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. AMP ELECTRICAL, INC., Respondent.	OSHRC Docket No. 10-0245

APPEARANCES:

Nathan Goldstein, Esquire
U.S. Department of Labor
Boston, Massachusetts
For the Secretary.

Bart Heemskerk, Esquire
Springfield, Massachusetts
For the Respondent.

BEFORE: G. Marvin Bober
Administrative Law Judge

DECISION AND ORDER

This proceeding is before the Occupational Safety and Health Review Commission ("the Commission") under section 10(c) of the Occupational Safety and Health Act of 1970, 29 U.S.C. § 651 *et seq*. ("the Act"). The Occupational Safety and Health Administration ("OSHA") inspected a work site of AMP Electrical, Inc. ("AMP" or "Respondent") after an employee of AMP was injured at the site on November 18, 2009. As a result of the inspection, OSHA issued to AMP a serious citation under the general industry standards alleging (1) a failure to provide training determined by the risk to the employee, and (2) a failure to provide protective equipment appropriate for the work to be done. AMP contested the citation and the proposed penalties, and this matter was designated for the Commission's simplified proceedings. On April 5, 2010, the Secretary filed a motion to amend the citation to allege violations under OSHA's construction

standards. The motion was granted on April 22, 2010. As amended, Item 1 of the citation alleges a violation of 29 C.F.R. 1926.21(b)(2), for failure to instruct each employee in the recognition and avoidance of unsafe conditions, and the regulations applicable to his work environment. Item 2a alleges a violation of 29 C.F.R. 1926.95(a), for failure to provide appropriate protective equipment, and Item 2b alleges a violation of 29 C.F.R. 1926.416(a)(1), for permitting an employee to work in proximity to an electrical circuit without de-energizing and grounding it or adequately guarding it. The administrative trial in this matter was held in Springfield, Massachusetts, on July 20 and 21, 2010. Both parties have submitted post-trial briefs.

Background

AMP is an electrical contracting company based in West Springfield, Massachusetts. The co-owners of the business are Michael Ostrowski and Andrew Dutko. On November 16, 2009, two AMP employees began working in the mechanical room of a J.C. Penny outlet store ("the store") in Springfield, Massachusetts. The two employees were Edward Reniewicz IV, a journeyman electrician, and Greg Gethins, an apprentice electrician. Mr. Reniewicz was AMP's supervisor for the project. New England Mechanical ("New England"), the general contractor, had hired AMP to perform the electrical work associated with installing a new chiller at the store. *See* ALJ-1, pp. 1-2.[1]

On the morning of November 18, 2009, Mr. Reniewicz was in the process of installing a bracket and a variable frequency drive ("VFD") in a bucket of the switchboard in the store's mechanical room.[2] The bucket's front door was open, and Mr. Reniewicz was working at the front face of the back plate of the bucket. Electrical conductors called "bus bars" were located behind the bucket. There were two separate sets of bus bars behind the bucket, one set running

[1] ALJ-1 is the parties' Joint Stipulation of Admitted Facts.

[2] A "switchboard" is a large panel or assembly of panels with switches, buses and other devices mounted on the front or back or both. *See* 29 C.F.R. 1926.449(b). The switchboard at the site had five tiers or sections, each containing a number of compartments with doors or covers that could be opened or taken off to do wiring or other work. (Tr. 216; C-1-2, C-9-11). At the trial, AMP disputed the use of the terms "switchboard" and "compartment," urging that the proper terms were "motor control center" ("MCC") and "bucket." However, Kenneth Mastrullo, the Secretary's expert, testified that the term "switchboard" was the more appropriate, as the panel "[fed] all the equipment in the building;" an MCC would provide motor controls to units. (Tr. 23-24, 67, 90-97). AMP's expert, Michael Leary, in essence agreed with Mr. Mastrullo in this regard. (Tr. 313-15; C-22). Mr. Mastrullo also testified that the term "bucket" was commonly used to refer to a compartment. He stated that whether the term "switchboard" or "MCC" was used made no difference in his opinion since they were similar types of equipment and presented exactly the same hazards. (Tr. 59-60). The terms "switchboard" and "bucket" will be used in this decision.

horizontally and the other running vertically.[3] Mr. Ostrowski and Mr. Reniewicz had both seen the horizontal bus bars, but not the vertical bus bars, before the day of the accident. They had seen the horizontal bus bars upon removing certain bucket covers in another location in the mechanical room but had been unable to see the vertical bus bars. The horizontal bus bars were about 5.5 inches behind the back plate of the bucket. The vertical bus bars, however, were only about 1.5 inches behind the back plate of the bucket. *See* ALJ-1, pp. 2-3.

On November 18, 2009, Mr. Reniewicz was using a battery-operated drill with a drill bit that was about 3 inches long to drill a hole in the back plate of the bucket. As he did so, the drill bit came into contact with an energized electrical circuit behind the back plate of the bucket. There was a big flash, and Mr. Reniewicz dropped to his knees. He was taken to a hospital and was treated for second and third-degree burns to his face and neck. He was released after about an hour. Following the accident, Mr. Reniewicz missed three weeks of work. The accident also resulted in the power being knocked out in the store and in other nearby stores. Power was restored in about eight hours. (Tr. 147-48; ALJ-1, pp. 3-4).

