United States of America
OCCUPATIONAL SAFETY AND HEALTH REVIEW COMMISSION
1120 20th Street, N.W., Ninth Floor
Washington, DC 20036-3457

SECRETARY OF LABOR, Complainant, v. O'CONNELL ELECTRIC COMPANY, INC. Respondent.	:	OSHRC DOCKET NO. 09-2035

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BEFORE: John H. Schumacher,
Administrative Law Judge

DECISION AND ORDER

This proceeding arises under the Occupational Safety and Health Act of 1970, as amended, 29 U.S.C. § 651 *et seq*. ("the Act"). Following an accident at a worksite at the State University of New York at Buffalo, Amherst Campus ("SUNY"), the Secretary issued a citation to O'Connell Electric Co., ("O'Connell" or "respondent") alleging several serious violations of the Act. Respondent filed a timely Notice of Contest pursuant to section 10(c) of the Act, bringing this matter before the Occupational Safety and Health Review Commission ("the Commission"). After filing her initial complaint, the Secretary filed an amended complaint alleging eight serious violations of the Act and proposing total penalties of $50,400. Respondent

filed its timely Answer and a hearing was held in Buffalo, New York from October 18-20, 2010. Both parties have filed post-hearing briefs and this matter is ready for disposition.

BACKGROUND

Beginning on May 15, 2009, SUNY planned a scheduled electrical shutdown so it could remove and replace metal clad switchgear in the "Adjacent Room" located in the basement of Baldy Hall, a facility which also housed classrooms (Tr. 36-37). O'Connell was hired to remove all the switching gear in the in the Adjacent Room. This required removal of all the wiring and conduits, the disconnection of bus ducts, its replacement with new equipment, and eventually the reconnection of all the wiring, conduit and bus ducts (Tr. 37). Because the work required an electrical shutdown, SUNY decided to add a preventive maintenance project on the switches and transformers located in the Vault Room, which was also located in the basement of Baldy Hall. Both rooms shared a common doorway which facilitated travel between them (Tr. 36).

The equipment in the Baldy Hall "Vault Room" is part of the SUNY Buffalo Campus Utility System (Tr. 451). Electrical power is provided by a private utility company and the SUNY Buffalo Campus Utility System distributes this power to various buildings on the campus. (Tr. 447-448). The Vault Room contains two circuits, 53A and 25B. Circuit 25B is fed through switches S1 and S4, while circuit 53A is fed through switches S2 and S3. The University did not want a total electrical shutdown and therefore required that circuit 25B remain energized. (Tr. 51, 86-87). Therefore, only switches S2 and S3 were de-energized and these were the only switches that employees were authorized to work on during the day in question.

On May 16, 2009, before the O'Connell crews arrived, the utility company opened the 53A switch in nearby O'Brian Hall, which fed electricity to Baldy Hall, so O'Connell could perform its work. The utility placed their locks and isolation devices on the switches. However, they gave O'Connell no guarantees regarding the de-energized status of any of the switches, which meant that O'Connell had to test the circuits and switches to determine their safety (Tr. 376-377, 379). In order to re-energize the 53A switches, the University would have to remove its lock and keys. The actual re-energizing would be performed by the University (Tr. 377-378).

The Adjacent Room

The switchgear in the Adjacent Room was housed in large metal cabinets where they

were attached to "bus ducts" that fed them the electricity that powered the switchgear (Tr. 151-152, 161). These bus ducts ran from the Vault Room to the Adjacent Room and powered the switches and transformers in both rooms (Tr. 151). In order to remove and replace the switchgear, respondent had to remove all of the wiring, pipes and conduits that formed the core and disconnect the switchgear from the bus ducts in the ceiling (Tr. 37, 135-138).

O'Connell hired a rigging company to remove the metal cabinets and the old switchgear out of the Adjacent Room and transport the new cabinets and switchgear into the room (Tr. 367).

The backup feed from nearby O'Brian Hall to the Adjacent Room was deactivated and the switch in O'Brian Hall where it was deactivated was locked and tagged before the crew arrived at the site on May 16, 2009 (Tr. 87, 339-340). Grounds were installed on the downstream side of the switch where the backup feed was deactivated (Tr. 87, 339).

After the sources of electrical power were locked out and tagged and the grounds installed, the busses and bus ducts running from the transformers in the Vault Room to the switchgear in the Adjacent Room were disconnected from the switchgear in the Adjacent Room and were dismantled (Tr. 154, 158, 171). The busses and bus ducts running from the backup feed in O'Brian Hall to the switchgear in the Adjacent Room were also disconnected from the switchgear in the Adjacent Room and were dismantled (Tr. 154-155). The disassembly of busses and bus ducts was completed before either the Adjacent Room crew or the Vault Room crew arrived on the site on May 16, 2009 (Tr. 135, 171). The members of the Adjacent Room crew could see that these busses were disconnected and suspended from the ceiling (Tr. 137, 154-155).

Four employees were assigned to work in the Adjacent Room: Roman Solecki, Kevin Bacon, Jim Fleck and Mike Reynolds. These employees reported for work on 5:00 a.m. on Saturday, May 16, 2009 (Tr. 38). Before they began work, O'Connell foreman, Kevin Schoenthal held a safety meeting with the crew (Tr. 38, 141). The meeting lasted between 15 minutes and half an hour and covered thirteen topics listed on O'Connell's Safety Meeting Sheet (Tr. 38, Ex. P-011, Ex. P-023, p.10). Among the topics discussed were switching, testing and grounding procedures, appropriate equipment needed for the tasks, personal protective equipment ("PPE"), and a reminder that everyone was responsible for testing all equipment before they made contact themselves, even if the equipment was previously tested (Ex. P-011). As part of the safety meeting, Schoenthal took the Adjacent Room crew on a tour of the Vault Room (Tr. 319). The purpose of the tour was to show the employees where all the equipment was de-energized, and

where it was locked out for the project (Tr. 38). At the conclusion of the meeting, the Adjacent Room crew signed the Safety Meeting Sheet as proof of their attendance (Tr. 230).

Foreman Schoenthal instructed Kevin Bacon to test the equipment in the Adjacent Room before the crew started their shift because he was concerned about a potential electrical feedback from another part of the building traveling into and affecting equipment in the Adjacent Room (Tr. 137).

With the old equipment disconnected from all sources of electrical power, the Adjacent Room crew proceeded to completely disassemble the old switchgear and began assembly of the new switchgear (Tr. 199-202). However, at no time during the Adjacent Room crew's shift on May 16, 2009 were the busses that supplied power to the switchgear in the Adjacent Room reconnected (Tr. 141, 171). Therefore, throughout the shift, the switchgear remained de-energized. Moreover, without being reconnected to the busses, the switchgear could not become energized as the result of the actuation of a de-energizing point, such as the de-energized circuits in the Vault Room, or the switch in O'Brian Hall that deactivated the 53A circuits.

After the safety meeting ended, Schoenthal introduced a group lockbox for the crews of both the Adjacent Room and the Vault Room (Tr. 53, 263, 291, 309, 317, Ex. P-23, p.8). Under the group lockbox procedure, the Yale key that opened all the doors to cabinets S1-S4 and transformers 1 and 2 in the Vault Room was placed in a box. Each employee would then put his lock on the outside of the box. As a result, the box could not be opened until every employee removed his personal lock (Tr. 284, 330). The procedure was not made mandatory. Therefore, some of the employees did not place their lock on the group lockbox (Tr. 128, 138, 284). Moreover, at some point, foreman Schoenthal took the Yale key out of the lockbox and handed it to a member of the Vault Room crew (Tr. 333).

The key remained out of the box until the accident occurred (Tr. 333). However, Schoenthal also instituted a mandatory sign-in/sign-out sheet (Tr. 68, 171-172,) Under this procedure, each employee signs out to verify that he is clear of the site and that all his tools and personal effects have been removed (Tr. 119-120, 132, 171, 179, 237, 273, 348). Until all the crew members have signed out, the system could not be re-energized (Tr. 347-348).

The Vault Room

The preventative maintenance project in the Vault Room on May 16 involved cleaning,

lubricating, inspecting and testing two of the four switches (S2 and S3) and the two transformers (T1 and T2) to ensure that they were in safe operating condition (Tr. 39). There were four switches in the Vault Room that were housed in similar looking cabinets (Tr. 40, 179, Exs. RX 24-26). Just above the access handle of the outer door of each cabinet was a sign with a red background that read "Danger High Voltage." Behind the outer door of each metal cabinet was an inner door through which one could see the switchgear. There was a warning sign on each of those inner doors (Tr. 369-371).

These warning signs appeared on the outer and inner doors of each of the cabinets, whether they were energized or not (Tr. 369-371). The Yale key, that was supposed to be placed in the group lockbox, opened the door to each of the four cabinets and the two transformers (Tr. 48-49, 94-95, 335). The key did not control the energizing or de-energizing of any switch. Rather, it only allowed the outer door each of the switches to be opened (Tr. 358). The four switches were followed by the two transformers which also stood next to each other (Tr. 48-49, 94-95, 335, Ex. RX-27).

To maintain power to the other buildings on the campus, switches S1 and S4 remained energized at 34,500 volts (34.5 KV)(Tr. 51, Ex. P-23, p.3). As a result, the employees worked on switches S2 and S3 (circuit 53A), which were in the middle of the row of four switches, while the two end switches (S1 and S4, circuits 25B) remained energized (Tr. 232-233, 246-247, 278, 299-300, 334). The Vault Room crew was instructed to work only on switches S2 and S3 (Tr. 303, 346-347).

Four employees were assigned to work in the Vault Room: [redacted], Jeff Wozniak, James Woodfield and Keith Pastuszynski (Tr. 40-41). These employees started working at approximately 7:00 a.m. on May 16, 2009 (Tr. 41). As with the Adjacent Room crew, foreman Schoenthal held a safety meeting with the Vault Room crew before the start of their shift (Tr. 41, 348). After the meeting, Schoenthal took the crew on a tour of Baldy and O'Brian Halls. He showed them the equipment he had grounded and locked on (Tr. 124, 246). The purpose of the tour was to show everyone that the switches on the equipment they were to work on were opened and de-energized (Tr. 246, 250-251).

During the meeting, Schoenthal removed his locks and tags from switch cabinets S2 and S3, the switches that the employees were scheduled to work upon (Tr. 356). Before the crew began its work, Woodfield put on the PPE that he kept in his car and tested one of the de-

energized 53A switches to verify that it was de-energized. Woodfield performed his task using a 12-inch long proximity voltage detector attached to the end of a six-foot long nonconductive "hot stick" (Tr. 297). The testing confirmed that no voltage was present (Tr. 242). Woodfield then applied protective grounds to each of the three phases on the line and the load sides of the switches (Tr. 45, 239). Upon completion of the work on S3, the crew removed the grounds and closed the cabinet (Ex. P-28). They then placed grounds on the switch in cabinet S2 (Tr. 48-49, Ex. P-28-P-29). The crew then broke for lunch.

The Accident

After lunch, when work on S2 was complete, [redacted] and Wozniak removed the grounds from S2 and closed its cabinet (Tr. 362, Exs. P-28, 29). [redacted] was in front of S2 picking up his tools, while Wozniak went to one of the transformers to assist Pastuszynski and Woodfield with maintenance tasks (Ex. P-28). Foreman Schoenthal was summoned to address a problem that occurred with the transformer. The door to the transformer was open, obscuring the view of [redacted] from the rest of the crew (Ex. P-28).

