to prevent moisture or water from entering and accumulating within the enclosures. In wet locations the enclosures shall be weatherproof.

The Secretary has the burden of proving her case by a preponderance of the evidence.

In order to establish a violation of an occupational safety or health standard, the Secretary has the burden of proving: (a) the applicability of the cited standard, (b) the employer’s noncompliance with the standard’s terms, (c) employee access to the violative conditions, and (d) the employer’s actual or constructive knowledge of the violation (*i.e.*, the employer either knew or, with the exercise of reasonable diligence could have known, of the violative conditions).

*Atlantic Battery Co.*, 16 BNA OSHC 2131, 2138 (No. 90-1747, 1994).

#### Applicability

Boeing argues that the standards found in subpart S of the § 1910 standards do not apply to its facilities and operations. Therefore, Boeing contends, items 1 and 2 must be vacated.

Section 1910.302(a)(1), the scope provision for subpart S states (emphasis added):

The provisions of §§ 1910.302 through 1910.308 of this subpart cover electrical installations and utilization equipment installed or used within or on buildings, structures, and other premises, including:

- (i) Yards
- (ii) Carnivals
- (iii) Parking and other lots
- (iv) Mobile homes
- (v) Recreational vehicles
- (vi) *Industrial substations*
- (vii) Conductors that connect the installations to a supply of electricity, and
- (viii) Other outside conductors on the premises

Section 1910.302(a)(2) provides in pertinent part:

The provisions of § 1910.302 through 1910.308 of this subpart do not cover:

- (v) Installations under the exclusive control of electric utilities for the purpose of communication or metering; or for the generation, control, transformation, transmission, and distribution of electric energy located in buildings used exclusively by utilities for such purposes or located outdoors on property owned or leased by the utility or on public highways, streets, roads, etc., or outdoors by established rights on private property.

Boeing concedes that reading these two sections together “creates the impression” that industrial substations are covered and installations under the exclusive control of electric utilities are excluded (Boeing’s brief, p. 12). Boeing contends, however, that the cited standards are inapplicable to its electrical system. Boeing asserts that the standard that actually covers the cited condition is § 1910.269. Boeing argues that the preambles and histories of subpart S and § 1910.269 must be considered in order to gain an accurate understanding of the sections’ coverage.

The electrical standards contained in subpart S were initially adopted from the National Electric Code (NEC) pursuant to a provision of the Occupational Safety and Health Act of 1970 (Act). The Act’s provision allowed the Secretary to adopt national consensus and pre-existing federal regulations without using established rulemaking procedures. OSHA incorporated the NEC by

reference and by direct adoption of certain provisions into subpart S. In 1979, OSHA decided to revise subpart S. Following notice and comment, OSHA included all the relevant provisions of the NEC in the text of the regulations, eliminating the need to incorporate the code by reference. See 46 Fed. Reg. 4034 (1981).

In 1994, the Secretary promulgated § 1910.269 in order to provide protection to “[e]mployees performing operations or maintenance work on electric power generation, transmission, or distribution installations.” 59 Fed. Reg. 4320, 4322 (1994). The provisions contained within § 1910.269 are based upon the National Electrical Safety Code (NESC).

Section 1910.269(a)(1) provides:

This section covers the operation and maintenance of electric power generation, control, transformation, transmission, and distribution lines and equipment. These provisions apply to :

(A) Power generation, transmission, and distribution installations, including related equipment for the purpose of communication or metering, which are accessible only to qualified employees.

The scope provision of § 1910.269 does not differentiate between those installations operated by a utility and those operated by an industrial facility. A note within § 1910.269 states:

The type of installations covered by this paragraph include the generation, transmission, and distribution installations of electric utilities, as well as equivalent installations of industrial establishments. Supplementary electric generating equipment that is used to supply a workplace for emergency, standby, or similar purposes only is covered under subpart S of this part.

The language of § 1910.269(a)(1) and the accompanying note indicate that § 1910.269 governs installations of industrial facilities which are equivalent to those used by electric utilities and which are maintained by qualified employees.