Whether the Citation, as Amended, is Improper

AMP opposed the Secretary's motion to amend the citation, and it has addressed this matter in its post-trial brief. It contends that the general industry standards are more specifically applicable to the work that was done at the site, and it makes numerous arguments in this regard. R. Brief, pp. 9-14. The Secretary disputes AMP's contention. She notes the work at the site "was construction because it constituted a replacement of and upgrade to a major industrial component of [the store]." She also notes that "the relevant inquiry is the type of work being performed." S. Brief, p. 12. The Secretary is correct.

As the Secretary points out, OSHA's standards define "construction work" as "work for construction, alteration, and/or repair, including painting and decorating." *See* 29 C.F.R. 1926.32(g) and 29 C.F.R. 1910.12(b). As she also indicates, the Commission has long held that work that involves replacing existing equipment is considered "work for … alteration" and is therefore "construction work." *See Jimerson Under-Ground, Inc.*, 21 BNA OSHC 1459, 1461 (No. 04-0970), *citing United Tel. Co. of the Carolinas*, 4 BNA OSHC 1644, 1646 (No. 4210, 1976). S. Brief, pp. 13-14.

[3] There were four bus bars in the set of horizontal bars and three bus bars in the set of vertical bars. The vertical bars fed power to the upper and lower buckets in the switchboard. (Tr. 48-50; C-10-12).

In *United Telephone*, the Commission found that erecting and removing telephone poles and transferring lines to new poles was reconstruction constituting "alterations" and was thus construction work as defined in 29 C.F.R. 1910.12(b). 4 BNA OSHC 1646. In *Jimerson Under-Ground*, the employer's work involved replacing the existing sewer piping with new piping. The Commission determined that, as in *United Telephone*, Jimerson was engaged in "work for … alteration." The Commission also noted that Jimerson's work was an integral part of a larger project involving replacement of all of the city's sewer lines. The Commission concluded that Jimerson's activities constituted construction work under the plain language of section 1910.12(b) and, consequently, the general industry standards did not apply to the cited condition. 21 BNA 1461-62. The Secretary cites to a number of other cases that support her position.[4] *See, e.g., Cleveland Consol., Inc.*, 13 BNA OSHC 1114 (No. 84-696, 1987); *Mississippi Power & Light Co.*, 7 BNA OSHC 2036 (No. 76-2044, 1979); *New England Tel. & Tel. Co.*, 4 BNA 1838 (No. 9627, 1976); *rev'd on other grounds*, 589 F.2d 81 (1st Cir. 1978); *Pacific Gas & Elec. Co.*, 2 BNA OSHC 1692 (No. 2821, 1975). S. Brief, pp. 12-14.

The record in this case shows AMP's work at the site was construction work, as defined in OSHA's standards. The parties agree that AMP's work was "electrical work associated with installing a new chiller for [the store]." ALJ-1, p. 2, ¶ 7. Mr. Ostrowski testified that New England, the general contractor, was replacing the chiller unit and that AMP was installing wiring for the unit and the VFD for the exhaust fan for the leak detection equipment.[5] Mr. Ostrowski said Mr. Reniewicz's job on November 18 was "[m]ounting the equipment in the bucket, running the pipe to the motor, pulling the wires, tying it all in." (Tr. 212-14). Dale Varney, the OSHA compliance officer ("CO") who inspected the site, also testified that the project involved replacing the old chiller unit with a new one. He described the new unit as a "large" and "major" component that was much more efficient than the old one. He also said that the project involved "substantial upgrades" to the existing system, including a leak detection system, and that the total cost of the project was about $200,000.00. (Tr. 176-77). I find that the replacement of the chiller unit was construction work, according to OSHA's definition of that term and the above Commission precedent. I also find that AMP's work was an integral part of

[4] Respondent AMP has cited to no case law in support of its position.
[5] The record indicates that a chiller is the main component of an air conditioning system. (Tr. 176-77, 212).

the project. I conclude that AMP's work at the site was "work for … alteration" and was therefore construction work. AMP's contention is rejected.

The Undisputed Facts

The switchboard at the site was a 480-volt system. The switchboard's manufacturer was Federal Pacific, which, by the time of the accident, had been out of business for over 30 years. The switchboard was fed by three 500-KVA transformers located about 30 feet from the switchboard. There had been a main secondary breaker in the switchboard that had allowed workers to de-energize the switchboard when necessary. That breaker, however, had been removed, evidently due to a problem with that equipment. There was another breaker on the primary side of the transformers that could have de-energized the switchboard, but that breaker was controlled by the power company. (Tr. 23-29, 233, 238-41, 244; C-8).

Before the accident, Mr. Ostrowski went to the site to perform a risk assessment and to find out what size of wire and conduit was needed to do the wiring for the chiller unit. He opened the bucket that would be involved in that work, which was two buckets away from the subject bucket, and he saw the front faces of the horizontal bus bars. After Mr. Ostrowski's visit, Mr. Reniewicz went to the site to do the wiring work for the chiller unit. He opened the bucket and saw the horizontal bus bars. Mr. Reniewicz wore an arc flash suit for protection that day because he considered the exposed and energized bus bars to be dangerous. (Tr. 144-45, 215-20, 239).