For some unknown reason, [redacted] opened the door to and entered S4, a 25B switch, which was not within the Vault Room crew's scope of work. An arc-flash occurred, knocking [redacted] five feet across the room. He suffered a two-to-three inch laceration to the back of his head and second and third degree burns to his face, shoulders, neck, torso, arms and hands. His co-workers put out the fire that engulfed him and summoned emergency personnel who transported him to a local hospital. In the rescue, Woodfield suffered burns on his left arm, but refused treatment (Exs. P-16, P-28).

O'Connell undertook an internal investigation of the accident. It concluded that Schoenthal did nothing that contributed to the accident. It also concluded that [redacted] was solely responsible for the accident, and he was subsequently disciplined (Tr. 176-177, Ex. P-35).

DISCUSSION

In her amended complaint, the Secretary alleges eight individual violations of the Act. Retaining the numbering from the original citation, the remaining items may be grouped into several general categories: PPE (items 2, 5 and 8); work practices and warning signs (items 4b, 13); Lockout/Tagout ("LOTO") (items 11, 12); and workplace hazard assessment (item 3).

Although the citation did not group the items by topic, they will be so analyzed here, rather than in numerical order.

I. *Applicability of the Standards at §§1910.331 through 1910.335.*

To establish a violation of an OSHA standard, the Secretary must establish that: (1) the standard applies to the facts; (2) the employer failed to comply with the terms of that standard; (3) employees had access to the hazard covered by the standard, and (4) the employer knew or could have known of the existence of the hazard with the exercise of reasonable diligence. *Atlantic Battery Co.,*16 BNA OSHC 2131, 2138 (No. 90-1747, 1994).

As a preliminary matter, the Secretary alleged various violations of standards found at 29 C.F.R. §§1910.331 through 1910.335 (Items 4b, 8, 3, 13). O'Connell raises issues regarding the applicability of those standards. Although the Secretary, in her amended complaint, pled violations of alternative standards for each of these violations, issues regarding the applicability of §§1910.331 through 1910.335 run as a common thread throughout this case. Rather than revisit the issue for each of the four relevant items, the matter will be resolved here.

Subpart S sets forth specific standards applicable to electrical work. Within Subpart S the standards at §§1910.331 through 1910.335 set forth "Safety-Related Work Practices." However, §1910.331(c)(1) states:

> (c) Excluded work by qualified persons. The provisions of §§ 1910.331 through 1910.335 do not apply to work performed by qualified persons on or directly associated with the following installations:
> (1) Generation, transmission, and distribution installations. Installations for the generation, control, transformation, transmission, and distribution of electric energy (including communication and metering) located in buildings used for such purposes or located outdoors.

O'Connell argues that this exemption applies to the crew that was working in the Vault Room. First, it alleges that the Vault Room crew were all "qualified persons" within the meaning of the standard. Second, it argues that the Vault Room qualified as a building and was used for the transmission and distribution of electrical energy.

The Secretary claims that the exemption is not applicable on three grounds: (1) The employees' failure to conduct an arc hazard analysis and their failure to wear appropriate PPE demonstrates that they were not "qualified persons;"

(2) The facility was not a facility for the "generation, control…and distribution of electric energy;" and

(3) The exclusion applies only to work "on or directly associated with" generation, transmission, distribution, and transformation equipment, and that the Vault Room crew was engaged only in "routine maintenance."

A. Qualified Persons

The Secretary asserts that Woodfield was not a qualified person because (1) he failed to conduct an arc flash hazard analysis and denied that one was necessary; and (2) he did not know what appropriate PPE he needed to wear.

1910.399 defines a "qualified person" as:

> One who has received training in and has demonstrated skills and knowledge in the construction and operation of electric equipment and installations and the hazards involved.

Note 1 to the definition of "qualified person" states:

> Whether an employee is considered to be a "qualified person" will depend upon various circumstances in the workplace. For example, it is possible and, in fact, likely for an individual to be considered "qualified" with regard to certain equipment in the workplace, but "unqualified" as to other equipment. (See 1910.332(b)(3) for training requirements that specifically apply to qualified persons.)

Note 2 to the definition of "qualified person" states:

> An employee who is undergoing on-the-job training and who, in the course of such training, has demonstrated an ability to perform duties safely at his or her level of training and who is under the direct supervision of a qualified person is considered to be a qualified person for the performance of those duties.

1910.332(b)(3) further defines a "qualified person" as:

> *Additional requirements for qualified persons*. Qualified persons (i.e., those permitted to work on or near exposed energized parts) shall, at a minimum, be trained in and familiar with the following:
>
> (i) The skills and techniques necessary to distinguish exposed live parts from other parts of electric equipment,
>
> (ii) The skills and techniques necessary to determine the nominal voltage of exposed live parts, and
>
> (iii) The clearance distances specified in Sec. 1910.333(c) and the corresponding voltages to which the qualified person will be exposed.

> Note 1: For the purposes of Sec. Sec. 1910.331 through 1910.335, a person must have the training required by paragraph (b)(3) of this section in order to be considered a qualified person.
>
> Note 2: Qualified persons whose work on energized equipment involves either direct contact or contact by means of tools or materials must also have the training needed to meet Sec. 1910.333(c)(2).

The additional factor set forth in 1910.333(c)(2) provides:

> (2) Work on energized equipment. Only qualified persons may work on electric circuit parts or equipment that have not been deenergized under the procedures of paragraph (b) of this section. Such persons shall be capable of working safely on energized circuits and shall be familiar with the proper use of special precautionary techniques, personal protective equipment, insulating and shielding materials, and insulated tools.

I find that the crew working in the Vault Room met the requirements to be "qualified" persons within the meaning of the above standards. Woodfield has been a licensed and certified Master Electrician since 1994 (Tr. 216). To earn that designation, he had to pass a test that proved he had the ability to do the work completely (Tr. 216). Prior to that, he completed an apprenticeship program with the International Brotherhood of Electrical Workers (IBEW) in 1994 (Tr. 217). He received on the job training for the last 3 years with O'Connell (Tr. 218). He continued to receive training after receiving his master status. He has had arc class training (Tr. 219) and has had several jobs in de-energized maintenance and high voltage experience (Tr. 220-221, Ex. RX-5, Ex RX-6). He took the OSHA 10-hour course twice; once as a journeyman and once as an apprentice (Tr. 223). He has worked on at least nine jobs where did de-energized shutdowns which involved the same kinds of tasks at Baldy Hall (Tr. 224). There were another ten times where he was hired to verify that new equipment was operating correctly and to test vaults in order to put them into service for the transmission and distribution of electrical power (Tr. 225). At the time of this incident, Woodfield had been working with electricity for 24 years (Tr. 223).

The Secretary's argument that Woodfield's failure to conduct an arc-flash analysis and the improper use of PPE disqualifies him from "qualified person" status, essentially implies that whenever an electrician does anything contrary to code/accepted procedure *ipso facto* establishes

that he is not a "qualified person." This overlooks the simple truth that well-trained and competent employees will occasionally err, be it the result of laziness, mistake, inadvertence, or shortcut. The record establishes that Woodfield is a well-trained and highly experienced Master Electrician with a good comprehension of arc-flash analysis (Tr. 209-211). Therefore, I find that Woodfield was a "qualified person."

Similarly, I find that the other crew members of the Vault Room crew to be "qualified persons."

Jeff Wozniak

Jeff Wozniak has been working as an electrician for 21 years (Tr. 268). He completed his apprenticeship training program and is now a journeyman electrician (Tr. 267, 268, Ex. 44 p. 13). Being a journeyman means that the person completed training and is qualified to do electrical work. He has taken the OSHA 10-hour and 30-hour courses and receives training on a monthly basis (Tr. 278). Wozniak also took an electrical safety and maintenance seminar in Auburn NY in January 2009 (Tr. 280).

Keith Pastuszynski

Keith Pastuszynski has been doing electrical work for 13 years (Tr. 296). He began working for O'Connell in 2005 and completed his 5-year apprenticeship program in 2007 (Tr. 287, 295-296, Ex. RX45, pp. 2-3) and is now a journeyman electrician (Tr. 337). He has taken the OSHA 10-hour training course, and has been trained in relay maintenance for electro-mechanicals and microprocessor based relays and ground testing. He has also taken seminars in Lockout/Tagout ("LOTO") and arc-flash (Tr. 297).

Kevin Schoenthal

Foreman Kevin Schoenthal has been employed by O'Connell since 1999. Prior to that, he was employed by Industrial Power & Lighting since 1992. He completed the 5-year apprenticeship program, is a journeyman electrician (Tr. 336, 337, (Ex. 45 pp. 4-5) and is considered by O'Connell to be one of their qualified people (Tr. 366).

[redacted]

[redacted] is qualified as a journeyman electrician (Tr. 183, Ex. RX-9). He completed substation safety training through Rochester Gas and Electric, permitting him to work unattended in substations (Tr. 183). He completed de-energized maintenance and arc-flash training (Tr. 183). He is also AEMC Ground Testing Certified and is a TEGG-Certified Technician (Ex. RX-9, 10). [redacted] completed the OSHA 10-hour training course in Construction Safety and Health (Ex. RX-11).

Having reviewed the credentials of the Vault Room crew and, except for [redacted], having had the opportunity to hear and assess their testimony, I conclude that, by way of training and experience, the Vault Room crew were all "qualified persons" within the meaning of Subpart S.

B. Nature of the facility

The Secretary argues that the use of the conjunctive "and" in §1910.331(c)(1) means that, to qualify for the exemption set forth in §1910.331(c)(1), the facility must be used for every activity set forth in §1910.331(c), i.e. the facility must be engaged in the control, transformation, transmission, distribution *and* generation of electric energy. Because the Vault Room in Baldy Hall did not generate electricity, the Secretary contends that the exemption does not apply. I am not persuaded that the use of "and" was not meant to require that, to qualify for the exemption, the facility must be engaged in each and every activity listed. That the exemption did not intend to be an inclusive list is demonstrated by accompanying notes 1 and 3 to 1910.331(c):

> Note 1: Work on or directly associated with installations of utilization equipment used for purposes other than generating, transmitting, *or* distributing electric energy (such as installations which are in office buildings, warehouses, garages, machine shops, or recreational buildings, or other utilization installations which are not an integral part of a generating installation, substation, or control center) is covered under paragraph (a)(1) of this section.
>
> Note 3: Work on or directly associated with generation, transmission, *or* distribution installations includes:
> (1) Work performed directly on such installations, such as repairing overhead or underground distribution lines or repairing a feed-water pump for the boiler in a generating plant.
> (2) Work directly associated with such installations, such as line-clearance tree trimming and replacing utility poles.
> (3) Work on electric utilization circuits in a generating plant provided that:

(A) Such circuits are commingled with installations of power generation equipment or circuits, and
(B) The generation equipment or circuits present greater electrical hazards than those posed by the utilization equipment or circuits (such as exposure to higher voltages or lack of overcurrent protection).

(Emphasis added)

In "Notes" 1 and 3, the SOL uses "or" when describing the types of activities the facilities much engage in. Particularly instructive is Note 3, which explicitly states that line-clearance tree trimming and replacing of utility poles can qualify for the exemption. Obviously, such lines, while involved with the transmission and distribution of electricity, have nothing to do with its generation.

