# THIS CASE IS NOT A FINAL ORDER OF THE REVIEW COMMISSION AS IT IS PENDING COMMISSION REVIEW



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.

MASTEC NORTH AMERICA, INC. dba MASTEC ADVANCED TECHNOLOGIES, INC.,

Respondent.

**OSHRC DOCKET NO. 15-1574** 

**APPEARANCES**:

Dane L. Steffenson, Esquire Department of Labor, Office of the Solicitor Atlanta, Georgia For the Secretary

Alana F. Genderson, Esquire, Washington, D.C. Jason S. Mills, Esquire, Los Angeles, California Morgan, Lewis & Bockius LLP For Respondent

## **BEFORE:**

Dennis L. Phillips Administrative Law Judge

# **DECISION AND ORDER**

Some personal identifiers have been redacted for privacy purposes.

This proceeding is before the Occupational Safety and Health Review Commission (the Commission) pursuant to § 10(c) of the Occupational Safety and Health Act of 1970, 29 U.S.C. § 659(c) (the Act). On March 10, 2015, employees of MasTec North America, Inc. dba MasTec Advanced Technologies, Inc. (MasTec) were moving energized power lines (also referred to as phases, wires, lines, or conductors) from 45-foot wooden poles to new weather-resistant 50-foot tall concrete poles as part of a project to improve power distribution in Merritt Island, Florida for Florida Power & Light (FP&L). While engaged in moving the energized lines at Pole 65, 3210 South Tropical Trail, Merritt Island, Florida (worksite, work site, or job site), MasTec employee [redacted] was electrocuted and died at the worksite.

On March 11, 2015, Occupational Safety and Health Administration (OSHA) Compliance Officer (CO or CSHO) Luis Cebollero inspected the worksite. On September 8, 2015, OSHA issued a citation and notification of penalty (Citation) to MasTec. The Citation alleged one serious violation of OSHA's power generation and distribution construction standard for a total proposed penalty of \$7,000. MasTec timely contested the Citation. A two-day trial was held in Orlando, Florida on December 14-15, 2016. Post-trial briefs were filed by both parties; a reply brief was filed by Respondent.

#### **Jurisdiction**

Based upon the record, the Court finds Respondent, at all relevant times, was engaged in a business affecting commerce and was an employer within the meaning of sections 3(3) and 3(5) of the Act, 29 U.S.C. §§ 652(3) and (5).<sup>1</sup> (Answer at ¶¶ I-III). The Court finds the Commission has jurisdiction over the parties and subject matter in this case.

#### Admitted Facts

<sup>&</sup>lt;sup>1</sup> The parties do not dispute the Commission's jurisdiction or that Respondent is an employer within the meaning of the Act. (Joint Pre-Hearing Statement (JPHS), p. 9).

The parties submitted and stipulated to the following admitted facts (AF):

1. MasTec workers conducted work at South Tropical Trail for MasTec's client Florida Power & Light ("FPL", "FP&L" or "customer") on a project to remove 45-foot tall wooden poles and replace them with new 50-foot tall concrete weather resistant poles.

2. The worksite was Pole 65 located near [3210]<sup>2</sup> S. Tropical Trail, Merritt Island, Florida.

3. The incident occurred on March 10, 2015.

4. On March 10, 2015 the MasTec work crew was transferring hardware, equipment and conductor from wood poles onto taller adjacent concrete poles and/or installing new hardware, equipment and spliced conductors onto the concrete poles where required.

5. On March 10, 2015, MasTec USG employed more than 250 employees.

6. The following MasTec employees worked on March 10, 2016 [sic]<sup>3</sup> at the worksite at the time of the incident: [redacted] (Lineman 1), Jonathan Jinks (Lineman 2), Ed Bilodeau (Foreman), David Peterson (Groundman), Brian Caddell (Groundman), Franklin McCray (Apprentice).

7. All work ceased as soon as the incident occurred. None of the workers in the original crew continued to work after the incident. Immediately following the incident 911 was called. The Brevard County Sheriff Department closed the street and conducted an investigation shortly thereafter. The same day, to avoid safety and power issues in the neighborhood after the site was cleared by the Brevard County Sheriff Department, a second MasTec crew who was working nearby went to the worksite to restore power to the area. Jason Spicer, Thomas Bryant, Cody Rudd, Doyle Surritte, Tyler Langston, and Curt Williams were all members of the second MasTec crew.

8. Aside from CSHO Cebollero, no other CSHOs or other employees [sic] representatives or agents of OSHA visited the worksite.

9. CSHO Cebollero did not personally observe any MasTec employee(s) conducting work on or near Pole 65.

 $<sup>^{2}</sup>$  At trial, the parties agreed to modify AF No. 2 to reflect the correct street address of 3210 S. Tropical Trail. (Tr. 44).

<sup>&</sup>lt;sup>3</sup> The Court rejects AF No. 3 to the extent it states the year 2016, and instead finds the employer worked on March 10, 2015.

10. On August 3, 2015, OSHA Tampa Area Director Les Grove and OSHA Tampa Assistant Area Director Erin Sanchez interviewed a witness regarding the incident via telephone.

# Voltage Onsite and Tools and Equipment Used

11. The distribution lines on the pole at issue had an electrical voltage of 7,620 volts phase-to-ground system and 13,200 volts phase-to-phase system.

12. On the day of the incident the following tools and equipment were used by MasTec workers at the worksite:

a. Class III rubber protective gloves (with leather protectors) and rubber protective line hoses

b. Class II rubber protective sleeves

c. Class IV rubber protective blankets

d. Plastic/non-conductive pole guards (yellow plastic)

e. Line hoists with insulated handles (also known as "hot hoists")

f. Fiberglass link (also known as "link stick"), providing a barrier between the two ends of the line hoist and the conductor.

g. Fall protection harnesses

h. Composite or steel-toe work boots

i. Hard hats

j. Safety glasses

k. Fire resistant ("FR") clothing, including the upper (shirt) and lower (pants).

1. Rubber blanket clips (also referred to as "clothes pins")

m. Non-conductive collar rope

n. Black electrical tape.

# Description of Incident

13. Work was being performed on the middle phase that was in the process of being connected to the concrete pole. Previously, the middle phase was connected to the wooden pole.

14. The road-side phase and field-side phase remained attached to the wooden pole at the time of the incident.

15. Linemen Jonathan Jinks and [redacted] used equipment to cover most energized parts throughout the worksite.

a. Equipment used on site was inspected prior to use.

b. Although work was not being performed on the field-side and road-side phases, Class IV rubber protective blankets were installed on the field-side and road-side phases with rubber blanket clips.

c. A Class III line hose was placed over the end of the middle phase where work was being conducted. On one side of the line hose, a hot hoist was

attached to the conductor, which acted as a bumper against which the line hose could not move past (note: the exact measurement of the hot hoist from the conductor or end of the line hose is disputed). Non-conductive collar rope was wrapped around the line hose on the other end. Black electrical tape then was wrapped around the rope, the line hose and blue hot hoist webbing. It is unknown whether the black electrical tape was sticky side down or sticky side up.