During his risk assessment, Mr. Ostrowski determined there was "zero hazard" as to the other work to be done, that is, installing the VFD in the subject bucket. He based his assessment on the fact that that bucket was empty and had no energized parts in it and on his belief the bucket had a double back plate to prevent penetration of any live equipment. Mr. Ostrowski and Mr. Reniewicz were unaware of the vertical bus bars that were behind that bucket. When Mr. Reniewicz went to the site to install the VFD, he did not take an arc flash suit with him. He also did not wear a hard hat or safety glasses for protection that day. He wore a long-sleeve cotton shirt and jeans to do the installation work. (Tr. 144-49, 215-30; ALJ-1, pp. 3-4, ¶¶ 11, 16).

Mr. Reniewicz is a licensed journeyman electrician in Massachusetts and Connecticut. He attends a licensing recertification course in Massachusetts every three years and a licensing recertification course in Connecticut every year. His last such course for both states was in early 2009. About two hours of the Massachusetts course focus on safe electrical work practices, including arc flash training, and about one hour of the Connecticut course focuses on those

practices. In March 2007, AMP's employees, including Mr. Reniewicz, attended an OSHA ten-hour training course. That course includes one to two hours of electrical safety. In November 2007, AMP's employees, including Mr. Reniewicz, attended a course sponsored by Salisbury, a personal protective equipment ("PPE") manufacturer and distributor, and Graybar, a distributor of electrical equipment and materials.[6] (Tr. 81-82, 149-54, 210, 245-46; ALJ-1, pp. 4-5).

Before the accident, AMP had informal employee safety meetings about twice a year. These addressed general safety hazards, lasted about a half hour, and were not documented. At the time of the accident, AMP's written safety and health policies were contained in Section 8 of the "Information Handbook for Employees of Amp Electrical, Inc.," ("Handbook") and the National Fire Protection Association ("NFPA") 70E Compliance Guide ("70E Chart"). The safety rules in the Handbook were general safety rules and not specific to electrical safe work practices. Mr. Reniewicz had received a copy of the Handbook in 2006. At the time of the OSHA inspection, AMP was in the process of developing a safety and health program, but it had not yet implemented the program. After the accident, AMP began holding safety meetings that addressed OSHA's electrical standards. (Tr. 77-78, 170-71, 236-37; ALJ-1, p. 5; C-18, C-19).

DISCUSSION AND CONCLUSION

To establish a violation of an OSHA standard, the Secretary must prove: (1) the standard applies to the cited condition; (2) the terms of the standard were violated; (3) one or more of the employer's employees had access to the cited conditions; and (4) the employer knew, or with the exercise of reasonable diligence could have known, of the violative conditions. *Kulka Constr. Mgmt. Corp.*, 15 BNA OSHC 1870, 1873 (No. 88-1167, 1992); *Ormet Corp.*, 14 BNA OSHC 2135 (No. 85-0531, 1991).

The Alleged Violation of 29 C.F.R. 1926.416(a)(1) – Item 2b

Item 2b of the citation alleges a violation of 29 C.F.R. 1926.416(a)(1), which provides:

> No employer shall permit an employee to work in such proximity to any part of an electric power circuit that the employee could contact the electric power circuit in the course of work, unless the employee is protected against electric shock by deenergizing the circuit and grounding it or by guarding it effectively by insulation or other means.

The citation describes the violation as follows:

> Employees were performing electrical work on a new chiller that was being installed on the air conditioning system. An employee drilled through the back of

[6] AMP already had arc-flash-rated PPE at the time of the Salisbury-Graybar course. (Tr. 211-12).

a cabinet and his drill came in contact with a live bus bar that was located in close proximity to the back of the cabinet.

As noted above, the parties have stipulated that the "drill bit came into contact with an energized electrical circuit behind the back plate of the bucket/compartment." ALJ-1, ¶ 12. Kenneth Mastrullo, the Secretary's expert, opined that when Mr. Reniewicz drilled through the back plate, the drill bit either contacted a vertical bus bar or got close enough such that there was an "arcing effect."[7] In either case, an "arc flash" occurred and came out the hole that was drilled. Mr. Mastrullo said he reached this conclusion based on Mr. Reniewicz's deposition testimony that there was a bright flash when the accident occurred and that he received second and third-degree burns; these facts are consistent with an arc flash. He also reached his conclusion due to the molten metal below the drilled hole, shown in C-14, which indicated an arc flash.[8] Mr. Mastrullo stated that the bucket was a barrier that deflected most of the arc flash; if the opening or hole had been larger, Mr. Reniewicz's injuries could have been much worse. He also stated that AMP violated the cited standard because Mr. Reniewicz drilled through the bucket's back plate, which was in close proximity to the live bus bars. Mr. Mastrullo said that de-energizing the switchboard would have eliminated the hazard and prevented the accident. (Tr. 30-36, 119-25).