I also find no merit in the Secretary's assertion that the Vault Room was only an area in the basement of Baldy Hall, which was essentially filled with classrooms and, therefore, did not qualify as a "building" within the meaning of the exemption. Lawrence Poturalski, an engineer in the SUNY Buffalo facilities department, testified that the equipment located in the Vault Room was designed for the transformation, transmission, or distribution of electrical power (Tr. 451). While Baldy Hall is clearly a building, the issue is whether the "building" must be used exclusively for the listed purposes, or whether it can be, as here, a shared-use facility.

The exemption which states that the listed activities must be "located in buildings used for such purposes…" can be read both ways. However, the scope provision at §1910.331(a) is instructive:

(a) Covered work by both qualified and unqualified persons. The provisions of §§1910.331 through 1910.335 cover electrical safety-related work practices for both qualified persons (those who have training in avoiding the electrical hazards of working on or near exposed energized parts) and unqualified persons (those with little or no such training) working on, near, or with the following installations:
(1) Premises wiring. Installations of electric conductors and equipment within or on buildings or other structures, and on other premises such as yards, carnivals, parking, and other lots, and industrial substations…

Moreover, that the scope provision makes §§1910.331 through 1910.335 applicable to installations of electric conductors and equipment "within or on buildings or other structures" clearly implies that these buildings may have multiple uses beyond the generation, transmission or distribution of electricity. I find no reason why the term "building" used in the scope provision and the exemption should not be read in parallel. Thus, if the provisions of §§1910.331 through

1910.335 can apply to the basement at Baldy Hall because it is a qualified "building," then it is also a building subject to the exemption, when work is performed by qualified persons.

Indeed, the Secretary has not articulated any reason why the building must be exclusively for electrical functions, or any reason why the purposes of the standard would be compromised if the exemption encompassed buildings used for multiple functions. Moreover, the Secretary has issued a Letter of Interpretation that suggests that multiple use buildings can qualify for the exemption.

That letter was not introduced into evidence, but may be found at: http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=22236 However, I take official notice of this public document. *See Administrative Procedure Act, 5 U.S.C. §556(e).*The letter involves an inquiry where a facility was used both for distribution activities (covered under §§1910.331 through 1910.335) and utilization activities (which are not covered under §§1910.331 through 1910.335). The employer sought guidance regarding whether the facility was covered under §§1910.331 through 1910.335 or other parts of the electrical standards (specifically 29 C.F.R. §1910.269). The Secretary replied that:

> OSHA is concerned that using different work practices in these examples could lead to confusion for employees working on them. This confusion could result in serious accidents. In situations such as these, an employer would be expected to determine that these closely related installations are all either utilization or distribution and then require employees working on them to meet the work practice requirements of Subpart S or §1910.269, respectively, so as to have consistent work practices. Employers who do not adopt consistent work practices for working on the two "different" buses face the possibility of being cited for violation(s) of §1910.269, 1910 Subpart S or the general duty clause of the OSH Act if the inconsistencies pose hazards to employees.

Notably, nothing in the letter suggests that the facility should be disqualified from being covered under §§1910.331 through 1910.335 on the grounds that it was not being used exclusively for the relevant electrical activities or implied that the facility could not be exempt from §§1910.331 through 1910.335 because it was a multi-use facility. Rather, the Secretary clearly stated that the employer needed to select compliance with either §§1910.331 through 1910.335 or §1910.269 simply to maintain consistency in the work practices.

Therefore, I find that the Vault Room was located in a building within the meaning of the exemption set forth at §1910.331(c)(1).

C. Nature of the Work

The Secretary asserts that Vault Room crew was engaged only in preventative maintenance and repairs. Therefore, she asserts, the employees were not engaged in work "on or directly associated with generation, transmission, or distribution installations." According to the Secretary, the type of activities covered by the exemption would be (1) work performed directly on such installations, such as repairing overhead or underground distribution lines or repairing a feed water pump for the boiler in a generating plant; (2) work directly associated with such installations, such as line clearance-tree trimming and replacing utility poles; and (3) work on electric utilization circuits in a generating plant. 29 C.F.R. §1910.331(c)(1), n. 3

I am not persuaded. What the Secretary considers simple maintenance work must be viewed in the context of the totality of the work which took place in Baldy Hall. This was more than a mere maintenance project. Major pieces of equipment were being replaced in the adjacent room. As part of this project, SUNY found it advisable to do substantial maintenance and adjustment to the switching gear in the Vault Room. The cleaning and testing of the Vault Room equipment was an integral part of the major replacements in the Adjacent Room. As such, the work in the Vault Room went well beyond a routine maintenance project, such as would be the case with work associated with a regularly scheduled maintenance program. If clipping trees around a power line falls within the exemption as "work directly associated" with electrical installations, certainly the work taking place in the Vault Room at Baldy Hall would be similarly qualified. I also note that O'Connell chose a crew that who were all certified at the journeyman or master electrician level; hardly the type of crew one would expect to be assembled for work that was merely routine maintenance.

Accordingly, I conclude that the exemption set forth at §1910.331(c)(1) applied to work being done by the qualified crew in the Vault Room of Baldy Hall and, therefore, that the standards set forth at §§1910.331 through 1910.335 do not apply.

I note, however, that for each of the items that alleged a violation of a standard in §§1910.331 through 1910.335, the Secretary, in her Amended Complaint, alleged violations of alternative standards. Therefore, the status of those items will be resolved by determining whether the Secretary established violations of those alternative standards.

II. *Personal Protective Equipment (PPE)*

Facts

At the beginning of the shift, Foreman Schoenthal instructed his employees to wear "appropriate" PPE (Tr. 58, 60). It was Schoenthal's opinion that the employees were well trained and experienced and, therefore, would know what type of PPE was appropriate for the job (Tr. 60). Woodfield testified that he retrieved his PPE from his car, that the suit he wore was the only one available and that he couldn't recall its rating (Tr. 212-213). Moreover, he testified that he was the only employee who brought a protective suit into the Vault Room (Tr. 212).

The Compliance Officer ("CO") testified that the gloves worn by Woodfield were rated for 20KV (Tr. 46). He also testified that the Woodfield should have worn leather protectors over his gloves (Tr. 65). The CO testified that he never asked and was not told by Woodfield that he was wearing leather protectors (Tr. 115). However, Woodfield testified that his gloves were equipped with the leather covering (Tr. 239, 254). NFPA 70E states that leather protectors worn over insulating rubber gloves provide sufficient protection against arc-flash (Ex. RX-35).

When he tested and grounded the equipment in the Vault Room, Woodfield wore, a face shield rated at 12 calories/cm^2 attached to his hardhat (Tr. 44, Exs. P-38, pg. 5-6; P-39, p.27). This was considered Class 2 protection (Tr. 130, 177).

Respondent introduced the testimony of its expert, Douglas Strang, an electrical engineer with a Master's Degree in Industrial Engineering (Tr. 382). Strang testified that, using the "Lee Equation" to calculate the effect of an arc-flash, Woodfield was outside the range of potential injury (Tr. 419). The Secretary attempted to rebut Strang's testimony by calling its expert, William DeWitt, who has a Master's Degree in Electrical Engineering. DeWitt would not accept the accuracy of the "Lee Equation" when calculating the range of an arc-flash in a confined space, such as a switch cabinet. DeWitt testified that one of the recognized weaknesses of the "Lee Equation" is its failure to calculate the magnifying effect of an arc-flash blast in a confined space. Rather, it is only accurate to calculate the force of an open air arc-flash. For confined spaces, DeWitt uses a different formula which is termed "arc-in-a-box." However, the arc-in-a-box effect has not been tested for voltages above 15 KV (Tr. 460-463). DeWitt explained that because the arc-in-a-box effect has not been tested for voltages above 15K, the computer equations automatically revert to the Lee equation above that voltage (Tr. 463). Although DeWitt attempted to rebut the accuracy of the "Lee Equation" when calculating the effects of an

arc-flash in a confined environment, he did not offer his own calculations.

Item 2

Item 2 alleges that O'Connell violated 29 CFR §1910.132(d)(1)(ii) on the grounds that, an employee in the Vault Room, entered the transformers and load switches, tested for the absence of voltage and applied protective grounds, but was "not informed about the types of PPE that he needed to wear to protect him from the electrical hazards present or likely to be present in this workplace where the potential voltage in the above mentioned equipment was 34,500 volts-ac."

The cited standard states:

> 1910.132 **General requirements.**
>
> * * *
>
> (d) Hazard assessment and equipment selection. (1) The employer shall assess the workplace to determine if hazards are present, or are likely to be present, which necessitate the use of personal protective equipment (PPE). If such hazards are present, or likely to be present, the employer shall:
>
> * * *
>
> (ii) Communicate selection decisions to each affected employee

The Secretary also alleged, in the alternative, a serious violation of 29 CFR §1910.269(a)(2)(ii)(D) on the grounds that employees were not trained and familiar with the proper use of protective gear. That standard provides:

> 1910.269 **Electric power generation, transmission, and distribution.**
>
> (a) General
>
> * * *
>
> (2) Training.
>
> * * *
>
> (ii) Qualified employees shall also be trained and competent in:
>
> * * *
>
> (D) The proper use of special precautionary techniques, personal protective equipment, insulating and shielding materials, and insulated tools for working on or near exposed energized parts of electric equipment.

The Secretary proposed a penalty of $6300 for this violation.

Arguments

Secretary

According to the Secretary, it is undisputed that Foreman Schoenthal only instructed his employees to wear "appropriate" PPE. In response, Woodfield wore Class 2 PPE, when the

conditions called for him to wear Class 4. The Secretary also asserts that Woodfield was not competent to choose the appropriate PPE. Rather than select the proper PPE, he simply put on what he had available in his car. He never made an attempt to ascertain whether the PPE in his possession was adequate protection in the event of an arc-flash. That other members of the Vault Room crew did not even bring PPE into the room shows a lack of adequate training and underscores O'Connell's responsibility to select the appropriate PPE. The Secretary also points out that the Commission has said that "employers cannot count on employees' common sense, experience, training by former employers or a union to preclude the need for specific instruction." *Par Electrical Contractors, Inc.*, 20 BNA OSHC 1624 (No. 99-1520, 2004))

Respondent

O'Connell points out that Foreman Schoenthal communicated the need to wear appropriate PPE, and before the job began, explained the nature of work. Woodfield was trained and competent in the proper use of PPE. He had 20 years of experience as an electrician and has been a master electrician since 1993. He also had classroom training and training in arc-flash hazards.

The Secretary's position that an employer cannot rely on an experienced electrician to select the appropriate PPE as a job unfolds has been squarely rejected. *Capital Electric Line Builders of Kansas, Inc. v. Marshall,* 678 F.2d 128, 131 (10th Cir. 1982). Also in *El Paso Crane & Rigging*, 16 BNA OSHC 1419 (1993) the Commission held that an employer's instructions are not necessarily deficient because they allow employees discretion as to how to proceed, particularly when circumstances are such that no one form of protection is capable of being used every time. Here, the Secretary failed to show that Schoenthal's instructions were insufficient.

Turing to the alternative standard, O'Connell argues that Woodfield, who did the initial testing and grounding of equipment, made his PPE selection decisions upon the particular tasks he performed as work progressed. Woodfield was plainly qualified to make such PPE selections.

Discussion

The duty imposed by 29 CFR §1910.132(d)(1)(ii) is clear. The employer has the explicit obligation to (i) assess the workplace for hazards necessitating the use of PPE; and (ii) communicate its selection decision to each employee. Here, the employer did not communicate a selection decision. Rather, realizing that PPE was required, the foreman simply told the employees to wear "appropriate" PPE, thus leaving the selection decision to the employees.