16. Self-securing cable and line hose "end caps" are not available in the industry for overhead distribution lines.

17. At all relevant times on the day of the incident, both Jonathan Jinks and [redacted] wore Class III rubber protective gloves with leather protectors, Class II rubber protective sleeves, and other personal protective equipment such as composite or steel-toe work boots, hard hats, safety glasses, and fall protection harnesses.

18. Working in an elevated bucket of a bucket truck, Lineman Jonathan Jinks secured the energized middle phase into a jib hoist. Then, controlling the jib hoist from his bucket, Jonathan Jinks lifted the middle phase up and away from the work area. This increased the distance between the cross-arm of the concrete pole that Lineman [redacted] was installing and these energized parts.

19. [redacted]'s work installing the cross-arm to the concrete pole also was performed from a bucket of a bucket truck in an elevated position. For the vast majority of [redacted]'s work installing the cross-arm, the middle phase conductor was held up and away in the jib hoist by Jonathan Jinks.

20. Although the exact distance between the energized middle phase and [redacted] is not known, while the lines were held up and away in the jib hoist by Jonathan Jinks, the distance was several feet (beyond the MAD).

21. No measurements were taken regarding the position of the middle phase conductor within the line hose while the middle phase was lifted up and away in the jib hoist.

22. When [redacted] was almost finished installing the cross-arm, [redacted] instructed Jonathan Jinks to lower the middle phase on to the cross arm and to go retrieve a piece of equipment.

23. Jonathan Jinks lowered the middle phase onto the cross-arm. Jonathan Jinks started to boom away to retrieve the equipment.

24. [redacted] reached out of his bucket over the cross arm to tighten the cross arm bolts on the other side of the concrete pole as part of the process of installing

the cross-arm to the concrete pole. [redacted] was working on the south side of the concrete pole (on the same side as the hot hoist) at this time.

25. Wounds on [redacted]'s body indicate that an energized part came into contact or close enough to cause an arc with his back at the same moment when [redacted]' s front touched a part of the cross arm that acted as a ground.

26. Foreman Ed Bilodeau was watching the work being performed from the ground. Mr. Bilodeau was looking down at the exact moment of the electrocution.

27. No known eye witnesses saw the moment of the electrocution.

28. [redacted] died shortly thereafter.

# Pre-Job Briefings

29. "Cover up!! Cover up!!" was written on a pre-job briefing, which was signed by all employees, including [redacted] and Jonathan Jinks.

30. On the pre-job briefing on the day of the incident, Foreman Ed Bilodeau wrote to "watch phase to phase & phase to ground clearances M.A.D." The pre-job briefing was signed by all employees, including [redacted] and Jonathan Jinks. The same pre-job briefing also noted the MAD and checked boxes for installing protective barriers and defenses. Rubber gloves and sleeves were noted as inspected, and cover-up and PPE were checked as required. The phrase "Gloves and sleeves cradle to cradle" was underlined three times on the pre-job briefing page.

# Training & Work Rules

31. MasTec policy requires employees to wear appropriately rated gloves and sleeves "cradle to cradle" while working near energized parts.

32. The qualified observer, Edward Bilodeau, underwent an OSHA 10 hour construction course focused on electrical safety on March 19, 2008. He also received training on Basic Overhead, Line Installation and underwent MasTec's Introduction to Safety Courses on Electrical Safety Awareness and Electrical PPE. Edward Bilodeau previously completed the 10 hour electrical safety course developed by industry and OSHA through the OSHA Strategic Partnership on Electrical Transmission and Distribution ("ET&D").

33. [redacted], who completed MasTec's Introduction to Safety Courses on Electrical Safety Awareness and Electrical PPE, was provided training on how to avoid electrical hazards while working near electrical parts. [redacted] received specific training on line installation and removal with regard to electrical safety and answered questions to confirm his substantive understanding. MasTec also assessed [redacted] for electrical knowledge and competency.

## Discipline and Self-Inspections

34. MasTec's Safety and Health Inspection program (referred to as "DynaQ") specifically covers electrical distribution topics. DynaQ audits provide the opportunity to coach and discipline on electrical distribution work rules, in order to ensure that they are consistently followed.

OSHA Strategic Partnership with the Electrical Transmission and Distribution Construction Contractors, the IBEW and Trade Associations ("ET&D Partnership")

35. MasTec is one of thirteen signatories of the ET&D Partnership, along with the International Brotherhood of Electrical Workers (IBEW) and others.

36. According to OSHA' s website on the ET&D Partnership, partnership Goals include the following:

a. Develop recommended Best Practices to reduce the number of fatalities, injuries and illnesses that directly correspond to the identified causes, as well as any other significant hazards identified by the Partnership.b. Ensure that the Industry Partners' employees are effectively trained to

utilize the established Best Practices.

c. Effectively communicate safety and health Best Practices, and other useful safety and health information, within the Industry.

(JPHS, pp. 10-16; Tr. 44-45).

# **Relevant Testimony**

Three witnesses testified at the hearing: Jonathan Jinks, former lineman for MasTec,

Jarrett Quoyle, MasTec's Director of Safety and Health, and OSHA CO Luis Cebollero, Jr.<sup>4</sup>

Mr. Jinks was working at pole top with lead lineman [redacted] when the accident

occurred. He testified regarding his work and training experience at MasTec and what occurred

at the worksite the day of the accident. (Tr. 79-260). Mr. Quoyle was not at the accident site;

however, he investigated the accident for MasTec. (Tr. 271-72). Mr. Quoyle testified regarding

<sup>&</sup>lt;sup>4</sup> The Stipulated Testimony of OSHA Area Director (AD) Lesley L. Grove, III, consisting of four pages (Stipulated Testimony of AD Grove), was offered by Respondent and admitted for the sole purpose of impeaching Mr. Jinks without objection. (Tr. 519; Stipulated Testimony of AD Grove).

what he learned about the accident through his investigation and MasTec's safety program. (Tr. 267-465). CO Cebollero investigated the cause of the accident. He testified about the details of the investigation, what he learned, and the basis for the Citation and penalty issued to MasTec. (Tr. 466-99).