Michael Leary, AMP's expert, opined that no arc flash or arc blast had taken place.[9] He said that for an arc flash to occur, an arc has to travel through the air. He did not believe an arc had "jumped" from the bus bar to the drill bit before actual contact was made, because there was insufficient voltage for that to have happened. Mr. Leary stated that if an arc flash had actually taken place, the bucket would have melted down and Mr. Reniewicz would have died. Mr. Leary believed that the drill bit contacted an energized part and faulted against the bucket. In particular, he believed that a ground fault, or short circuit, had occurred and that the over-current fuses on the transformers had opened, shutting off the electrical power. His opinion was that AMP had

[7] Mr. Mastrullo is the electrical expert and compliance assistance coordinator in OSHA's Boston Regional Office. He has many years of experience working as a licensed electrician, and he has a master electrician's license from Massachusetts. He also worked for the NFPA's Electrical Division for a number of years. There, he taught the National Electrical Code and was in charge of the NFPA 70E, which is an electrical safe work practice consensus document. He has worked for OSHA since 2005. (Tr. 14-18).

[8] Exhibits C-1 through C-15 are photographs CO Varney took at the site. C-2 shows the front of the bucket after the accident and the burned area around the drilled hole. C-14 shows the vertical bars behind the bucket and, between two of those bus bars, the drilled hole and the molten material in that area. (Tr. 20-22, 31-33, 124, 166-68).

[9] Mr. Leary is the inspector of wires of the City of Chicopee, Massachusetts. He also is employed as an electrical contractor in commercial and industrial settings. He has been a licensed electrician for 22 years, and he has master electrician's licenses in Massachusetts and four other New England states. Mr. Leary is an OSHA "10/30" course instructor, and he been an electrician recertification course instructor for 18 years. (Tr. 264-67).

not violated the cited standard because the bucket's back plate was a guard against contact with the energized equipment. (Tr. 276-88).

It is clear from the above that the two experts, both of whom visited the site and reviewed the relevant documents and photographs in this case, had different opinions about what happened and whether a violation of the standard occurred. In comparing their testimony, however, I find there are significant problems with Mr. Leary's testimony. First, he testified he was unaware when he formed his opinion that Mr. Reniewicz was injured. (Tr. 305-06). Second, he opined that there was no violation of the standard because the bucket's back plate was a guard against contact with the live equipment, even though he knew that Mr. Reniewicz drilled through the back plate and contacted live equipment. (Tr. 279-81, 301-02). Mr. Leary also testified that the subject bucket did not have a double back plate. (Tr. 297). And, he acknowledged that his own company had a "no live work policy" and that he told employees to de-energize equipment if they could. (Tr. 301). Finally, on cross-examination, Mr. Leary basically recanted some of his direct testimony. For example, on direct, he testified that the panel at the site was an MCC, not a switchboard. (Tr. 292-94). On cross, however, he admitted that when he was asked at his deposition to circle the table most appropriate to this case on C-18, the 70E Chart, he circled the one entitled "Panelboards/Switchboards Rated 240 V to 600 V." (Tr. 313-15).

Based on the foregoing, I do not find Mr. Leary to be as credible an expert witness as Mr. Mastrullo in this matter. In particular, I find it incredible that he was unaware of Mr. Reniewicz's injuries when he formed his opinion and that he could actually believe that the back plate was an effective guard when he knew that Mr. Reniewicz had to drill through the back plate to install the VFD. Mr. Mastrullo, on the other hand, offered the entirely credible opinion that AMP violated the standard because Mr. Reniewicz drilled through the back plate, which was in close proximity to the live bus bars. I also find it very significant that Mr. Mastrullo's opinion, that an arc flash occurred, was based on Mr. Reniewicz's testimony that there was a bright flash at the time of the accident, and that he sustained second and third-degree burns to his face and neck. According to Mr. Mastrullo, these facts are consistent with an arc flash occurring. In view of my findings, Mr. Mastrullo's opinions and testimony will be credited over those of Mr. Leary to the extent their opinions and testimony differ.[10] On the basis of the credible evidence of record, I conclude the

[10] Mr. Mastrullo's testimony is also credited over that of Mr. Ostrowski. I found Mr. Ostrowski to be a credible witness in some respects. Some of his testimony, however, (*i.e.*, that there was no risk involved in installing the

cited standard applies, that its terms were violated, and that at least one employee was exposed to the cited condition.

In regard to AMP's knowledge of the cited condition, it is clear that AMP knew the switchboard was energized. (Tr. 239). It is also clear that both Mr. Ostrowski and Mr. Reniewicz were aware of the horizontal bus bars because they saw them prior to the accident. (ALJ-1, p. 3, ¶ 11). Mr. Reniewicz, in fact, wore an arc flash suit for the wiring work he did before November 18, 2009, because he considered the exposed bus bars dangerous. (Tr. 144-45). Mr. Ostrowski and Mr. Reniewicz were not aware of the vertical bus bars before the accident. (Tr. 144-45, 227, ALJ-1, p. 3, ¶ 11). Mr. Ostrowski testified that AMP and the prior company he had worked for routinely did work like that at the subject site.[11] He said that the horizontal bus bars did not necessarily suggest that there would be vertical bus bars. He also said the vertical bus bars were unusual, that in all his years of experience he had never seen bus bars within 1.5 inches of a back plate, and that in newer equipment the bus bars are "set back." Mr. Ostrowski believed, based on his experience with equipment like that at the site, that the bucket had a double back plate that would prevent penetration through to live equipment. (Tr. 206-08, 228-30, 250-51). Mr. Leary also testified that buckets like those at the site generally have double back plates. He said that Federal Pacific equipment is very poorly designed and that the vertical bars in question were "way too close." He stated it would not have been reasonable for Mr. Ostrowski to have thought there could have been live electrical parts 1.5 inches from the bucket's back plate. (Tr. 293-30).