The cases relied on by respondent are clearly distinguishable. In *Capital Electric Line Builders,* an employee working on a utility line was electrocuted while removing a ground clamp when one hand came into contact with an energized switch. As a result, the employer was cited for violating (1) 29 C.F.R. § 1926.950(c)(1) for allowing an employee to work too closely to energized parts without insulating equipment; (2) 29 C.F.R. §1926.954(e)(2) for allowing an employee to remove grounds without using insulating tools; and (3) 29 C.F.R. §1926.556(b)(2)(v) for allowing an employee to work in an aerial bucket without a restraining belt. The evidence demonstrated that while the employee took insulated gloves into his bucket, he was not wearing them at the time of the violation. Finding that the employer established the Unpreventable Employee Misconduct ("UEM") defense, the 10th circuit noted that it was undisputed that the employer provided its employees with all required safety equipment, held regular meetings, disseminated information, and enforced its work rules. The court also noted that the employee was a highly trained and experienced journeyman lineman. The court found that the standards governing work in energized areas "inherently require a judgment call by the employee as to when 'cover-up' is necessary." 678 F.2d at 131.Contrary to O'Connell's assertion, *Capital Line Builders* does not state that an employer can rely on an experienced electrician to *select* appropriate PPE. Rather, it goes to an employer's right to rely on an experienced employee to know when to *use* that equipment. Indeed, the standards cited in *Capital Line Builders* require the employer to provide protective equipment. In that case, the appropriate PPE was provided, but not used.

In *El Paso*, an employee was killed after falling from a building under construction. Safety nets were not provided. As a result, the employer was cited for, *inter alia*, a violation of §1926.21(b)(2) for failing to instruct each employee on how to recognize and avoid possible exposure to fall hazards. The Commission noted that the standard's command to "instruct each employee in the recognition and avoidance of unsafe conditions" is so general and subjective that the Commission and the courts have seen fit to read into it a reasonableness standard. That is, to establish noncompliance, the Secretary must establish that the cited employer failed to provide instructions that a reasonably prudent employer would have given in the same circumstances. The Commission found that the Secretary failed to prove that the instructions given were significantly less than a reasonably prudent employer would have given in the same circumstances. It stated that the sufficiency of a company's safety instructions "must be judged in

the context of the safety program's substance." 16 BNA OSHC at 1426. The Commission concluded that an "employer's instructions are not necessarily deficient because they allow the employees discretion as to how to proceed, particularly where the working circumstances are such that no one form of protection is capable of being used every time." *Id.*

The objective obligation imposed by §1910.132(d) differentiates it from such standards as §1926.21(b)(2) which is an "instruction" standard and therefore by its nature subjective. Here, however, the employer has an objective duty to assess the hazards and communicate his selection to each affected employee. The employer does not satisfy his duty under §1910.132(d) by delegating his responsibility to make the assessment to the employee, no matter how trained, competent or qualified he may be. That may go to the gravity of the hazard, but not to whether the standard was violated. Here, by only instructing its employees to wear "appropriate" PPE, K knowing that PPE was required, Schoenthal violated the express mandate of the standard to select the PPE its employees should have worn. Accordingly, the item 2, alleging a violation of 29 C.F.R. §1910.132(d)(1)(ii) is affirmed.

Having found a violation of 29 C.F.R. §1910.132(d)(1)(ii), it is unnecessary to address the alternatively cited standard.

Item 5

Item 5 alleges a serious violation of 29 CFR §1910.138(a) on the grounds that O'Connell failed to select and require its employees to use appropriate hand protection for exposure to thermal burn and other harmful substances.

The cited standard provides:

> 1910.138 **Hand protection.**
> (a) General requirements. Employers shall select and require employees to use appropriate hand protection when employees' hands are exposed to hazards such as those from skin absorption of harmful substances; severe cuts or lacerations; severe abrasions; punctures; chemical burns; thermal burns; and harmful temperature extremes.

The Secretary proposed a penalty of $6300 for this violation.

Arguments

Secretary

The Secretary points out that Schoenthal only instructed employees to use appropriate PPE. He did not specifically select what gloves they should wear. It was established that

Woodfield tested switches and grounded transformers in vault room. Woodfield should have considered them energized at 34.5 KV until tested and grounded, and he should have worn gloves to protect himself at that level. Instead he wore only gloves that protected him to 20 KV. Safety Manager Sandvik and Expert witness Strang confirmed that he should have worn category 4 gloves, instead of the category 2 gloves he was wearing

The Secretary also argues that O'Connell belatedly raised at trial the assertion that Woodfield used leather covers on his gloves and that Woodfield never informed the CO that he used the leather covers. In any event, Woodfield confirmed that leather covers only designed to protect his 20 KV gloves from damage and did not provide any additional protection from electrical hazards.

Respondent

O'Connell asserts that the gloves were adequate. It points out that the standard at 29 C.F.R. §1910.296(l)(2) sets minimum approach distances for which employees need to wear insulated gloves to protect against shock hazard. That standard, at Table R-6, indicates that at 35 KV, phase-to-phase, minimum distance is 2 feet 7 inches. Therefore, gloves only need to be worn when working inside that distance. However, the Secretary never demonstrated that Woodfield's hands passed inside that minimum approach distance. Rather, the evidence shows that he performed the testing and grounding using a voltage detector attached to the end of a six-foot long hot stick to test for the absence of voltage. Therefore, no gloves were required and the gloves he wore were sufficient to protect against shock hazards.

Moreover, respondent argues that the 34.5 KV volts is a phase-to-phase measurement. Woodfield testified that 34.5 KV phase to phase is equivalent to 19 KV volts ground-to-ground. Accordingly, the gloves which were rated for 20 KV were sufficient. Also, per standard practice, Woodfield wore leather coverings over his gloves. The CO, who assumed that Woodfield did not wear leather protectors, testified that he should have worn them. However, the CO never asked Woodfield if he was wearing the leather protectors. According to NFPA 70E, leather protectors worn over insulating gloves provide sufficient hand protection against arc flash (RX 35 at 6). This is not disputed by the Secretary.

In any event there was no hazard within the purview of 29 C.F.R. §1910.138(a). Electrical shock and arc-flash hazards are not among the hazards within the scope of 29 C.F.R. §1910.138(a) which is limited to mechanical and chemical hazards "such as those from skin

absorption of harmful substances, severe cuts or lacerations, severe abrasions, punctures, chemical burns, thermal burns, and harmful temperature extremes." PPE to protect against electrical shock hazards come within 29 C.F.R. §§1910.269(l)(2) or 1910.335(a)(1)(i). Therefore, the cited standard does not even apply to any hazard to which Woodfield was exposed.

Finally, O'Connell argues that items 2, 5 and 8 all relate to PPE and overlap. Therefore if any of these items are affirmed, they should be grouped for penalty purposes.

Discussion

The first issue to address is whether the cited standard applies to the hazards to which Woodfield was exposed. The problem with O'Connell's argument is that it mixes the concept of the "insulating" (electrical) value of gloves with its "thermal" value. The citation specifically addresses "thermal hazards." The standard requires protection against "thermal burns; and harmful temperature extremes." Here, one of the hazards is arcing which presents thermal hazards. It is noteworthy that the Secretary is not claiming that the gloves were not insulated, which would implicate an electrical hazard.

The Commission has recognized the difference between thermal hazards and electrical hazards. In *North Landing Line Constr. Co.,* 19 BNA OSHC 1465 (No. 96-721, 2001), the Commission noted that the arc-over between the phases creates a fireball that engulfs employees and causes thermal burns. There was also general testimony that, *in addition*, electric current can flow through the employee, causing electrical burns. I would also note that, in the ALJ decision in *North Landing Line*, Judge Rooney clearly explained that electrical burns are caused by current passing through the body, and that thermal burns are caused by external heat such as that produced in an arc blast.

Protecting against electrical hazards means that the PPE has to have insulation value against an electrical current. Protection against thermal energy refers to protection against heat. Here, the quality of the PPE being discussed, though based on current, is measured in calories, which is a measure of heat. Clearly, the higher the voltage, the greater the heat that will be generated at any given distance. Thus, to adequately guard against heat, PPE for 35.5 KV will require a higher caloric protective value than PPE needed to guard against 20 KV. Also, leather is not an electrical insulator. However, it does provide thermal protection. O'Connell implicitly recognizes this by arguing that the gloves had leather covers.

Respondent argues that there was no hazard because Woodfield maintained the minimum

distance set forth in Table R-6. These minimum distances do not apply to thermal hazards, since the purpose of maintaining a minimum distance is to prevent an employee from bringing a conductive object, such as his hand close enough to the source of the current to cause an arcing. Rather, this relates to the insulating value of the gloves, which is not at issue here. When wearing PPE for protection against heat, one assumes that an arcing can occur no matter what the distance the employee's hand may be from the source of the electricity.

During work, it is possible that some event other than an employee coming within the minimum distance could cause an arcing. (In *North Landing Line Constr. Co,* the Commission discusses expert testimony that describes possible causes of an arcing besides employees coming within the minimum distance). Certainly, the farther from the source, the lower the temperature from arcing, but that has nothing to do with being too far to cause an arcing. So viewed, the relevant measure is the heat generated from the arcing at the distance the employee is from the arc, not if he would come within the minimum distance that could set off an arcing. Finally, I would note that both 29 C.F.R §§1910.269(l)(2) or 1910.335(a)(1)(i), which respondent asserts applies, refer to electrical hazards, not thermal hazards. The citation specifically addresses "thermal" hazards. Accordingly, I find that the cited standard applies.

Having found that the standard applies, the next issue is whether the gloves were appropriate for the thermal hazard presented. The evidence is that gloves were rated at 20 KV. Respondent argues that the 34.5KV is based on phase-to-phase which is equal to 19 KV phase-to- ground (Tr. 253-255). However, it is unclear whether the rated voltage is phase-phase or ground-ground. This was brought up by Woodfield, who testified that he was wearing gloves that were rated at 20 KV to ground (Tr. 238), but was not supported with any other testimony or evidence and, therefore, remains uncorroborated.

While the distinction between phase-to-phase and phase-to-ground seems troubling, respondent's Corporate Safety Manager, William Sandvik, testified that Woodfield was wearing Category 2 PPE but should have been wearing Category 4 (Tr. 177). Foreman Schoenthal testified that whether they should have been wearing Category 2 or 4 depended on the task they were performing (Tr. 320). He then testified that Woodfield should have been wearing Category 2. The credibility of his testimony was undermined when he was asked to read his own deposition where he stated that they should have been wearing Category 4 (Tr. 321-322). Woodfield testified that his gloves were rated at 20 KV to ground (Tr. 238). The CO testified that

Woodfield was wearing gloves rated at 20 KV, but that when actually working on the switchgear inside the cabinet, his gloves should have been rated at 35 KV (Tr. 64-65). This was substantially supported by respondent's expert witness, Strang. In his report, Strang stated that while working with a hot stick, and maintaining a six foot distance from the switchgear, gloves rated for 35 KV were not required (Ex. RX-35, p. 4-6). This was consistent with his overall view that, at that distance, Woodfield's PPE was sufficient (Tr. 419, Ex. RX-35, p.7). However, at the hearing, Strang testified that, when opening the inner door to the cabinet where he would be closer to the switchgear, he should have been wearing a 44 calorie suit, but he was only wearing an 8 calorie suit (Tr. 428-429). Accordingly, I find that the preponderance of the evidence establishes that Woodfield should have been wearing gloves rated for 35 KV.