## Jonathan Jinks

Jonathan Jinks has worked in the electrical industry building overhead powerlines at ten different companies for 20 years with 19 years of experience as a lineman from a bucket truck. During that time, he often worked with a second person who was also in a second bucket. (Tr. 81, 85-86, 175-76). His experience included one year as a foreman supervising fourteen linemen primarily performing distribution work on a re-conduct job.<sup>5</sup> (Tr. 86-87). Mr. Jinks was a journeyman lineman in both electrical transmission and electrical distribution. He became a journeyman lineman in overhead transmission in 2000 after four years in an apprenticeship program. He became a journeyman lineman in overhead distribution around 2013.<sup>6</sup> (Tr. 81-83). He said he considers himself a good lineman and takes "a lot of pride and dignity in" being a lineman. He indicated being safe is "definitely" a part of being a lineman "[b]ecause if you're not safe you're, you're not going to be a lineman too long." He testified that "safety is the main thing that Mastec" and most every utility contractor "preaches and teaches." (Tr. 178-79). He explained that the difference between overhead transmission and distribution work is the voltage—overhead transmission is at a higher voltage.<sup>7</sup> (Tr. 83). In transmission, the lines are generally de-energized lines whereas in distribution the lines are generally energized. (Tr. 84-

<sup>&</sup>lt;sup>5</sup> Mr. Jinks testified that: "[r]e-conduct is where you pull a new wire in. You take and set new poles, pull the new wire, changing out new arms, new insulators. Basically, just bringing those lines up to spec. You know, you're breaking out an old line, building the new line." He said it was the same type of work he and [redacted] were doing on March 10, 2015. (Tr. 87).

<sup>&</sup>lt;sup>6</sup> During his apprenticeship, he learned a lot about safety, personal protective equipment (PPE), and electricity. (Tr. 176-77).

 $<sup>^{7}</sup>$  Mr. Jinks testified that he believed the cut-off for distribution is at 43,000 volts and transmission is above that level. (Tr. 83).

85).

From the time he started working for MasTec, about a week to ten days before the accident, Mr. Jinks had been partnered with [redacted] every day, including the day [redacted] was electrocuted.<sup>8</sup> (Tr. 83-84, 88-90). Mr. Jinks testified that they were working on overhead distribution lines that were at 7,620-volt phase-to-ground and 13,200 volts phase-to-phase.<sup>9</sup> (Tr. 84; AF No. 11). [redacted] had told Mr. Jinks that he had been doing line work at MasTec for the past four years, except for a period of eight months when he drove a tow truck elsewhere. (Tr. 91, 97). Mr. Jinks testified that [redacted] had started as a groundman for Foreman Edward Bilodeau. [redacted] had only been working "in the bucket" for a little over a year.<sup>10</sup> (Tr. 90-91). Mr. Jinks said that Foreman Bilodeau designated [redacted] as the lead lineman for all of the jobs Messrs. Jinks and [redacted] worked on during the week to ten days that preceded the accident, including the March 10, 2015 job.<sup>11</sup> He said [redacted] had been "pushed into that position" because a prior lead lineman had just quit MasTec. Mr. Jinks said that [redacted] was still "learning" and needed "somebody's lead to follow." He testified that [redacted] was not working at a journeyman lineman's skill level.<sup>12</sup> He did not know whether [redacted] was a certified journeyman lineman. (Tr. 93-99). Mr. Jinks testified that a lead lineman needed to be a journeyman because you "want somebody that knows the work, all the rules, all the specs.

<sup>&</sup>lt;sup>8</sup> Mr. Jinks worked for MasTec a total of three times on various projects for a total of about one year as a lineman. Mr. Jinks did transmission work on de-energized lines for the two periods of work at MasTec that preceded the accident. (Tr. 88-89).

<sup>&</sup>lt;sup>9</sup> MasTec admitted [redacted] was working on or near an electrical voltage of 13,200 volts phase to phase on March 10, 2015. (Ex. 3, Second Supplemental (SS) Responses to RFA No. 11, at 1-2). The parties have also stipulated that the "distribution lines on the pole at issue had an electrical voltage of 7,620 volts phase-to-ground system and 13,200 volts phase-to-phase system." (AF No. 11).

<sup>&</sup>lt;sup>10</sup> Mr. Jinks said he needed to know [redacted]'s level of skill because it is dangerous and "there's no room for mistakes or shortcuts" when working with energized lines. (Tr. 89-93).

<sup>&</sup>lt;sup>11</sup> MasTec's Pre-Job Briefing dated 3/10/15, 7:00 AM, identifies [redacted] as the "Lead Lineman." (JEx. IV, p. 1).

<sup>&</sup>lt;sup>12</sup> Mr. Jinks said that when rebuilding a transformer, he observed that [redacted] did not know which lead went where and how to ground the transformer. He said Foreman Bilodeau told him that [redacted] "wasn't, you know, a true journeyman." Mr. Jinks said [redacted] would routinely ask the foreman how to perform even simple tasks that a journeyman lineman should already know how to do. (Tr. 99-100).

Somebody that's really responsible, very safe." (Tr. 98).

Mr. Jinks testified that he and [redacted] had completed roughly ten pole-line transfers moving phases from old to new locations during the days preceding the accident without encountering any problems. He said each pole-line transfer took three to three-and-a-half hours to complete. Mr. Jinks testified that on the morning of Tuesday, March 10, 2015, he and Messrs. Bilodeau and [redacted] performed a job safety analysis (JSA)<sup>13</sup> at the work site.<sup>14</sup> They reviewed the hazards and discussed how best to proceed with the job.<sup>15</sup> They discussed the need to work the middle phase first "to keep the phase-to-phase clearance to keep from crossphasing." Mr. Jinks also testified that [redacted] wore his gloves and sleeves at the work site. Their discussion did not address where to cut the overhead lines or how much rubber hose "tail" to leave. Mr. Jinks testified that there were also two other crew members at the work site, one working as an operator and the other as the ground hand or apprentice.<sup>16</sup> (Tr. 95, 104, 155, 179-84, 188-89; JEx. IV, pp. 1-2; Ex. 2, RR RFA No. 8, p. 31).

Mr. Jinks testified that the photographs at JEx. V looked like they were probably taken within an hour of the accident. (Tr. 107). He said the photographs at JEx. V showed the pole he and [redacted] worked on March 10, 2015. He said the pole shown at the left in JEx. V, p. 1, was the existing wooden pole and the pole about eight feet to the right was the new concrete pole that they were going to be transferring the wire over to. He said the concrete pole was five feet

<sup>&</sup>lt;sup>13</sup> Also referred to as a "Pre-Job Briefing" in AF Nos. 29-30. (Tr. 179-80; Joint Exhibit (JEx.) IV).

<sup>&</sup>lt;sup>14</sup> He testified that the JSA stated "spotters watch phase to phase and phase to ground clearances, M.A.D." (Tr, 181, 188; JEx. IV, p. 1). Mr. Jinks estimated the JSA lasted between 15 to 30 minutes. (Tr. 187).

<sup>&</sup>lt;sup>15</sup> Mr. Jinks testified that he regularly participated in daily tool box safety talks on topics, including electrocution and fall hazards. He further said that he completed a three-hour long safety orientation when he started working for MasTec a week or so before the accident. He also recalled completing specific training on pole-top rescue and forklifts while employed at MasTec. (Tr. 104).