Contrary to the testimony of Mr. Ostrowski and Mr. Leary, Mr. Mastrullo testified that buckets generally do not have double back plates, whether they are in an MCC or a switchboard. He explained that when a modular plug-in unit is put into an empty bucket and is pushed in against the bucket's back plate, then the bucket has a double back plate; this was not the case at the site, as the bucket was completely empty.[12] He also explained why AMP should have known there were vertical bus bars at the site. Horizontal bus bars provide power horizontally, and vertical bars are necessary to provide power vertically, in that the buckets in switchboards are typically five or six levels high. In addition, there is no standardization in the configurations of

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VFD in the bucket because there were no energized parts in the bucket), was simply not believable for the same reasons that Mr. Leary's similar testimony was not believable. (Tr. 222).

[11] Mr. Ostrowski has a master electrician's license in Massachusetts, Connecticut and Maine. He has worked as an electrician for 16 years, and he and Mr. Reniewicz both worked previously for Elm Electrical. (Tr. 203-08, 228).

[12] Mr. Mastrullo testified that even if the bucket at the site had had a double back plate, Mr. Reniewicz still could have contacted or been in close proximity to the energized equipment. (Tr. 59).

electrical components behind switchboards; he has seen many different configurations, in his experience, and the only way to determine the configuration is to take the compartment covers off. Mr. Mastrullo said that AMP could have discovered the vertical bus bars by removing the cover of the "blank filler plate" that was at the bottom of the section where the subject bucket was located. He pointed out that C-12, one of the CO's photographs of the site, showed the "blank filler plate" after the accident, with its cover removed, which revealed the vertical bus bars.[13] (Tr. 30-31, 48-58, 326).

In light of Mr. Mastrullo's testimony, and my credibility findings above, I conclude that AMP could have known, with the exercise of reasonable diligence, that there were vertical bus bars behind the subject bucket and that Mr. Reniewicz would be exposed to the energized bus bars when he drilled through the back plate of the bucket. This is especially so upon considering that the cover of the "blank filler plate," which was at the bottom of the section containing the subject bucket, could have been removed, thus revealing the vertical bus bars. In this regard, I note the following questions to Mr. Ostrowski and his answers:

> Q: Wouldn't it be prudent to be very careful no matter what you do? Because you don't know … where all those things may be.
> A: I understand what you're saying, yeah….
> Q: So … if you knew there was no … main circuit breaker, and I assume you knew that … because you were there and he was there.
> A: Yes.
> Q. Wouldn't it be prudent to be very careful and check everything before you did anything?
> A: We … checked as best as we, we knew how. I mean it's, there's, you know, not much you can check with the bus bar. It's there or it's not, but it's prudent to check everything, you're right. You're absolutely right. (Tr. 248).

While the foregoing is sufficient to dispose of this item, there are two issues that need to be addressed for completeness. First, AMP indicated at the trial that although the power company could have de-energized the equipment, there were reasons to not do so; the store did not want that to occur, unless it was absolutely necessary, and de-energizing would have resulted in the security and fire alarm systems being down and the need for security guards. (Tr. 232-33). Mr. Reniewicz, however, agreed it would have been possible to do the job at night with the equipment de-energized. (Tr. 146). And, Mr. Ostrowski conceded that AMP had considered de-energizing the equipment. (Tr. 242-44). AMP has not claimed infeasibility of compliance. I find,

[13] The CO also testified about C-12 showing the exposed vertical bars after the cover was removed. (Tr. 169).

therefore, that de-energizing the switchboard was feasible. [14] Second, Mr. Leary testified that the over-current fuses on the transformers were a better system than having a main circuit breaker in place, as they shut off the current more quickly. (Tr. 275-79, 322). Mr. Mastrullo disagreed. He indicated both were necessary, noting that "every time you add a device into a system it creates more resistance … so you get less energy through." He also testified that while primary fuses may act more quickly, the main circuit breaker on the 480-volt side of the subject transformers was a "dead shot" and would have tripped very quickly. (Tr. 326-27). Mr. Mastrullo's opinion in this regard is credited over that of Mr. Leary.

Based on the record, the Secretary has established the alleged violation. She has also established that the violation was serious, in view of Mr. Reniewicz's injuries. As Mr. Mastrullo indicated, Mr. Reniewicz's injuries could have been much worse if the hole or opening in the back plate had been larger. (Tr. 35-36). This citation item is affirmed as a serious violation.