Regarding the leather covering over the gloves, the Secretary complains that the CO was not told about them until later (Tr. 131). However, there is no evidence that he specifically asked about them (Tr. 115). This is a credible explanation, since the evidence demonstrates that leather coverings are customarily worn to protect the rubber gloves (Tr. 238). Therefore, there would be no reason for Woodfield to volunteer this information. Nonetheless, I do not find that the gloves increased the protective factors inherent in the gloves worn by Woodfield. As Woodfield testified, the glove comes in two pieces: a rubber piece designed to protect the worker from electricity and a leather cover designed to protect the glove from damage (Tr. 238). As a two-piece glove, I find that the rating includes use of the leather protector.

Respondent also argues that NFPA 70E at 130.7(C)(13) provides that "[w]here insulating rubber gloves are used for shock protection, leather protectors shall be worn over the rubber gloves" (RX-35, p.6). The flaw in respondent's argument is that the NFPA specifically refers to the use of leather coverings "[w]here insulating rubber gloves are used for shock protection." Here, however, the issue is whether they provided sufficient thermal protection.

I would also note that the standard clearly requires the employer to "select and require employees to use appropriate hand protection." As with item 2, *supra*, the evidence demonstrates that the choice of PPE was left to the individual employee. The failure of Schoenfeld to select the appropriate gloves for Woodfield further establishes that O'Connell violated the standard.

Accordingly, I find that the standard applies and that the Secretary has established, by a preponderance of the evidence, that the gloves worn by Woodfield were inadequate for the thermal hazards to which he was exposed. The item is, therefore, Affirmed.

Item 8

Item 8 alleges a serious violation of 29 C.F.R. §1910.335(a)(1) on the grounds that O'Connell failed to ensure that employees who were exposed to eye and face injuries from electrical arc flashes or from flying objects resulting from electrical explosions wore adequate PPE.

The standard provides:

> Sec. 1910.335 **Safeguards for personnel protection**.
>
> (a) Use of protective equipment--(1) Personal protective equipment.
> (i) Employees working in areas where there are potential electrical hazards shall be provided with, and shall use, electrical protective equipment that is appropriate for the specific parts of the body to be protected and for the work to be performed.
>
> Note: Personal protective equipment requirements are contained in subpart I of this part.
>
> (ii) Protective equipment shall be maintained in a safe, reliable condition and shall be periodically inspected or tested, as required by Sec. 1910.137.
> (iii) If the insulating capability of protective equipment may be subject to damage during use, the insulating material shall be protected. (For example, an outer covering of leather is sometimes used for the protection of rubber insulating material.)
> (iv) Employees shall wear nonconductive head protection wherever there is a danger of head injury from electric shock or burns due to contact with exposed energized parts.
> (v) Employees shall wear protective equipment for the eyes or face wherever there is danger of injury to the eyes or face from electric arcs or flashes or from flying objects resulting from electrical explosion.

As noted, *supra,* I have found that this standard was inapplicable to the Vault Room pursuant to the exemption in 29 C.F.R. §1910.331(c). However, the Secretary alleges in the alternative, a violation of 29 C.F.R. §1910.133(a)(1) which states:

> Sec. 1910.133 **Eye and face protection**.
>
> (a) General requirements. (1) The employer shall ensure that each affected employee uses appropriate eye or face protection when exposed to eye or face hazards from flying particles, molten metal, liquid

chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation.

Arguments

Respondent:

Respondent argues that electric shock and arc-flash hazards are not among the hazards within the scope of §1910.133. Section 1910.133 is limited to mechanical and chemical hazards and "injurious light radiation." Thus, the regulation does not even apply to the hazards cited.

Respondent next contends that, even if the standard applies, the eye and face protection worn by Woodfield provided adequate protection against the hazards present. As discussed, *supra*, Woodfield was well outside the 2'7" approach distance so he was not exposed to a shock hazard. Strang calculated an approach distance of 6 feet would have incident energy of 11 cal/cm^2. Thus, at any distance equal or greater than 6 feet, Woodfield's face shield, which was rated for over 12 cal/cm^2, would have provided a greater level of protection than the incident energy.

The Secretary's rebuttal witness, DeWitt, criticized Strang for not accounting for the arc-in-a-box effect. However, DeWitt's own preferred method does not apply to systems operating at 34.5 KV (Tr. 452). Thus, DeWitt did not provide an alternative estimate and never specifically said that he believed the incident energy would have been higher than Strang calculated. Therefore, the only evidence in the record establishes that the incident energy to be protected against at 6 feet would have been 11 cal/cm^2 and Woodfield's face shield provided proper protection against the hazards a reasonable employer could expect him to encounter.

Secretary

The Secretary argues that Woodfield wore a face shield that was rated at 12 calories and provided inadequate protection against 34.5 KV arc flash. According to the Secretary, it is undisputed that there was a reasonable probability of injury from a vault room arc-flash. That is why Schoenthal conducted a safety meeting, locked and tagged out equipment, and instructed his crew to test for the presence of voltage and apply personal grounds. A "reasonable" employer, familiar with the conditions would have recognized the hazard. Indeed, although Schoenthal recognized the hazard, he failed to specify the type of eye and face protection the crew should have worn. Moreover, in its safety manual, O'Connell cautions employees that arc hoods should be worn when exposed to potential higher energy levels.

The Secretary notes that respondent's expert, Strang, conducted an arc-flash simulation and concluded that Woodfield wore adequate PPE when standing 6.5 to 7.5 feet away. However, the Secretary argues that her rebuttal expert, DeWitt, discredited the simulation on grounds that it applied only to an open air arc-flash. Here, we were dealing with an arc-flash occurring in a confined space, or an "arc in a box." The Secretary argues other flaws in Strang's testimony. For example, Strang conceded that his simulation was based on figures obtained by a third party. That third party was the National Grid in 2008. However, Strang did not verify that the numbers on which his results were based were still applicable on May 16, 2009 (SOL at 38).

Discussion

I find that the Secretary has failed to establish a violation of §1910.133. Under that standard, the Secretary must show that the vault room presented hazards associated with flying particles, glare and injurious light radiation. However, there was no evidence to establish that employees were exposed to flying particles or glare, or even if they were exposed, that the face shields they wore were inadequate to protect them from those hazards. Indeed, there is nothing in the record addressing those hazards. Rather, the entire thrust of the Secretary's efforts were to establish that the eye and face protection worn was inadequate to protect employees from the heat generated from an arc-flash at 35.5 KV. That is not the hazard addressed by the standard.

As to the injurious "light radiation," a review of the standards makes it clear that the cited standard addresses light in its simplest form, not in the physics context where electrical energy is a form of light. For example, at §1910.133(a)(5), the standard discusses protection from light radiation in the context of welding, where the light is intense and could burn the eyes. There is no evidence that the face shield worn by Woodfield did not have protection against light radiation. Also, the record does not indicate whether any of the face shields targeted by the Secretary included tinted visors designed to reduce the effect of light from an arc-flash. Moreover, when an employee is welding, the light is constant, focused and requires heavily tinted eye protection. Here, heavily tinted eye protection as a precaution against a possible arc-flash would likely make it difficult, if not impossible for the employee to see his work or navigate safely around the Vault Room.

Given this finding, it is not necessary to determine the weight to be given to the testimony of the two experts on this matter.

Accordingly, this item is vacated.

Penalty

The Secretary classified both items 2 and 5 as serious and proposed a penalty of $6300 for each item. A violation is serious where the evidence demonstrates that the likely result of a failure to comply with the standard is death or serious physical harm. *Beverly Enterprises, Inc.*, 19 BNA OSHC 1161, 1188 (No. 91-3144, 2000)(Consolidated).

Regarding item 2, the evidence establishes that having been instructed on the nature of the PPE that was required, respondent's employees, made their own decisions regarding what PPE they would wear. This resulted in Woodfield retrieving whatever PPE he had in his car which, as demonstrated *supra*, was inappropriate for the tasks he was undertaking. This could have resulted in serious harm from electrical burns (Tr. 59-60). As to item 5, the evidence demonstrates that, in the event of an arc-flash or other electrical accident, the failure of employees to wear appropriate protective gloves could result in serious burns to an employee's hands. (Tr. 61) Accordingly, I find that both items were properly characterized as serious.

Section 17(j) of the Act, 29 U.S.C. § 666(j), requires that, in assessing penalties, the Commission must give "due consideration" to four criteria: the size of the employer's business, the gravity of the violation, the employer's good faith, and its prior history of violations. *S & G Packaging Co.*, 19 BNA OSHC 1503, 1509 (No. 98-1107, 2001). The CO testified that the violation was considered to be of high gravity and severity with a "greater" probability of an incident. Based on these factors, the Secretary assigned a base penalty of $7000. The Secretary deducted 10% for O'Connell's history, which included no serious or repeat violations in the past three years. No credit was given for either size or good-faith (Tr. 60-62, Ex. P-2). These factors were applied to all of the alleged violations (Tr. 62). I find that the Secretary properly considered the section 17(j) factors when proposing the penalty and that a penalty of $6300 is appropriate for each of the items. .

Respondent argues that the items are sufficiently similar that the penalties should be combined. The Commission has the discretion to combine penalties where a single action will abate both violations. *H.H. Hall Constr. Co.*, 10 BNA OSHC 1042, 1046 (No. 76-4765, 1981). Here, Schoenthal testified, at different times that Woodfield should have worn either Category 2 or 4 gloves. This strongly suggests that he was confused regarding the appropriate Category of gloves that would have been appropriate for the worksite. Therefore, even if Schoenthal had

designated the gloves that Woodfield should have worn, there was no guarantee that his selection would have been appropriate. Accordingly, I decline to combine the items for penalty purposes.

III. Work Practices/Signs

A. Facts

When the Vault Room crew completed their work on switch S3, they removed the grounds and closed the cabinet (Ex. P-28). At 1:10 pm, the crew completed work on switch cabinet S2. Again, the crew removed the grounds and closed that door (Tr. 361-362, Ex. P-28). Switch cabinets S1 and S4 had the cabinet door and inside screen door shut throughout the operation (Tr. 354-356, RX-24). However, the doors to all four switch cabinets could be opened with a single Yale Key (Tr. 358).

The evidence demonstrates that the 25B switches (S1 and S4) which remained energized, had a hasp with a lock and tag which was installed by Schoenthal. The tag had his name and phone number on it and was not supposed to be removed without contacting him. (Tr. 355) Similar tags on the 53A switches (S2 and S4), were removed to allow the Vault Room crew to do their work. (Tr. 356, 360) Also, above the 25B switch was a small red and white sticker that warned that there was high voltage (Tr. 356, Exhibit RX-24). Despite this evidence, at Stipulation #31 of its opening brief, respondent states that "O'Connell Electric did not install any special tags to remind its employees that two electrical switches remained energized."

Besides the basic warning signs that applied to all four of the switches, respondent did not erect any barricades or post attendants to prevent unimpeded access to the two energized switches. (Tr. 63, Ex. P-23, p 18, Ex. P-24, p. 8, Ex. P-25, p.5, Ex. P-26, p.7)

Item 4b

Item 4(b) originally alleged a violation of 29 C.F.R. §1910.333(a)(2) on the grounds that O'Connell failed to institute any "other" safety related work practices to protect employees in the Vault Room from contacting switches S1 and S4, which remained energized. The Secretary specifically noted that respondent did not erect any barricades or post attendants to prevent unimpeded access to the two energized switches or post any signs specifically warning employees that switches S1 and S4 remained energized.