<sup>&</sup>lt;sup>16</sup> The parties have stipulated as an admitted fact that the crew at the work site on March 10, 2015 consisted of six men. (AF No. 6).

higher than the existing wooden pole as shown in the photograph at JEx. V, p. 2.<sup>17</sup> He stated that the photograph at JEx. V, p. 3, showed the bucket that he was working in, as well as the boom [redacted] used, at the time of the accident.<sup>18</sup> Mr. Jinks testified that the photograph at JEx. V, p. 3, at "A", showed a red jib and winch line, a mechanical arm also known as a jib arm or jib hoist, at the bucket in the forefront and to the right in the photograph.<sup>19</sup> Mr. Jinks said that [redacted]'s boom stood between the two poles. Mr. Jinks was responsible for performing the tasks to the left in the direction of the wooden pole. [redacted] was responsible for performing identical tasks to the right in the direction of the concrete pole. (Tr. 109-11, 129, 143, 191, 258; JEx. V, p. 3, at "B").

Mr. Jinks said the type of work he and [redacted] were performing on March 10, 2015 did not differ from the type of work he had performed while working for other companies in the power line industry. He said the minimum approach distance (MAD) was two-foot, one inch when working on 7,620-volt lines. He also said he needed to make sure that six feet (two armslength) of any exposed<sup>20</sup> wire was covered (insulated)<sup>21</sup> with line hoses<sup>22</sup> and blankets<sup>23</sup> to deal with touch potential when working with overhead energized or exposed lines. When moving a wire from one pole to another he said an early step required the lineman to cover with line hoses and blankets all three of the lines that were within arms-length, the neutral wire, and any taps

<sup>21</sup> 29 C.F.R. § 1926.968A defines "Insulated" as "Separated from other conducting surfaces by a dielectric

<sup>&</sup>lt;sup>17</sup> Mr. Jinks testified that before the accident the phases located at each end of the wooden cross-arm were always secured to the lower cross-arm on the wooden pole. (Tr. 190; AF No. 14).

<sup>&</sup>lt;sup>18</sup> Mr. Jinks said after the accident Respondent was no longer able to use the bucket where [redacted] was at the time of the accident. Instead, Respondent brought in a third bucket to use at the work site, including raising and lowering the line. (Tr. 129-30). The Court finds that Mr. Jinks mistakenly labeled the boom shown at JEx. V, p. 3, at "B", as "[redacted]'s bucket".

<sup>&</sup>lt;sup>19</sup> Mr. Jinks testified that the jib and winch line was "used for moving wire, lowering, hanging transformers. It, basically, works like a little small mini crane boom to lower and raise objects." (Tr. 109).

<sup>&</sup>lt;sup>20</sup> 29 C.F.R. § 1926.968A defines "Exposed ... [as] Not isolated or guarded."

<sup>(</sup>including air space) offering a high resistance to the passage of current. NOTE TO THE DEFINITION OF

<sup>&</sup>quot;INSULATED": When any object is said to be insulated, it is understood to be insulated for the conditions to which it normally is subjected. Otherwise, it is, for the purpose of this subpart, uninsulated."

<sup>&</sup>lt;sup>22</sup> A demonstrative photograph of line hose is at Ex. AA, at "F"). (Tr. 394-95, 398).

<sup>&</sup>lt;sup>23</sup> A demonstrative photograph of a blanket is at Ex. W, at "B"). (Tr. 391-92, 398).

that you would go above. The middle power line did not have enough slack in it to be raised up intact. They had to cut the middle power line and add in a new section.

Mr. Jinks testified that they needed to "mack it out" which means to use a jumper cable<sup>24</sup> to allow electricity to continue to flow around a section of wire being cut out.<sup>25</sup> Mr. Jinks said he and [redacted] attached a fiber stick (also known as a "hot" link, link stick, or fiber link) to serve as an isolation point to prevent electricity from getting to you.<sup>26</sup> They attached two grips<sup>27</sup> and a hot hoist<sup>28</sup> to jack the wire up until it floated.<sup>29</sup> Mr. Jinks then cut a foot on each side of the grip, enough to call a "dead end, automatic sleeve" that sleeves (joins) the two wires together for the piece being added in. He said, "it basically becomes one, one continuous wire thereafter." Mr. Jinks then wrapped a blanket around the wire to provide protection "from any kind of touch potential." (Tr. 111-27, 138, 143, 184; JEx. V, pp. 1-2, Ex. Z; AF 12e-f; R. Br., p. 1). Mr. Jinks testified that he [Mr. Jinks] intended to properly and effectively cover all energized parts as part of the operation so that he [Mr. Jinks] could operate safely. (Tr. 247-48, 257-59).

Mr. Jinks stated that usually the lineman in one bucket attaches the jib and jib line to the phase and raises the phase above the pole so the lineman standing in the other bucket cannot touch the phase and can safely install the cross-arm. He testified that the ground hands handed

<sup>&</sup>lt;sup>24</sup> A photograph of a mechanical jumper is at Ex. Y, at "D". (Tr. 392-93).

<sup>&</sup>lt;sup>25</sup> Mr. Jinks also referred to a "mack" line as a "four aught cooper ground" or a "grounding chain." (Tr. 122-23; JEx. V, p. 1, at "F"). The actual "mack" line was energized and is shown laying above and across the cross-arm at photograph JEx. V, p. 4, at "C". (Tr. 135, 139). The "mack" line was insulated with a "coated four-aught ground." Mr. Jinks testified that there are times when laying the mack line across a still or wood cross-arm, a lineman would actually put a line hose or blanket over the mack line for extra protection because the mack line's insulation may get damaged through use. He said "[b]ut on a fiberglass arm it's, you're pretty safe on that." (Tr. 139-40).

<sup>&</sup>lt;sup>27</sup> "Grips" are shown at JEx. V, p. 1, at "D". (Tr. 122-23). A demonstrative photograph of a grip is at JEx. V, at "A". (Tr. 389-90, 398).

<sup>&</sup>lt;sup>28</sup> The "hot hoist" is shown at JEx. V, p. 1, at "E". (Tr. 123). The non-energized "hot hoist" nylon strap is shown at JEx. V, p. 4, at "E". (Tr. 138-40). A demonstrative photograph of a "hot hoist" is at Ex. BB, at "G". (Tr. 395, 398).

<sup>&</sup>lt;sup>29</sup> Mr. Jinks also called this "breaking the load to go slack where it's attached so you can cut it out there." (Tr. 122). Mr. Jinks testified that he wanted to cut the wire about a foot in front of the grip so that he could add a ten to twelveinch automatic sleeve and not have excess wire hanging. He said FP&L requires the sleeve to be six to eight feet away from the cross-arm. (Tr. 124-25).