The Secretary has proposed a penalty of $2,000.00 for Item 2b, which has been grouped with Item 2a for penalty purposes. In assessing penalties, the Commission must give due consideration to the gravity of the violation and to the size, history and good faith of the employer. *See* section 17(j) of the Act. CO Varney testified that Item 2b had high severity and high probability, in that Mr. Reniewicz was working in close proximity to live, 240-volt bus bars. He was injured as a result, and his injuries could have been more serious. The CO further testified that a 60 percent reduction for AMP's size was given, resulting in a proposed penalty of $2,000.00. No other reductions were given. (Tr. 180-83).

In considering the proposed penalty for Item 2b, I have noted that it was grouped with Item 2a for penalty purposes. Item 2a has been vacated, for the reasons set out below. Despite this fact, however, I find that a penalty of $2,000.00 for Item 2b is appropriate, due to the high gravity of the cited condition and the serious injuries Mr. Reniewicz received. A penalty of $2,000.00 is therefore assessed for Item 2b.

The Alleged Violation of 29 C.F.R. 1926.95(a) -- Item 2a

Item 2a of the citation alleges a violation of 29 C.F.R. 1926.95(a), which states:

> Protective equipment, including personal protective equipment for eyes, face, head, and extremities, protective clothing, respiratory devices, and protective shields and barriers, shall be provided, used, and maintained in a sanitary and reliable condition wherever it is necessary by reason of hazards of processes or

[14] My finding is supported by the testimony of Mr. Mastrullo in this regard. (Tr. 39-41).

> environment, chemical hazards, radiological hazards, or mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact.
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> The citation describes the violation as follows:
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> Employees working in areas where there were live electrical parts operating at 480 volts, and where the available fault current exceeded 75 KA, were not using the appropriate protective equipment for the task.

The basis of this item, according to the Secretary, is that AMP "failed to require its employee to use [PPE] in the limited instances during the work in question in which such [PPE] was permissible." S. Brief, p. 3. Mr. Mastrullo testified about the required PPE for shock protection and arc flash protection; arc flash PPE, for example, would be a face shield or hood, a body suit or clothing with a flame-resistant rating, and voltage-rated gloves and tools. He noted that the clothing Mr. Reniewicz wore on November 18, *i.e.*, a long-sleeve cotton shirt and jeans, was not appropriate for the work he did. He also noted that while AMP had arc-flash-rated body suits, and while Mr. Reniewicz had worn one of the suits for work at the site on a previous day, he did not have a body suit with him on the day of the accident. Mr. Mastrullo stated that there was very little PPE available for some situations, like an arc blast, which can cause equipment to explode and flying shrapnel as well as a pressure wave. (Tr. 34, 43, 61-63).

Mr. Mastrullo further testified that 29 C.F.R. 1926.416(a)(1) required equipment like that at the site to be de-energized or guarded effectively before it could be worked on. He said there were limited instances when de-energizing would not be required, for example, when voltage testing or troubleshooting had to be done. He also said that if equipment was not de-energized, and the employer believed that doing so was infeasible or a greater hazard, OSHA would take the circumstances into account. Mr. Mastrullo stated that if equipment was not de-energized, proper PPE for the potential hazard would be required. He also stated that PPE is not equivalent to de-energization, due to the limitations of PPE. (Tr. 36-38, 41-43, 60-61, 130-32).

Mr. Mastrullo said the NFPA 70E Chart (Exhibit C-18) can be used to determine the appropriate PPE based on the hazard risk category ("HRC") for the work being done.[15] He noted that AMP had not used C-18 properly. (Tr. 63-64). Mr. Ostrowski used the table on C-18 entitled "600 V Class Motor Control Centers (MCC's)" and determined the HRC was "0" as the bucket

[15] Mr. Mastrullo said the NFPA 70E is an electrical safe work practice consensus document that is very consistent with OSHA electrical standards. NFPA 70E was admitted as C-17. Exhibit C-18 is part of C-17. (Tr. 15-18, 43-45).

was empty and had no exposed live parts in it. (Tr. 224-26). Mr. Mastrullo said Mr. Ostrowski should have used the table entitled "Panelboards/Switchboards Rated 240 V to 600 V" ("the Table"); he then should have gone to the Table's third line, which reads: "Work on energized parts, including voltage testing." That work has an HRC of "2*" and requires voltage-rated tools and gloves, as well as fire-resistant long-sleeved shirt and pants or fire-resistant coveralls.[16] Mr. Mastrullo also said, however, that the Table further refers users to "Notes 1 & 3," which appear with other notes at the bottom left of C-18. The heading for those notes states as follows: "**<u>*If the notes cannot be satisfied, work must be performed de-energized.</u>**" (Emphasis in original). Mr. Mastrullo focused on Note 1, which provides: "Maximum of 25 kA short circuit current available, 0.03 second (2 cycle) fault clearing time." Mr. Mastrullo stated he had calculated the short circuit current available in this case to be 30 to 33 kA.[17] He also stated the fault clearing time could not be determined because the switchboard's main breaker was missing; this was critical, as it meant that there could be a very high potential arc flash hazard, which required a high level of PPE. Mr. Mastrullo testified that the PPE set out at "2*" was not appropriate, in these circumstances, and that the equipment had to be de-energized before it could be worked on. (Tr. 25-30, 43-46, 63-67).