The cited standard states:

§1910.333 **Selection and use of work practices.**

(a) General

* * *

(2) Energized parts. If the exposed live parts are not deenergized (i.e., for reasons of increased or additional hazards or infeasibility), other safety-related work practices shall be used to protect employees who may be exposed to the electrical hazards involved. Such work practices shall protect employees against contact with energized circuit parts directly with any part of their body or indirectly through some other conductive object. The work practices that are used shall be suitable for the conditions under which the work is to be performed and for the voltage level of the exposed electric conductors or circuit parts. Specific work practice requirements are detailed in paragraph (c) of this section.

However, as noted, *supra*, pursuant to §1910.331(c), the standards at §§1910.331 through 1910.335 are not applicable to the activities of the Vault Room crew.

In her amended complaint, however, the Secretary alleges, in the alternative, a violation of §1910.269(l)(2) on the grounds that respondent failed to ensure that no employee in the Vault Room approached or took any conductive object closer to exposed energized parts than set forth in Tables R-6 through R-10. That standard provides:

1910.269 Electric power generation, transmission, and distribution.

* * *

(l) Working on or near exposed energized parts. This paragraph applies to work on exposed live parts, or near enough to them, to expose the employee to any hazard they present.

* * *

(2) Minimum approach distances. The employer shall ensure that no employee approaches or takes any conductive object closer to exposed energized parts than set forth in Table R-6 through Table R-10 [approximately 21/2 feet], unless: [omitted]

Arguments

Secretary

The Secretary points out that foreman Schoenthal knew that the Yale Key opened the doors to all the cabinets. Since the key was available to all the members of the Vault Room crew, he should have taken additional precautions to ensure that no one could accidentally come into contact with live switches S1 and S4. The Secretary specifically notes that respondent failed to erect any sort of barricade or post attendants to prevent unimpeded access to the two energized

switches. Respondent relied on pre-existing safety signs, but the signs are common on electrical equipment and the ones at the site did nothing to distinguish the live switches from the de-energized switches. The facts show that respondent did nothing to obstruct access to switches 1 and 4. The record is also devoid of evidence that O'Connell installed any device that would have prevented employees from coming within the Minimum Allowed Distance with the 34.5 KV circuits.

Respondent

O'Connell points out that the burden is on the Secretary to make a *prima* facie showing of knowledge. Schoenthal was never aware that [redacted] was opening the cabinet S4. Woodfield was similarly unaware. He was working in front of the Transformer T1 and his view of [redacted] was obstructed. Switches S1 and S4 were closed and locked. Employees were instructed not to open or enter them. [redacted] was an experienced journeyman electrician and was familiar with the hazards associated with working on medium-voltage systems. That [redacted] possessed the Yale key that unlocked S4 is irrelevant. The energized parts were enclosed within the cabinet and the Secretary cites no regulatory requirement that such an enclosure must be locked, let alone that employees not gain access to the key to such a cabinet. Therefore, O'Connell contends that the Secretary failed to make a *prima facie* showing of knowledge.

Moreover, even if *prima facie* knowledge were shown, [redacted] entry into switch S4 was the result of unpreventable employee misconduct. [redacted] was specifically instructed that S4 was energized, not within scope of work and not to be entered. The Vault Room crew was instructed to keep out of S4. O'Connell has an established safety program that provides for periodic safety training, on-site "tool box" safety talks and it regularly enforces it safety policies.

Discussion

As noted, *supra,* as part of her *prima facie* case the Secretary must demonstrate that the employer knew, or with the exercise of reasonable diligence could have known of the existence of the hazard. *Atlantic Battery Co.,* 16 BNA OSHC at 2138. To meet her burden here, the Secretary was required to demonstrate that O'Connell knew, or with the exercise of reasonable diligence could have known that a member of the Vault Room crew might come within the Minimum Approach Distance set forth in Table R-6 of the cited standard. I find that this item

must be vacated because the Secretary has failed to make out a *prima facie* showing of knowledge.

The preponderance of the evidence establishes that the employees who worked in the Vault Room were highly trained, experienced and competent electricians, all of whom attained, at a minimum, journeyman status. The electrified components of the 25B switches (Switch cabinets S1 and S4) were in locked cabinets. This prevented employee access to the energized components therein, and prevented any crew member from coming within the Minimum Approach Distance either by the necessities of the job or by accident. The evidence also establishes that before the day's shift began, Foreman Schoenthal held a meeting where he explained the job to the crew and instructed the crew that they were to work only on the two center switch cabinets S2 and S3 and not to open either of the two end cabinets S1 and S4 (Tr. 278, 300, 303, 346-347, 349-350). I also note that Schoenthal testified that he placed a hasp with a lock and tag on each of four (Tr. 355-356, 360). Those tags contained his name and phone number, indicating that he was to be contacted before the switches were opened (Tr. 355-356, Ex. P-25). The lock and tag on the 53A switches had been removed to allow the Vault Room crew to do their work (Tr. 360). They remained on the 25B switches. Although the same key opened the locks on all four cabinets, the point remains that [redacted] knew that the de-energized cabinets S2 and S3 had the lock and tag removed, while the energized cabinets S1 and S4 remained locked and off-limits to the crew, and contained Schoenthal's tags. Even after the work was completed on S2 and S3 and their doors locked, there is no evidence that the tags were replaced.

There is no evidence to suggest why [redacted] opened switch cabinet S4. The Secretary posits that it was accidental and caused by insufficient/inappropriate work practices by O'Connell. However, that is purely speculative. I find that the evidence fails to establish that O'Connell knew, or with the exercise of reasonable diligence, could have known, that an employee would violate his instructions, open a locked and tagged cabinet that was not relevant to his work, and bring a conductive object within the Minimum Approach Distance set forth in Tables R-6 through R-10. Accordingly, the item is vacated.

Item 13

Item 13 alleges a serious violation of 29 CFR §1910.335(b)(1) on the grounds that O'Connell failed to install safety signs, safety symbols or accident prevention tags to warn

employees of electrical hazards in switches S1 and S4.The standard provides:

> 1910.335 **Safeguards for personal protection.**
>
> * * *
>
> (b) Alerting techniques. The following alerting techniques shall be used to warn and protect employees from hazards which could cause injury due to electric shock, burns, or failure of electric equipment parts:
> (1) Safety signs and tags. Safety signs, safety symbols, or accident prevention tags shall be used where necessary to warn employees about electrical hazards which may endanger them, as required by Sec. 1910.145.

As noted, s*upra*, I find that the cited standard does not apply to the work performed by the Vault Room crew. However, in her amended complaint, the Secretary alternatively alleges a violation of 29 C.F.R. §1910.145(f)(3) on the grounds that:

> tags were not used as a means to prevent accidental injury or illness to employees exposed to hazardous or potentially hazardous conditions, equipment or operations which were out of the ordinary, unexpected or not readily apparent. Tags were not used until the identified hazard was eliminated or the hazardous operation completed. Respondent did not employ any other positive means of protection.

The standard states:

> Sec. 1910.145 **Specifications for accident prevention signs and tags.**
>
> * * *
>
> (f) Accident prevention tags
>
> * * *
>
> (3) Use. Tags shall be used as a means to prevent accidental injury or illness to employees who are exposed to hazardous or potentially hazardous conditions, equipment or operations which are out of the ordinary, unexpected or not readily apparent. Tags shall be used until such time as the identified hazard is eliminated or the hazardous operation is completed. Tags need not be used where signs, guarding or other positive means of protection are being used.

Specifically, the Secretary asserts that there was a fixed 'Yale Lock' on the outer door of each switch. A key had to be inserted into this lock in order for an employee to enter the switch to perform preventative maintenance. All four switches had their 'switching handle' in the down position (open) and the foreman's lock and tag was attached to each handle. All of the switches looked almost identical, but inside two of the switches, there were exposed parts at 34,500 volts. A single key entrusted to the foreman could open the door to any of the four switches, since the 'Yale Locks' were all keyed the same. An employee

> entered switch [S4] with live parts and an arc flash occurred engulfing the employee in flames causing severe burns. Accident prevention tags which could have prevented this injury were not placed on switches [S1 and S4] to indicate that they contained live parts and were unsafe to enter.

Arguments

Secretary

The Secretary notes that it is undisputed that O'Connell did not install any safety signs, symbols or tags in vault room. Rather, it relied on switches cabinet enclosures and pre-existing safety signs to guard against exposure to electrical hazards associated with switches S1 and S4. All of cabinets looked alike and Yale Key granted access to them all. Also it is undisputed that the "Danger High Voltage" signs that were in the Vault Room are common on electrical worksites and equipment. Therefore, it was incumbent on respondent to take additional steps to ensure that the energized and de-energized switches were distinguishable. It failed to do so.

Also, respondent admitted that when the Vault Room crew was finished with the required maintenance and repairs for cabinet S3, they removed the grounds and closed the cabinet, thus making them indistinguishable from the energized cabinets.

Respondent

Respondent points out that the evidence shows that guarding was in place to isolate employees from the energized parts within S4. These energized parts were enclosed within a metal cabinet. Respondent points out that §1910.145(f)(3) does not require tags where guarding is in place, the metal cabinet enclosing S4 satisfied that requirement. It notes that in the Federal Register document adopting many of the current rules under Subpart S, it states at 59 FR 4320, 4419 n.95 that "an employee is isolated from an energized part if the installation prevents the employee from coming within the withstand distance for the voltage required." The regulations also define "guarded" as "Covered, fenced, enclosed or otherwise protected, by means of suitable covers or casings, …designed to minimize the possibility, under normal conditions, of dangerous approach or accidental contact by persons or objects." 29 CFR 1910.269(x). That section also defines a "barrier" as "A physical obstruction which is intended to prevent contact with energized lines or equipment or to prevent unauthorized access to a work area."

Section 1910.269(u)(4)(i)(C)(1) recognizes enclosing live parts "within grounded metal-enclosed equipment" as a means of guarding to allow even unqualified persons to enter a transmission, distribution, or transformation facility, *as required by 1910.145*." *Id.* (Emphasis

added)

A warning sign was already present on the door of S4 at all times of the alleged violation. Presence of similar signs is not relevant. Thus, the Secretary failed to show that respondent was obligated to place additional tags on S4.

Finally, respondent contends that OSHA cannot cite 1910.145(f)(3) as a stand-alone violation. OSHA has noted that the "Standard does not contain requirements for employers to post signs and tags. Instead, other OSHA standards in Part 1910 directly specify the posting requirements for the signs and tags described by this Standard." 66 FR 21414 at 21414 (2001) Thus, according to OSHA's own interpretation, 1910.145(f)(3) did not impose any requirements that tags be posted.

Discussion

For reasons given earlier, I find that the originally cited standard, 29 C.F.R. §1910.335(b)(1) was not applicable to the work being performed by the Vault Room crew. Respondent also argues that the alternative standard, 29 C.F.R. §1910.145(f)(3), does not apply on the grounds that it is does not impose any substantive requirements. In support it cites to 66 FR 21414 (April 30, 2001). That publication concerned "the collection-of-information requirements of the standard on "Specifications for Accident Prevention Signs and Tags" in regards to its proposal to decrease the existing burden-hour estimates of OMB's collection-of-information requirements. Justifying its removal of the burden hours previously attributed to the standard, OSHA stated:

> The Agency notes that the Standard does not contain requirements for employers to post signs and tags. Instead, other OSHA standards in part 1910 directly specify the posting requirements for the signs and tags described by this Standard.