[redacted] the cross-arm. [redacted] laid the cross-arm across his bucket. [redacted] raised his bucket and used the bucket to align the cross-arm with the concrete pole. Mr. Jinks said the cross-arm, with a factory affixed plate, is installed with top and bottom 14-inch bolts that run through the plate and the pole. After sliding the cross-arm onto the pole, a lineman installs one side with a flat washer and a nut and then a nut on the back side at the top and then does the same at the bottom bolt. Insulators are then added to the cross-arm either while the phase is being held up, or the phase is tied to the cross-arm so that it cannot move and stays a safe distance from either phase-to-phase contact or contact with a ground. If the lineman lowers the phase down to the cross-arm to install insulators, he uses blankets, "rubber goods," or hoses to insulate the phase line. (Tr. 127-32, 223-26; JEx. V, p. 3, at "A").

Mr. Jinks testified that, before the accident, [redacted] performed the same tasks on the concrete pole as he (Mr. Jinks) did on the wooden pole, except [redacted] used a rubber hose on the existing wire that he cut, and Mr. Jinks used a rubber blanket because he only had a foot of wire sticking out past his grip.<sup>30</sup> He said the rubber line hoses shown in the photograph at JEx. V, p. 4, were around four to six feet long; too long for a four-foot length of wire.<sup>31</sup> Mr. Jinks said that if [redacted] had cut his wire a foot in front of his grip he would have been about five-and-a-half to six feet away from the concrete pole, which would give him plenty of clearance to safely do his work. (Tr. 143-45, 221-22). Mr. Jinks testified that the energized conductor wire, about an inch from the end of the rubber line hose, electrocuted [redacted] and the bolt on the

<sup>&</sup>lt;sup>30</sup> Mr. Jinks testified that just before the accident both he and [redacted] were working above the concrete pole's cross-arm with Mr. Jinks positioned on one side of the cross-arm and [redacted] on the other side. (Tr. 193-95). <sup>31</sup> Mr. Jinks said a half-inch to <sup>3</sup>/<sub>4</sub> inch wire slides easily into a rubber line hose since its opening is an inch to an inch and a half. (Tr. 154).

cross-arm made contact from phase-to-ground.<sup>32</sup> He said it was "obvious" what had happened because the line inside the rubber hose and the bolt were the two points where contact was made.<sup>33</sup> Mr. Jinks said if the wire was six to eight inches inside of the rubber hose "it would be a total different story then it would be good, but when they took pictures, when they went up and took pictures the, the line was only about an inch to an inch-and-a-half from the end of that line hose." <sup>34</sup> (Tr. 156-60). Mr. Jinks said the photograph at JEx. VI, pp. 3-4, showed the actual rubber hose covered line that was removed from atop the cross-arm. He testified that all that dark black around the end of that rubber hose was there because the wire was only an inch inside the rubber hose.<sup>35</sup> He said that is where "the actual electricity was making contact to his body at." (Tr. 160; JEx. VI, pp. 3-4).

Mr. Jinks testified that the jumper connecting the two wires "should be insulated, it

<sup>&</sup>lt;sup>32</sup> To protect against electrocution, Mr. Jinks said "when he leaned over that cross-arm he [[redacted]] should have threw a blanket on it.... He could have threw one of those rubber blankets over that bolt, leaned over that and tightened that bolt up and nothing would have happened to him." (Tr. 159-60).

<sup>&</sup>lt;sup>33</sup> Mr. Jinks later testified that he knew "it was freak accident." (Tr. 171).

<sup>&</sup>lt;sup>34</sup> By way of stipulated testimony, AD Grove said that on August 3, 2015 Mr. Jinks had told AD Grove and Assistant Area Director (AAD) Sanchez by telephone that at one time he "estimated that the energized conductor was approximately eight to ten inches inside of the line hose ...." (Stipulated Testimony of AD Grove, p. 2). Mr. Jinks testified that after the accident, Jason Spicer, a MasTec foreman on a different crew working down the street, went up to the top of the concrete pole to make the line "hot" again because they had knocked the line out. While up there, Mr. Spicer took pictures with his telephone that showed "the conductor was like an inch to an inch-and-a-half inside the line hose with a burnt mark on it, and then he took a picture of the, the bolt that was on the cross-arm that still had the flesh that made contact from phase-to-ground." Mr. Jinks testified that the flesh came from the lower right side of his [redacted]'s body. (Tr. 157-58, 250-51; JExs. V, p. 4 at "H"; VI, p. 1 at "A" and "B", pp.3-4; AF No. 7).

The Court finds the conductor line was less than 1.575 inches inside the rubber line hose at the time of the incident. Neither Messrs. Spicer or Bilodeau testified at the trial. The Court finds Mr. Jinks' courtroom testimony in this regard to be credible based upon the Court's observation of his courtroom demeanor. The Court further finds that the stipulated testimony of AD Grove that Mr. Jinks had told him on August 3, 2015 that the energized conductor was about eight to ten inches inside of the line hose does not impeach Mr. Jinks' courtroom testimony that the conductor was only about an inch to an inch-and-a-half from the end of the line hose at the time of, and immediately following, the incident. Mr. Jinks was referring to the conductor's location at two separate times: first, the conductor's initial location inside the rubber line hose as alleged by Foreman Bilodeau during the March 11, 2015 meeting at the hotel and second, at the time of, and immediately following, the incident as shown on the photographs taken by Mr. Spicer and described by Mr. Jinks at the trial. Mr. Jinks credibly testified that the line had later moved up inside the hose, after its initial location, and eventually made contact with [redacted]. (Tr. 156-60). <sup>35</sup> By way of stipulated testimony, AD Grove said that on August 3, 2015, Mr. Jinks told AD Grove and AAD Sanchez by telephone "that, after the incident, burn marks were seen approximately two to three inches inside of the line hose." (Stipulated Testimony of AD Grove, p. 2).

should have a rubber line hose." He said that [redacted] had a rubber line hose on that middle phase line. He said "the end of the line hose it was really close to the new pole where that, that conductor should have been cut, about a foot right in front of that hoist. And then there should have just been a blanket wrapped around it."<sup>36</sup> (Tr. 132-33; JEx. V, p. 1, at "D" [Grip], "E" [Hoist], p. 4, at "A Cut Point" and "B"). He said a line hose, by itself, may be insufficient to insulate a line. He said a lineman may also need to use a blanket to wrap around the end of the line hose or cover the cross-arm, especially if the conductor line is not eight to ten inches inside the rubber hose. (Tr. 216). Mr. Jinks also testified that a rubber line hose should have been installed on the neutral line on the right side of the concrete pole shown at JEx. V, p. 1, at "C". (Tr. 136).