AMP contends that, based on Mr. Mastrullo's testimony, de-energization or effective guarding, and not PPE, was required for the work at the site. AMP also contends the Secretary has never stated what PPE was required and that, therefore, it cannot be found in violation of the cited standard. R. Brief, pp.16-18. I agree, for the following reasons.

First, Mr. Mastrullo's testimony on direct, as set out above, supports AMP's contention. Mr. Mastrullo reiterated this testimony on cross-examination, *i.e.*, he stated that de-energization was required in this case. (Tr. 111-16, 136-39). Second, the Secretary suggests that Mr. Mastrullo's testimony, about the limited instances in which an employee may work on energized equipment as long as proper PPE is worn, applies here. S. Brief, p. 27-28. I disagree. Mr. Mastrullo testified that the limited instances, such as troubleshooting and voltage testing, apply to general industry workers (who perform electrical maintenance work) and not to construction workers (who perform electrical installation work). (Tr. 112-13). Further, there was no evidence to indicate that, if the power company had de-energized the switchboard, Mr. Reniewicz would

[16] In this regard, *see* C-18, "Minimum Clothing Requirements" table, at 2*.
[17] Mr. Mastrullo said he had software he used to calculate the 30 to 33 kA short circuit current available. (Tr. 27-28).

have had to test the voltage before he worked on the equipment. In view of the record, it seems much more likely that the power company employee who de-energized the equipment would have tested the voltage. Third, Mr. Mastrullo acknowledged that, while AMP was cited for not using the appropriate PPE, both 29 C.F.R. 1926.416(a)(1) and C-17, the NFPA 70E, required de-energization, and not PPE, in the circumstances at the job site. (Tr. 115-16).

I find that the Secretary has not established a violation of 29 C.F.R. 1926.95(a). In so doing, I have noted the testimony of Mr. Mastrullo that, although the situation at the site was beyond the dictates of C-18, the 70E Chart, AMP could have performed a detailed analysis to determine the proper PPE for the work. This would have involved doing a flash hazard analysis, which consists of an incident energy analysis and a flash protection boundary analysis to determine the severity of the electrical hazards and safe distances for the exposed employees. (Tr. 63-65, 68-69, 133-34).[18] As the Secretary concedes, these analyses are complex and time-consuming. S. Brief, p. 28. Further, Mr. Mastrullo indicated that to perform these analyses, both the available fault current and the tripping or fault clearing time would have to be known; he also indicated the fault clearing time could not be determined here because of the missing breaker. (Tr. 63-69). Mr. Mastrullo identified the document that contains these analyses as "IEEE 1584." He said that that document also prescribes the proper PPE for particular situations. He then said that sufficient PPE for Mr. Reniewicz's work existed but that "how you determine that is another issue." (Tr. 139-41). Mr. Mastrullo never specifically stated what the appropriate PPE for that work would have been. And, as is clear from his testimony above, his opinion was that de-energization, and not PPE, was required for the work at the site.

Based on the record, the Secretary has not demonstrated the alleged violation. Item 2a is accordingly vacated.

The Alleged Violation of 29 C.F.R. 1926.21(b)(2) -- Item 1

Item 1 of the citation alleges a violation of 29 C.F.R. 1926.21(b)(2), which provides:

> 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.

The citation describes the violation as follows:

[18] The Secretary also refers to a February 29, 2008 OSHA Interpretation Letter, which is Exhibit D to her brief, as containing the information for performing the required analyses. Exhibit D refers to the NFPA 70E in this regard.

> The employer did not provide to employees expected to work on live electrical equipment sufficient training in the area of safe electrical work practices to control or eliminate the hazards employees were exposed to. Training should address at a minimum the following areas: a thorough understanding of when safety related work practices apply, the level of hazardous energy being worked with (determined by voltage and available fault current), the shock protection boundaries and flash protection boundaries for the hazardous energy, and the required personal protective equipment for the task.

The undisputed facts, on pages 5 and 6 of this decision, set out the training and recertification courses Mr. Reniewicz had attended during the period he worked for AMP as a licensed journeyman electrician. The undisputed facts also set out the safety meetings held and the safety materials that AMP had before the accident. Specifically, AMP held informal safety meetings about twice a year that addressed general safety hazards, and the safety rules in AMP's Handbook contained general safety rules. AMP also utilized the NFPA 70E Chart.

As the Secretary notes, to show that AMP's training was insufficient, she must demonstrate that "the cited employer failed to provide the instructions that a reasonably prudent employer would have given in the same circumstances." *Valley Constr. Co.*, 1995 WL 455809, at *6 (No. 92-3644, 1995), citing to *El Paso Crane and Rigging Co.*, 16 BNA OSHC 1419, 1424 (No. 90-1160, 1993).[19] As she further notes, the issue in this case is whether AMP clearly instructed its employee(s) in recognizing the hazards associated with working in proximity to energized equipment and in avoiding such hazards. *Andrew Elec. Co.*, 2009 WL 56501, at *3 (No. 08-0103, 2009).[20] S. Brief, pp. 31-32.