The 1981 preamble to subpart S states that there is no overlap or conflict between the NESC (which became § 1910.269) and subpart S (46 Fed. Reg. 4034, 4039):

The NEC and OSHA’s subpart S do contain provisions which are appropriate for most industrial substations. Such facilities are included in the scope of this standard, because they vary widely in the power and voltage involved and in the type of equipment that is used.

While some industrial facilities may only include utility type equipment and operate similarly to a utility, this is not the general case. As a rule utilities operate at much higher voltages and with specially trained employees. In the situations where the industrial operation may be the same as that of an electric utility, there would not be an overlap since [§ 1910.269] contains the provisions which would apply and neither the NEC nor OSHA's subpart S contain provisions which would be applicable. However, since provisions are included in these standards which are appropriate for most industrial substations, these installations have been included in the scope of the final rule.

According to the preamble to subpart S, where an industrial substation operates at voltages equivalent to those used by utilities and is serviced by specially trained personnel, subpart S does not apply. The preamble to § 1910.269 complements the preamble to subpart S (59 Fed. Reg. 4320):

The existing electrical regulations contained in subpart S of the General Industry Standards address electric utilization systems--installations of electric conductors and equipment which uses electric energy for mechanical, chemical, heating, lighting, or similar purposes. Subpart S protects most employees from the hazards associated with electric utilization equipment and with the premises wiring that supplies this equipment. However, subpart S does not contain requirements protecting employees from hazards arising out of the operation or maintenance of electric power generation, transmission, or distribution installations.

The Secretary argues that, because Boeing's electrical system does not generate power (Tr. 213-215, 386-387), § 1910.269 cannot apply to it. Appendix A-1 to § 1910.269 provides a flow chart. The initial question the flow chart asks is, "Is this an electric power generation, transmission, or distribution installation?" If the answer is "no," the reader is directed to §§ 1910.302 through 1910.308. If the answer is "yes," the next question the flow chart asks is, "Is it a generation installation?" If the answer is "yes," the reader is directed to § 1910.269(v) ("Power generation"). If the answer is "no," (as in the instant case) the reader is directed to § 1910.269(u) ("Substations"). As the flow chart makes clear, § 1910.269 contemplates application to electrical systems that do not generate power. The Secretary is incorrect in asserting that an installation must generate power in order to be covered by § 1910.269.

The issue of whether § 1910.269 applies to Boeing's electrical system is determined by two criteria: whether Boeing's system uses voltages equivalent to those used by utilities, and whether its system is accessible only to specially trained personnel. The answer to both of these questions is yes.

An electrical transmission system delivers electrical power at high voltages to a substation where it is transformed to a lower voltage level and distributed to the end users. An electrical distribution system delivers the electrical power to the end user at usable voltage levels (Tr. 456-457). The 69 kv portion of Boeing's electrical system is an electrical transmission system. The 69 kv portion consists of the Stearman and Boeing Substations and the 69 kv side of the transformers at the six primary substations (Tr. 453). The 12.47 kv portion of Boeing's electrical system is an electrical distribution system. It consists of the 12.47 kv side of the transformers at the six primary substations and the 12.47 kv side of the transformers within the 160 secondary substations that transform the power to usable levels. These voltages are equivalent to those used by utilities (Tr. 453-457).

Boeing hires electrical power distribution employees to work on its electrical system. The employees must be qualified electricians and they are required to take Boeing's power distribution safety course (Exh. R-20, R-23, Tr. 328-333). The minimum requirements for job applicants include "completion of recognized power instruments and control or mechanical apprenticeship, plus five years related work experience, preferably with a utility company" (Exh. R-23).

Boeing meets the criteria for coverage under § 1910.269, rather than the standards found in subpart S. The cited standards do not apply to Boeing's electrical system. Items 1 and 2 are vacated.

#### FINDINGS OF FACT AND CONCLUSIONS OF LAW

The foregoing decision constitutes the findings of fact and conclusions of law in accordance with Federal Rule of Civil Procedure 52(a).

#### ORDER

Based upon the foregoing decision, it is hereby ORDERED that:

Items 1 and 2 of Citation No.1, alleging serious violations of §§ 1910.303(b)(1) and 1910.305(e)(1), are vacated and no penalties are assessed.

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NANCY J. SPIES  
Judge

Date: September 14, 1998