Looking at the photograph at JEx. V, p.1, Mr. Jinks said he thought [redacted] had tightened the bottom bolt of the cross-arm and secured the cross-arm to the concrete pole. He said [redacted] then hollered that Mr. Jinks could lower the phase down to him. [redacted] received the phase and placed it on the cross-arm. [redacted] was trying to tie a square knot with a piece of rope about 30 inches from the center of the cross-arm to the phase line so that they could install the insulators and splice the piece of wire. Mr. Jinks was five to six feet above the concrete pole. Mr. Jinks finished rolling about eight feet of his jib line up and was just starting to lower his bucket to the ground to get the insulators when he "heard mmmmmm and I looked down and [redacted] was leaned over the pole like this with a wrench in his hand. And he just

<sup>&</sup>lt;sup>36</sup> Mr. Jinks testified as follows:

Q And why, and so how many feet, you're saying one, he should have cut it one foot from -

A I'm just saying it, it didn't have to be one foot but that's just the standard, you know, it's you only want enough line, existing conductors excess out there just enough to put the automatic [sleeve] on there. That's for your safety, you know so you're not, you don't put yourself in a, you know, potential contact zone, you know, phase-to-ground, you know. With all that excess with that conductor being as close as it is to the pole, you know, there's a two foot one you now, minimum approach on that. But still, that end of that line hose is, is open and the wire, you know, if you can't see that wire out the end of that line hose then you don't know how far the line is back in, you know, in the hose. (Tr. 134).

tied into the, you know, being electrocuted."<sup>37</sup> He testified that [redacted] was leaning forward over the concrete pole to the right side of the line hose and tightening the nut on the bottom bolt because [redacted] had apparently left the nut on the bottom bolt "loose." Mr. Jinks said that [redacted] had apparently just previously used his hand to screw the nuts onto the bolt and secure the cross-arm to the concrete pole. Mr. Jinks went up in his bucket to [redacted] and "had to lift that phase off of him, everything up there had pretty much caught on fire and it burned the rope in two, so –" He said, "the electricity had him so much it almost drug him out of the bucket, and finally come out, you know, broke loose from contact." (Tr. 147-64, 224-35, 254-55; JEx. V, pp. 1. 3, at "C" and "D").

Mr. Jinks said Mr. Bilodeau came around and jumped up to the back of [redacted]'s bucket truck to swing the bucket with [redacted] in it away from the concrete pole. Messrs. Jinks and Bilodeau got [redacted] to the ground and began to administer "CPR." A "whole part" of [redacted]'s back and the front of his chest was "burned out." The fire department and ambulance arrived at the scene four to five minutes later. The first responders quickly determined that [redacted] was deceased. Mr. Jinks estimated that one to eight minutes elapsed between the time [redacted] asked him to lower the phase and the electrocution. Mr. Jinks said, "in that instant, you know, nobody even knew what had happened." (Tr. 147-64, 254-55).

Mr. Jinks testified that since [redacted] was "a little, short guy," he thought [redacted] was able to lean over his bucket to work with his hands while his feet were up off the bucket floor. He said, "[s]o his back got up against that line hose and when he arched up, your back automatically is going to arch up, and it pushed that line hose up enough for his back to make

<sup>&</sup>lt;sup>37</sup> Mr. Jinks testified that after hearing a noise at the time of the accident he looked down and saw [redacted] leaning over the cross-arm. At the time of the accident, Mr. Jinks testified that he was "booming down" to the ground to get three insulators, a piece of wire, and the automatic sleeve to splice that wire and install the insulators so they could tie the wiring in once it was spliced. (Tr. 145-46, 197; AF No. 23).

contact with that phase." He said he believed [redacted]'s back made physical contact with the conductor wire itself and "it would be just like walking over here and sticking a fork in this light socket, you know? You're grounded and you're sticking it in something hot, it went phase-to-ground." Mr. Jinks testified that [redacted]'s body "got right up against it [the conductor], he's dead."<sup>38</sup> He said that linemen were supposed to keep two feet, one inches from their bodies to any energized part, including a live wire, unless you have a layer of protection on such as gloves and sleeves.<sup>39</sup> (Tr. 246-48, 257-59).

Mr. Jinks testified that rather than leaning over the pole, [redacted] could have lowered his bucket and reached the bolt on the back side of the pole.<sup>40</sup> He saw him in-between the cross-arm and a location where the female end of the orange-colored line hose was hanging down a little bit, about a foot to a foot-and-a-half from the cross-arm atop the concrete pole. (Tr. 140-41, 220-29; JEx. V, p. 4, at "H", JEx. VI, p. 1; AF Nos. 22 and 24).

Mr. Jinks said that on March 10, 2015, Foreman Bilodeau was MasTec's qualified observer at the work site acting as a "coach." At the time of the accident, Foreman Bilodeau was sitting in his truck, where he could view Messrs. Jinks and [redacted] looking out the front windshield.<sup>41</sup> Mr. Jinks testified that Foreman Bilodeau was "sitting in the truck from the time we started the task, until the incident happened."<sup>42</sup> (Tr. 217-18; Ex. 2, Respondent's Response

<sup>&</sup>lt;sup>38</sup> In its Reply to Complainant's Post-Hearing Brief (R. Reply Br.), Respondent tries to discredit Mr. Jinks' testimony asserting that he never said the line hose got close to [redacted]'s body. (R. Reply Br., pp. 1-2). Mr. Jinks was referring to what he did not say in a prior discussion. The Court credits Mr. Jinks' courtroom testimony that [redacted]'s body got right up against the conductor. (Tr. 247).

<sup>&</sup>lt;sup>39</sup> The Court finds there was no effective layer of protection between [redacted]'s back and the conductor wire that was behind him and hanging down at the time of the accident.

<sup>&</sup>lt;sup>40</sup> Mr. Jinks said there were two or three other ways [redacted] could have tightened the bolts without leaning over the cross-arm. (Tr. 235).

<sup>&</sup>lt;sup>41</sup> The truck was parked about 20-30 yards down the road to the right of the concrete pole shown at JEx. V, p. 2. (Tr. 217-18).

<sup>&</sup>lt;sup>42</sup> By way of stipulated testimony, AD Grove said that on August 3, 2015 Mr. Jinks told him and AAD Sanchez by telephone that Foreman Bilodeau was "down on the ground watching". (Stipulated Testimony of AD Grove, p. 3). Based upon its evaluation of Mr. Jinks' courtroom demeanor, the Court credits Mr. Jinks' courtroom testimony and

(RR) to Interrogatory No. 18, p. 25, RR to Request for Admission (RFA) Nos. 5, 10, pp. 30-31). Mr. Jinks testified that Foreman Bilodeau was reportedly looking down at the time of the accident. Mr. Jinks said most of the time qualified observers do not sit in trucks while linemen are working overhead. Rather, they stand on the ground at the bottom and orchestrate what is going on above; especially when there are two linemen in the air performing a task like Messrs. Jinks and [redacted] were performing that day. (Tr. 141-42, 218-19; AF No. 26).