The Secretary points out that Mr. Reniewicz himself admitted to CO Varney, who spoke to the employee by telephone during his inspection, "that having been through this incident … he probably needed to know more information than he did at the time of the accident to work safely around electrical equipment." (Tr. 171-72). And, further evidence in the record establishes that Mr. Reniewicz did not receive the training he needed to recognize and avoid the hazards for the work in question. For example, both Mr. Reniewicz and Mr. Ostrowski failed to recognize that, upon seeing the horizontal bus bars, the switchboard also likely had vertical bus bars; as Mr. Mastrullo testified, the vertical bus bars could have been discovered by removing the cover of the "blank filler plate" that was at the bottom of the section where the subject bucket was

[19] *Valley Construction* is a Commission ALJ decision. It is summarized at 17 BNA OSHC 1418.
[20] *Andrew Electric*, also a Commission ALJ decision, is summarized at 22 BNA OSHC 1593.

located. *See* Decision, *supra*, pp. 9-10. As another example, AMP allowed employees to work on live equipment while wearing PPE. (Tr. 149, 241-42). As the Secretary notes, this policy is in direct contravention of both 29 C.F.R. 1926.416(a)(1) and the NFPA 70E, which unequivocally require de-energizing as the primary means of working safely on electrical equipment. *See* C-17, §§ 120.1 and 130.1.[21] AMP also allowed employees, when not working directly on live equipment, to not use flame-rated PPE. (Tr. 148-49, 242). Mr. Reniewicz even testified that AMP had never instructed him on the definition of live work under the OSHA standards. (Tr. 152-53). Mr. Mastrullo and CO Varney both testified to the effect that adequate training would have provided employees with a live work policy that is consistent with OSHA standards and prohibits them from working in proximity to energized equipment. (Tr. 75-76, 178-79).

Similar to the above, AMP did not instruct Mr. Reniewicz in how to select appropriate PPE. He was not instructed in how to use the 70E Chart properly, as he never determined the fault current at the site or referred to the notes at the bottom of the 70E Chart; both of these are critical to using the 70E Chart correctly. (Tr. 146, 238-39). *See also* Decision, *supra*, pp. 12-13. Likewise, AMP did not instruct Mr. Reniewicz, and he was not otherwise trained, in how to calculate incident energy levels and flash protection boundaries and in using such calculations to select the proper PPE for a given job. (Tr. 151; ALJ-1, p. 5, ¶ 22). Mr. Mastrullo and Mr. Leary both testified the calculations are necessary for an electrician to be adequately trained in recognizing and eliminating electric hazards. (Tr. 73, 76-77, 311-13).

Finally, the safety materials AMP provided and the training Mr. Reniewicz received were inadequate to address the hazard cited in this case. The safety meetings AMP held twice yearly addressed only general safety hazards, not electrical hazards, and the Handbook provided to employees had only general safety rules.[22] As for the electrical safety training Mr. Reniewicz had had, only a small portion of the training addressed safe electrical work practices. *See* Decision, *supra*, pp. 5-6. The PPE course sponsored by Salisbury and Graybar did not educate AMP in regard to having a compliant live work policy or instruct Mr. Reniewicz in how to perform a flash hazard analysis. (Tr. 210; ALJ-1, p. 5, ¶ 20). Based on the record, I find that AMP was in serious violation of the cited standard. I also find that AMP knew of the lack of training in this

[21] The NFPA 70E also prohibits "blind reaching" into areas that may contain energized parts. *See* C-17, § 130.6(B).
[22] As the Secretary notes, another critical component of an employer's safety program is its disciplinary policy. At the time when he was deposed, Mr. Ostrowski did not know whether AMP had a written disciplinary policy, and no one had ever been terminated for committing a safety infraction. (Tr. 237).

case, as an employer would necessarily have knowledge of whether or not it instructed its employees in the recognition and avoidance of unsafe conditions. *See Andrew Elec. Co.*, 2009 WL 56501, at *3 (No. 08-0103, 2009). Item 1 is affirmed.

The Secretary has proposed a penalty of $1,000.00 for this item. CO Varney testified that the severity of the hazard was high, in light of the injury that could have (and did) result; the probability was considered lesser, due to the relatively short amount of time that Mr. Reniewicz was exposed and the fact that Mr. Reniewicz had had some training. The CO further testified that, after considering these factors and applying a 60 percent reduction for AMP's size, the proposed penalty was $1,000.00. No other reductions were given. (Tr. 180-82). I find the proposed penalty appropriate. A penalty of $1,000.00 is therefore assessed for Item 1.

Findings of Fact and Conclusions of Law

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

ORDER

1. Item 1 of Serious Citation 1, alleging a violation of 29 C.F.R. 1926.21(b)(2), is affirmed, and a penalty of $1,000.00 is assessed.

2. Item 2a of Serious Citation 1, alleging a violation of 29 C.F.R. 1926.95(a), is vacated.

3. Item 2b of Serious Citation 1, alleging a violation of 29 C.F.R. 1926.416(a)(1), is affirmed, and a penalty of $2,000.00 is assessed.

/S/

G. Marvin Bober
Judge, OSHRC

Dated: December 13, 2010
Washington, D.C.