However, the Notice also stated that:

> OSHA is recognizing an additional paperwork requirement that it previously overlooked. The Standard requires employers to select signs and tags that are appropriate to the dangers and hazards identified in the workplace; paragraphs (c)(1)(i), (c)(2)(i), (c)(3), (e)(4), (f)(3), (f)(5) through (f)(7), and (f)(8)(i) specify the signs and tags that employers must select for these dangers and hazards. In addition, paragraphs (d)(l) through (d)(10), (e)(2), (f)(4)(i) through (f)(4)(iv), (f)(7), and (f)(8)(ii) provide the design and wording requirements for these signs and tags. Therefore, employers must ensure that the signs and tags selected are appropriate for the identified dangers and hazards and meet the design and wording requirements of the Standard.

Id.

Where the meaning of a standard is vague, the Commission is obligated to defer to the Secretary's reasonable interpretation. *Martin v. OSHRC (CF&I),* 499 U.S. 144, 150 (1991). The Federal Register section cited by respondent merely has to do with paperwork requirements and is not intended to be a formal interpretation of the substantive requirements of the standard. Also, the notice makes it clear, that (f)(3) applies and requires that employers "ensure that the signs and tags selected are appropriate for the identified hazards." Clearly, as noted, the Secretary is alleging that the universal signs on all the cabinets failed to achieve the goal of the standard, which is to differentiate live energized parts from de-energized parts. Accordingly, I find the Secretary's interpretation to be reasonable and I find the standard applicable to the alleged hazardous condition.

In its opening brief, at p.1, O'Connell sets forth stipulations taken from the parties' Joint Pre-Hearing Statement. The following stipulations are of relevance here:

> Stipulation #30: O'Connell Electric did not install any special signs to remind its employees that two electrical switches (the '25B' switches) remained energized. All four switches did have pre-existing signs that read 'DANGER HIGH VOLTAGE.'
>
> Stipulation #31: O'Connell Electric did not install any special tags to remind its employees that two electrical switches remained energized.
>
> Stipulation #32: O'Connell Electric did not erect any barricades to limit access to the two electrical switches that remained energized.
>
> Stipulation #33: O'Connell Electric did not utilize an attendant to remind its employees that two electrical switches remained energized.

These stipulations seem to indicate that there was nothing to distinguish the four cabinets. O'Connell argues that the warning signs on all four switch cabinets were sufficient to satisfy the standard. However, the clear intent of the standard is to "prevent accidental injury" from hazardous conditions that are "unexpected or not readily apparent." The purpose of this standard is not satisfied where the posted signs fail to distinguish between the hazardous energized cabinets from those that are de-energized. Similarly, the purpose of the standard is not satisfied where the guarding provided fails to distinguish between hazardous and nonhazardous installations and, therefore, fails to provide a "positive means of protection."

However, despite the stipulations, the evidence clearly demonstrates that Schoenfeld placed a lock and tag on all four cabinets and that he removed the lock and tags from cabinets S2

and S3 to enable the work, while leaving them on cabinets S1 and S4. While this evidence is not inconsistent with stipulations #30, 32 and 33, it does appear to conflict with stipulation #31, which states that no special tags were placed on cabinets S1 and S4 to remind employees that the two remaining switches remained energized. This apparently conflicting evidence is easily reconciled. The locks and tags were placed on all four cabinets and only removed from switches S2 and S4 to enable the crew to do their work. Having been originally placed on all the cabinets, Stipulation #31 is accurate, insofar as no "special tags" were placed on switch cabinets S1 and S4. Also, the stipulation says nothing about locks and there is no dispute between the parties that cabinets S1 and S4 were locked.

Nonetheless, the Secretary asserts that O'Connell should have either placed signs specific to cabinets S1 and S4, warning employees that they were energized, or placed some sort of tape or other physical barrier to warn employees or prevent access. However, while work was proceeding on S2 and S3, that they were unlocked and open should have provided sufficient notice to the crew as to which cabinets they were to work upon. As noted, *supra,* the Vault Room crew was a highly trained, experienced, and competent group of electricians. They were fully briefed on the scope of their work. Although after work was completed, the grounds were removed and the cabinet locked, there is no evidence that Schoenthal's tags were replaced on the doors. The two energized cabinets, on the other hand, were locked *and* tagged. Furthermore, after work was completed on S2 and S3, there is no evidence to suggest why any employee would have cause to enter any of the four cabinets after the grounds were removed and the cabinets S2 and S3 were locked. On this evidence, I find that there were adequate identifiers to inform the employees not to enter cabinets S1 and S4. The Secretary also asserts that a barricade or even yellow warning tape would have adequately warned the employees of the hazards presented by cabinets S1 and S4. Certainly, as O'Connell points out, a lock on a cabinet is a form of barricade. There is nothing in the record to suggest that an employee would not be just as likely to ignore yellow tape as he would a locked or tagged door. Accordingly, the item is vacated.

IV. Lockout/Tagout ("LOTO")

A. Facts

The next two items allege violations of Lockout/Tagout ("LOTO"). As noted, each of the switch cabinets in the Vault Room were secured by a Yale lock and key (Tr. 358). Additionally,

the key opened the transformer cabinets in the Vault Room (Tr. 327). Schoenthal chose to secure the key in a group lockbox (Tr. 317). Under the group lockbox procedure, the key was placed in a box and all crew members from both rooms were supposed to place their personal lock on the group box. This would ensure that the Yale key could not be removed until all crew members first removed their locks (Tr. 54, 107, 330). However, the evidence indicates that not all of the employees placed their personal locks on the group lockbox, including employees from the Adjacent Room (Tr. 55, 68, 138, 164, 263). Some employees had to get the key to do work on the switch and did not later replace the key (Tr. 55). Sometime after the safety meeting on May 16, Schoenthal removed the Yale key from the lockbox and gave it to a member of the Vault Room crew. It remained out of the lockbox for the remainder of the shift, until the accident occurred (Tr. 333). Several employees interviewed by the CO indicated that they were not sure how the group lockbox procedure worked (Tr. 132).

Schoenthal also indicated that he considered the lockbox policy to be only optional and that, instead, he used a mandatory sign-in/sign-out sheet where no equipment could be re-energized until all employees were accounted for by their signing out on the sheet (Tr. 68, 128, 328).

Both items involve conditions in the Adjacent Room. In the Adjacent Room, the bus ducts were hung high on the ceiling and the crew could plainly see that they were physically disconnected from the switch gear (Tr. 154-155). These bus ducts remained disconnected from all power sources at all times during the shift (Tr. 141, 171). This physical disconnection from the power sources left no way for the equipment in the Adjacent Room to which employees had access from being energized.

Item 11

Item 11 alleges that O'Connell violated 29 C.F.R. §1926.21(b)(2) which provides:

1926.21 **Safety training and education.**

* * *

(b) Employer responsibility.

* * *

(2) The employer shall instruct each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to his work environment to control or eliminate any hazards or other exposure to illness or injury.

Specifically, the citation alleges that in the Adjacent Room:

Employees were removing and replacing switchgear, including conduit & wiring,

and dismantling busses and hooking them back up. The employer had written Lockout & Tagging procedures which was the company's procedure to render circuits inoperative when performing construction as well as general industry type work. They used these procedures to protect their employees from the hazard of exposure to electric parts that might unexpectedly become energized. It was determined that six switches needed to be opened and locked out to protect the above employees. These switches were opened and locked out and the foreman placed his lock & tag on a hasp that was attached through the handle of each of the six switches. In lieu of requiring each employee performing the work to also put their individual lock & tag on the hasp attached to each of the six switches, a group lockout box was used. The 6 keys to the foreman's locks were placed inside the box. Then, each of the employees performing the work is to put their individual lock on the outside of the group lockout box so that the foreman's keys cannot be removed until each worker's lock has been removed from the box. Employees were not trained about the company's Lockout/Tagout program requirement that each of the employees performing the work is to put their individual lock on the outside of the group lockout box so that the foreman's' keys cannot be removed until each worker's lock has been removed from the box.

Arguments

Secretary

The Secretary contends that O'Connell was aware of the electrical hazards at the jobsite and introduced the group lockbox to abate them. Yet, O'Connell's employees demonstrated substantial confusion regarding how a group lockbox procedure operates. Indeed, Schoenthal himself violated the concept by not requiring all employees to attach their locks and by removing the Yale key and placing it in the custody of an employee.

Respondent

Respondent asserts that LOTO was not applicable to the Adjacent Room crew because it contained no electrical hazards. It points out that each of the busses that could carry power to the equipment in the Adjacent Room had been disconnected and disassembled. Because of the physical disconnection of the power sources there was no way for the equipment to become energized. Therefore, O'Connell takes the position that LOTO procedures were not applicable to the Adjacent Room.

Discussion

The gravamen of a violation of 29 C.F.R. §1926.21(b)(2) is that O'Connell failed to instruct "its employees about the hazards they may encounter on the job and the regulations applicable to those hazards." *Concrete Construction Co.*, 15 BNA OSHC 1614, 1619 (No. 89-

2019, 1992). To fall within the standard requires that this failure to instruct (1) created an unsafe condition and (2) resulted in the employees' inability to comply with applicable regulations. The Secretary's theory for this item is that the alleged confusion surrounding the group lock box demonstrated that O'Connell failed to instruct its employees in the necessity and proper use of a group lock box procedure and exposed the employees in the Adjacent Room to the hazard of accidental energization.

The evidence fails to demonstrate the need for any LOTO procedure in the Adjacent Room. Before the Adjacent Room crew arrived, Schoenthal had the equipment tested and grounded and the bus ducts separated from the equipment they were to work on (Tr. 344). Indeed, the busses were not only visibly disconnected (Tr. 154-155), but also they were hanging from the ceiling where they were out of reach. Thus, the potential electrical hazards were eliminated (Tr. 344). The citation claimed that Schoenthal put his lock on the hasp on all six switches. The evidence demonstrates that those six pieces of electrical equipment involved the four cabinets and two transformers in the Vault Room (Tr. 22, 42, 53, 54, 69). The Secretary's concern is that the accidental energization of equipment in the Vault Room would endanger employees in the Adjacent Room. However, the record fails to demonstrate that the Adjacent Room crew would have been exposed to any hazard by the accidental energization of equipment in the Vault Room.

The disassembly of the busses to the switches in the Adjacent Room was scheduled to continue for the rest of the day, until the Adjacent Room crew replaced the switching equipment in the room. This required that, among other steps, new switches be installed and attached to the busses. Until that occurred, there was no threat of accidental energization. Simply put, there was nothing to energize. The busses, which would have received energy from any accidental Vault Room energization were hanging from the ceiling and completely disconnected from the switches. This was not the typical LOTO situation where equipment is de-energized by tripping a switch, which needs to be locked out or tagged so that the switch cannot accidentally be turned back on. Here, there was no switch, dial, lever, etc. capable of energizing the equipment. Rather, the Adjacent Room switches were totally disconnected from any electrical source and would remain that way until reconnected when the Adjacent Room Crew finished their work (Tr. 154-155). Respondent had a mandatory sign in/sign out sheet which it was using to ensure that all employees were accounted for and clear before they eventually re-connected and re-energized

the switches in the Adjacent Room.

If there was a hazard in the Adjacent Room, it was the possibility for feedback. However, that is the purpose of grounding, and does not require LOTO. Until the switches were replaced and the busses reattached, there was no risk of unexpected energization that could be addressed by LOTO. The Commission has held that LOTO applies only when there is a hazard of "unexpected" energization. *General Motors Corp.,* 17 BNA OSHC 1217 (No. 91-2973, 1995)(consolidated), a*ff'd* 89 F.3d (6th Cir. 1996). Here there was no such hazard.