Mr. Jinks testified that MasTec did not provide him with any specific instruction on how to insulate the type of line [redacted] was working on once it was cut. (Tr. 151). Mr. Jinks said he saw [redacted] tying the line hose to the hot hoist but he did not have any idea how far back the conductor was initially inside the line hose.<sup>43</sup> He testified, "I don't know if it was eight to 10 inches. I don't know if it was a foot in there, if was two foot in there." Mr. Jinks testified that [redacted] had put some black tape around the line hose in two places. Upon Mr. Jink's suggestion, offered because the line hose end "was still kind of drooping a good bit,"<sup>44</sup> [redacted] took some collar rope that Mr. Jinks threw to him to secure the line hose to the hot hoist strap to keep it from sliding back and forth, or dangling in the air.<sup>45</sup> He tied a piece of collar rope about 8-10 inches above the end of the line hose and another piece about two to two-and-a-half feet

finds that Foreman Bilodeau was sitting in his truck when [redacted] was electrocuted. Foreman Bilodeau did not testify at the trial. Both AF No. 26 and AD Grove's stipulated testimony refer to "the ground" in a non-specific way.

<sup>&</sup>lt;sup>43</sup> Mr. Jinks said he was 8-10 feet away from [redacted] at that time. He further stated that he could not see the end of the hose because it was "almost even with that [cross] arm." If he [Mr. Jinks] knew the conductor was not further up into the rubber hose, he would have told [redacted] to either throw a blanket on or around it, or he [Mr. Jinks] would have helped [redacted] "get that wire cut back short, shorter." He said the conductor got near the end of the rubber hose because [redacted] had cut "cut his line too long. He should have, the line inside of the hose should have been shorter." To prevent this from happening, you would need to see "how far the conductor was cut before he put the hose in it." (Tr. 202-04).

<sup>&</sup>lt;sup>44</sup> Mr. Jinks was concerned that the hose line could slide off and expose the wire if the hose line was drooping down. (Tr. 153-54).

<sup>&</sup>lt;sup>45</sup> A demonstrative photograph of collar rope is at Ex. Z, at "E". (Tr. 393-94, 398).

above that.<sup>46</sup> (Tr. 151-53, 201-02, 217, 240; JEx. V, p. 4 at "G"; AF No. 15).

Mr. Jinks testified that MasTec's general foreman, Mr. Dickie, senior superintendent Copper Nelson, and Mr. Quoyle arrived at the accident site on March 10, 2015. (Tr. 161-64). On March 11, 2015, MasTec personnel met in a conference room at the Holiday Inn Express in Cocoa, Florida. (Tr. 168-69, 273). Mr. Jinks testified MasTec personnel spent many "countless" hours at the accident site trying to figure out what happened. He said these personnel discussed "why there wasn't a blanket laid across the arm and why he had so much excess wire instead of not cutting it off," as well as why: 1) the phase did not hold up, 2) [redacted] did not tighten the bottom bolt up, and 3) the phase raised. (Tr. 165-66). He testified that Foreman Bilodeau made a statement in the conference room to Messrs. Nelson, Dickie and Quoyle, and everyone else, that he [Foreman Bilodeau] saw when [redacted] secured the line the phase wire was eight to twelve inches inside the line hose because he saw [redacted] put the rubber hose onto the wire. Mr. Jinks testified that Foreman Bilodeau's exact words were "I know when I looked up there that that wire was further inside the line hose then what it was from when Jason Spicer took the pictures," (Tr. 240-241).

Mr. Jinks said that after the March 11, 2015 meeting at the Holiday Inn Express MasTec management told him to "cut it short" when cutting a jumper out. (Tr. 166-67, 219).

Mr. Jinks also testified that he gave a statement to CO Cebollero on March 11, 2015.<sup>47</sup> On August 3, 2015, AD Grove and AAD Sanchez interviewed Mr. Jinks by telephone for about

<sup>&</sup>lt;sup>46</sup> By way of stipulated testimony, AD Grove said on August 3, 2015 Mr. Jinks told him and AAD Sanchez by telephone "that a nylon rope was tied around the end of the line hose and the hot hoist strap." (Stipulated Testimony of AD Grove, p. 3).

<sup>&</sup>lt;sup>47</sup> Mr. Jinks declined Mr. Dickie's offer to be present when he gave his statement to CO Cebollero. He said Mr. Dickie told him to "watch what I said" and "to give out no more information than, than what was asked of." (Tr. 167). Mr. Jinks said he "felt like, you know, somebody was trying to coerce me into saying, you know, cover something up or something. But that, that wasn't what I was wanting to do, I was wanting the truth to be known, so." (Tr. 168).

three to four hours. (AF No. 10). He said he told AD Grove, that if [redacted] "had the conductor at least eight to 10 inches inside of the line hose, then he could have done it, he could have done it safely. Because then when his back would have pushed up against it, he wouldn't have pushed that line hose eight to 10 inches up against that conductor."<sup>48</sup> (Tr. 209-15). He testified that he also told AD Grove a scenario where [redacted]'s movement of his bucket may have caused the rubber line hose to slide up and "over enough just for that conductor to be at the end." (Tr. 239). He said that he told AD Grove if the conductor line was eight to twelve inches inside the rubber hose as Foreman Bilodeau said on March 11, 2015, the only way the rubber hose could have slid up and over the line was if [redacted]'s bucket was up against the rubber hose. <sup>49</sup> (Tr. 240).

Mr. Jinks was "let go" on March 20 or 21, 2015 after working three additional days for MasTec after the accident. He was told he "just wasn't the right person" and Messrs. Dickie and Nelson brought up a couple of times that he had given a statement to OSHA without someone there present. He said he guessed the reason for his termination was because he missed a day of work he had called in about. He testified that "I never had a write up. I never signed a piece of paper or anything, you know, saying why I was let go. I was just told, hey, you know, you don't work here no more." (Tr. 169-72).

<sup>&</sup>lt;sup>48</sup> Mr. Jinks testified that, even though he had never actually seen the line inside of the rubber hose, the conductor line was not eight to twelve inches back from the end opening of the rubber hose at the time of the accident because if it was the line would have been "isolated" and [redacted] could not have pushed his back up against it. (Tr. 210-11, 240).

<sup>&</sup>lt;sup>49</sup> By way of stipulated testimony, AD Grove said that on August 3, 2015 Mr. Jinks told him and AAD Sanchez by telephone that he [Mr. Jinks] "estimated that the energized conductor was approximately eight to ten inches inside of the line hose and that the line hose must have been pushed in some way such as by (1) [redacted]'s body or (2) the bucket from which [redacted] worked." Regarding the "eight to ten" inch and "approximately two to three inches inside of the line hose" estimates, neither AD Grove nor AAD Sanchez asked [redacted] to explain the bases for these two estimates. Based upon his interview of Mr. Jinks it is AD Grove's understanding that Mr. Jinks did not take any measurements of the energized conductor's position inside of the line hose. AD Grove does not know whether Mr. Jinks physically saw (i.e. viewed with his own eyes) the conductor's position inside of the line hose. Mr. Jinks provided no bases for his "eight to ten inch" and "two to three inches" estimates during the telephone interview. (Stipulated Testimony of AD Grove, pp. 1-2).