As O'Connell points out, the CO apparently did not fully comprehend that there was no hazard of unexpected energization (Tr. 100-101) and that the failure to properly instruct the employees in the group lock box procedure did not result in a failure to instruct employees in the recognition and avoidance of any unsafe condition or regulation applicable to their work environment. Accordingly, the item is vacated.

Item 12

Item 12 alleges that O'Connell failed to comply with 29 C.F.R. §1926.417(b) which provides:

> 1926.417 **Lockout and tagging of circuits.**
>
> * * *
>
> (b) Equipment and circuits. Equipment or circuits that are de-energized shall be rendered inoperative and shall have tags attached at all points where such equipment or circuits can be energized.

As amended the citation specifies that in the Adjacent Room:

> Employees were removing and replacing switchgear, including conduit and wiring and dismantling busses and hooking them back up. The employer had written lockout/tagout procedures which were intended to render circuits inoperative when performing construction and general industry assignments thus, protecting employees form [sic] the hazards of exposure to electrical parts which may become unexpectedly energized. It was determined that six switches needed to be locked and tagged out. The foreman locked and tagged out the switches, by placing his locks and tags on hasps which were attached to handles of each of the six switches. Instead, the foreman created a group lock box. He then placed his six keys in the group lock box. The other employees were then supposed to place their individual locks and tags on the outside of the group lock box so that the foreman's keys could not be removed from the lock box unless all of the individual locks and tags were removed. Some employees did not put their individual locks and tags on the group lock box as required.

Arguments

Secretary

The Secretary argues that the assertion of respondent's expert, Strang, that no hazard existed after equipment was locked out and grounded is not supported by the evidence. Adjacent Room crewman, Bacon, indicated concern about potential electrical back feeds from another part of the building travelling into and affecting equipment in the Adjacent Room (Tr. 137). Also, Adjacent Room crewmember Reynolds testified that there was a potential electrocution hazard once they started to reconnect equipment in the Vault Room (Tr. 160). At least one and possibly two employees failed to put their locks on the group lock box. Any crewmember could have retrieved keys from the box and re-energized equipment.

Also, respondent grounded the bus ducts that ran from the Vault Room to the Adjacent Room so they would not transmit electricity to the Adjacent Room when that crew was reconnecting the metal clad switchgear (Tr. 38-39, 51-52, 152, 157, 161, 204-206, 318-319). There was a potential for electrocution to the Adjacent Room crew if the bus ducts were not grounded (Tr. 152, 158-159).

The Secretary also points out that O'Connell locked out the 1600 amp feed from O'Brian Hall to Baldy Hall because it presented an electrocution hazard to the Adjacent Room crew (Tr. 38-39, Ex. P-23, p. 12 para. 2).

Respondent

Respondent contends that the Secretary failed to show that the standard was violated or that any employee was exposed to a hazard. It argues that employees in the Adjacent Room were not exposed to any electrical hazard because all sources of electrical power were physically disconnected. As discussed *supra*, there were no points where any of the equipment in the Adjacent Room could be energized because all sources of power, namely the three busses that fed the Adjacent Room switchgear had been physically disconnected from that switchgear. Because there was no source of power to be locked out, employees were not exposed to any hazard.

O'Connell also points out that §1926.417(b) requires that "Equipment or circuits that are de-energized shall be rendered inoperative and shall have tags attached to all points where such equipment or circuits can be energized." By disconnecting and making inaccessible all the

sources of power (busses), the Adjacent Room switchgear was rendered inoperative. There were no points where the switchgear could be energized. Thus, disconnection of the busses satisfied all the requirements of the standard.

Respondent points out that it was using a mandatory sign-in/sign-out sheet. Therefore, before power was restored, everybody had to sign the sheet establishing that they were out of the room and all their gear removed. This provided the requisite protection to employees

Discussion

The duty imposed by the standard is clear: de-energized circuits shall be rendered inoperative and shall have tags attached to all points where such equipment or circuits can be energized.

The evidence establishes that the de-energized circuits in the Adjacent Room were rendered inoperative. The busses that fed the Adjacent Room had been physically disconnected from that switchgear and hanging from the ceiling (Tr. 155, 171). Therefore, the switchgear was de-energized and would remain that way until they were reattached to busses at some point in the future (Tr. 201-202, 204, 319). Moreover, all the electrical equipment in the Adjacent Room was grounded. (Tr.156). The evidence fails to suggest any way, other than the replacement and reconnection of the busses, where the equipment could be energized. There simply were no points where the equipment could be re-energized. Accordingly, the evidence fails to demonstrate that attaching tags would have reduced or eliminated any hazard of accidental energization.

Nonetheless, the Secretary argues crewmember Bacon expressed concern about potential electrical back feeds from another part of the building travelling into and affecting equipment in the Adjacent Room (Tr. 137). Foreman Schoenthal testified, however, that the concern was that there might be feedback coming into the Adjacent Room from the 480-volt breaker in O'Brian Hall. That breaker was locked out independently of the group lockbox procedure (Tr. 318). The Secretary also argues that Adjacent Room crew member Reynolds testified there was a potential electrocution hazard once they started to reconnect equipment in the Vault Room (Tr. 160). However, that testimony presupposed that the busses in the Adjacent Room were already reconnected to the replaced switch gear. That was not a work activity scheduled for that day. Moreover, before that re-energization could occur, each employee was required to sign out on the mandatory sign-in/sign-out sheet to guarantee that they were clear of danger.

Accordingly, I find that the Secretary failed to establish a violation of 29 C.F.R. §1926.417(b) and the item is vacated.

V. Hazard Assessment

Item 3

Item 3 alleges that O'Connell failed to complete a certificate of hazard assessment for employees scheduled to perform electrical work in both the Vault Room and the Adjacent Room as required by 29 C.F.R. §1910.132(d)(2). The cited standard provides:

> 1910.132 **General requirements**.
> * * *
> (d) Hazard assessment and equipment selection.
> * * *
> (2) The employer shall verify that the required workplace hazard assessment has been performed through a written certification that identifies the workplace evaluated; the person certifying that the evaluation has been performed; the date(s) of the hazard assessment; and, which identifies the document as a certification of hazard assessment.

Facts

According to the CO, Foreman Schoenthal told him that although he conducted a hazard assessment, he did not prepare a Certificate of Hazard Assessment (Tr. 62-63). Respondent's expert, Douglas Strang, testified that the safety meeting sheet and the location safety sheet (Ex. 2) completed by Schoenthal together formed a Certificate of Hazard Assessment (Tr. 404, Ex. R-34). Strang pointed out that the location safety sheet and the safety meeting sheet together showed that the site had been reviewed, who was going to be in charge, emergency numbers, sign in forms, and a procedure check-off (Tr. 432).

Arguments

Respondent**:**

O'Connell points out that the Secretary does not allege that it failed to perform a hazard assessment. Rather, the Secretary alleges only that the paperwork it did complete failed to comply with the technical requirements of the standard. O'Connell argues that it completed a Location Safety Sheet that served as a *de facto* certification of hazard assessment.

Further, even if there was a technical violation, the Secretary failed to demonstrate that

this paperwork violation created a substantial probability that death or serious physical harm could result. Therefore, if affirmed, the violation should be classified as other than serious or *de minimis*.

Secretary**:**

The Secretary points out that Schoenthal admitted that he did not complete a written certificate of hazard assessment. She contends that O'Connell's contention that its Location Safety Sheet is a *de facto* certification is not supported by the record.

Discussion

The standard requires the employer to prepare a document entitled "Certification of Hazard Assessment." The evidence is undisputed that O'Connell did not prepare such a document. Furthermore, I find that the record does not support O'Connell's assertion that the Location Safety Sheet together with the safety meeting sheet constituted an acceptable substitute. First, the Location Safety Sheet contains no certification that the evaluation was performed. Also, the only date on the Location Safety Sheet is May 15, 2009, and makes no mention of May 16, the date of the accident or the nature of the work scheduled for that day. Also, the sheet identifies no hazards. It identifies "Backup Emergency Generators" as a possible source of feedback; identifies "O'Brian Feeder, Baldy Hall Feeder 25B & 53A" as Lockout/Tagout/Ground Locations," and as "Identified Hazards" merely says "all areas to be tested and personal grounds installed at each location. The[re] will be heavy traffic area." (Ex. P-12). Similarly, the Safety Meeting Sheet does not identify or assess any hazards. Rather, it only contains a check list of topics to be covered, using such terms as "Discuss," "Review," and "Explain." (Ex. P-11). Indeed, respondent's safety expert testified that he has never before seen a Location Safety Sheet and a Safety Meeting Sheet used as a Certificate of Hazard Assessment (Tr. 404-405).

There really is no dispute that there was, at a minimum, a technical violation of the standard. The standard requires that the document be identified as a "certification of hazard assessment." Although the Secretary does not dispute that an assessment was made, respondent failed to prepare a document formally called a "Hazard Assessment", and there was no certification that such an assessment was made.

A violation is *de minimis* when a deviation from the standard has no "direct or immediate" relationship to employee safety. *Dover Elevator Co.*, 15 BNA OSHC 1378, 1382

(No. 88-2642, 1991). Requiring that there be a certification creates accountability and therefore increases the likelihood that a proper assessment will be made. Therefore the failure to have the document is not *de minimis*.

The Secretary asserts that the violation was serious. However, the Secretary adduced no evidence that the violation was likely to result in death or serious physical harm. I find that, because an assessment was made and the hazards covered by Schoenthal during the morning safety meetings, it was unlikely that the result of the violation would be death or serious physical harm. According, the item is affirmed as other than serious.

As noted under items 2 and 5, *supra*, the Secretary proposed a penalty of $6300 for this violation. While the Secretary properly considered the statutory factors set forth in section 17(j) of the Act, the proposed penalty was based on the assumption that the violation was serious. Having found the violation to be other than serious, however, requires a substantial reduction in the penalty. Considering the gravity of the violation and the 17(j) factors, as developed at the hearing, I find that a penalty of $630 is appropriate.

ORDER

Based upon the foregoing findings of fact and conclusions of law, it is **ORDERED** that:

(1) Citation 1, item 2 alleging a serious violation of 29 CFR §1910.132(d)(1)(ii) is **AFFIRMED** and a penalty of $6300 is **ASSESSED**;

(2) Citation 1, item 3 alleging a serious violation of 29 C.F.R. §1910.132(d)(2) is **AFFIRMED**; as other than serious and a penalty of $630 is **ASSESSED**;

(3) Citation 1, item 4(b) alleging a serious violation of 29 C.F.R. §1910.269(l)(2) is **VACATED**;

(4) Citation 1, item 5, alleging a serious violation of 29 C.F.R. §1910.138(a) is **AFFIRMED** and a penalty of $6300 is **ASSESSED**;

(5) Citation 1, item 8, alleging a serious violation of 29 C.F.R. §1910.133(a)(1) is **VACATED**;

(6) Citation 1, item 11 alleging a serious violation of 29 C.F.R. §1926.21(b)(2) is **VACATED**;

(7) Citation 1, item 12, alleging a serious violation of 29 CFR §1926.417(b) is **VACATED**;

(8) Citation 1, item 13, alleging a serious violation of 29 CFR §1910.145(f)(3) is **VACATED.**

SO ORDERED.

_____/s/_____

The Honorable John H. Schumacher
U.S. OSHRC Judge

Dated: June 14, 2011
Washington, D.C.