### Jarrett Arthur Quoyle

Jarrett Arthur Quoyle, MasTec's Director of Safety and Health of Utilities Services Group, had worked for MasTec for over six years. (Tr. 267, 322; Ex. 3, SS RR to Interrogatory No. 1, p. 4). Previously, he worked at American Electric Power for four years as a distribution contractor/safety administrator and as a senior safety person in power generation construction. (Tr. 267-68, 322-23). Before that, he worked as a safety engineer for nearly a year at a carbon black manufacturer, a trainer at an insurance intermediary for a year, and a safety and health specialist for three years at a manufacturing facility. (Tr. 268-270).

Mr. Quoyle was awarded a Bachelor of Arts Regents degree from Marshall University in 1999. He also earned a Master of Science occupational safety and health degree from Marshall University in 2001 and holds a Certified Safety Professional (CSP) designation. (Tr. 323-24). He was an authorized outreach instructor for the OSHA 10-hour and 30-hour construction safety courses. (Tr. 324).

Mr. Quoyle was active in various industry organizations, including the Utility Safety Organization Leadership Network (USOLN), Edison Electric Institute, and the OSHA Electrical Transmission & Distribution (ET&D) Partnership. (Tr. 324-26). Mr. Quoyle was a speaker at USOLN's annual conference in 2015. (Tr. 325).

The OSHA ET&D Partnership is a partnership of electrical contractors, trade associations, OSHA, and the International Brotherhood of Electrical Workers (IBEW) created to establish best practices and training to reduce injuries and fatalities in the electrical distribution and transmission industry. (Tr. 325-26; AF No. 36; Exs. A-C). MasTec joined the ET&D Partnership in 2012. (Tr. 326; AF No. 35). MasTec started using the ET&D 10-hour safety training materials in early 2013.<sup>50</sup> (Tr. 444-46; Ex. D). Mr. Quoyle's safety responsibilities at MasTec included developing safety and health management systems, providing strategic direction, assisting the management team in developing policies, developing training, joining industry partnerships, and developing safety policies and procedures.<sup>51</sup> (Tr. 270-71, 322).

Mr. Quoyle led MasTec's investigation team made up of himself and the crew members that were at the job site on March 10, 2015. The team started going through the "facts and details" of the accident. Mr. Quoyle has never visited the job site where [redacted] died. He testified that "[t]here was no need to go to the actual site." He was also the point-of-contact for OSHA. (Tr. 271-72, 384-85). The day after the accident, he met with CO Cebollero at MasTec's "show-up" work yard in Cocoa, Florida away from the job site. (Tr. 272-73). Later that day, at a nearby hotel, he met with employees that had been at the worksite, including Messrs. Jinks and Bilodeau.<sup>52</sup> (Tr. 273-74). Mr. Quoyle testified that, during his investigation, he never discussed where the conductor wire was inside the rubber hose at the time of the accident with the individual crew members. He also said no one ever measured how far back the conductor wire was inside from the open end of the rubber hose following the accident. (Tr. 463-64). Mr. Quoyle was unaware until the trial that Foreman Bilodeau was sitting in his truck at the time of the accident. He said other crew members told him that Foreman Bilodeau was on the ground or on the road in-between the trucks. He said MasTec would have preferred Foreman Bilodeau to have been on the ground watching the elevated work rather than sitting in his truck at the time of the accident. (Tr. 442-43).

Mr. Quoyle testified that during his investigation he determined that at the job site the linemen used rubber line hoses, protective plastic barriers, pole guards, rubber blankets, link

<sup>&</sup>lt;sup>50</sup> MasTec stopped using the training materials provided in JEx. II in about late 2012/early 2013. (Tr. 444-48).

<sup>&</sup>lt;sup>51</sup> His responsibilities at prior companies were similar, i.e., training and policy development. (Tr. 268-69).

<sup>&</sup>lt;sup>52</sup> That was the only time Mr. Quoyle spoke with Messrs. Jinks and Bilodeau. (Tr. 274-75).

sticks, protective rubber gloves and sleeves, hot hoists,<sup>53</sup> ropes, grips,<sup>54</sup> electrical tape and clothespins.<sup>55</sup> (Tr. 354; Ex. 2, SS RR to Interrogatory Nos. 15 and 17, at pp. 9-13). Mr. Quoyle testified that his investigation team discussed "potential things that may have happened." But, he said "[w]e still haven't really been able to figure what" exactly happened. They know some type of contact or arc "or something of some sort" obviously occurred that "ended up with a phase-to-ground situation that ultimately led to the accident."<sup>56</sup> He testified that he did not know if [redacted] breached the MAD. He said his investigation did not identify anyone who was looking at [redacted] when he was electrocuted. He admitted that MasTec's response to an interrogatory stated, "when the energized wire came into contact with [redacted] which was an unforeseeable accident, the minimum approach distance was breached."<sup>57</sup> He also testified that MasTec admitted that [redacted] came into contact with an energized part. He further testified he was "not aware of ever finding evidence or facts that the conductor came out of the rubber hose." But he also admitted MasTec stated in its responses to Interrogatory Nos. 1 and 10 that

<sup>&</sup>lt;sup>53</sup> Mr. Quoyle testified that there were two hot hoist ratcheting devices at the job site. (Tr. 401-02).

<sup>&</sup>lt;sup>54</sup> Mr. Quoyle testified that the grips Messrs. [redacted] and Jinks used to attach to the middle phase conductor line were connected behind the hoist to hold the line on, on both sides. The linemen could then break the tension in the line by "jacking it," and putting a bow in it and relieving the pressure. He said the hot hoist mechanism allowed the middle phase conductor to stay taut after the conductor was cut. (Tr. 402-03).

<sup>&</sup>lt;sup>55</sup> A demonstrative photograph of a clothespin is at Ex. X, at "C". (Tr. 392, 398). Mr. Quoyle testified that clothespins are rubberized and plastic clothespins that are used to wrap and roll up blankets or to help prevent movement on a slack line. (Tr. 392).

<sup>&</sup>lt;sup>56</sup> During cross examination, Mr. Quoyle testified:

Q Okay, this is a good point to, a good point in time to clarify what was meant by contact there. We know what the, what these interrogatory responses said. Based on your investigation, did you find that, can we confirm that there was ever physical contact or is it physical contact or an arc flash or something? We know that ultimately an electrocution occurred.

A Yes, I mean, that's correct. We know that contact or it was close enough within distance to, to drawing arc, we know that from, obviously, the reading and then the unfortunate accident. What the, what's frustrating is trying to determine, okay, we knew line was covered. We knew the line was inside the hose. We knew that it was approximately 30 inches moved away. We knew they secured it that way. So, from the moment, like what, what happened? Did a bucket accidentally come down, move it, something unforeseeable that nobody saw, that's, that's the part that we don't know how it got to that point of, of that contact or close enough to, to that arc, that, that's the frustrating piece.

<sup>(</sup>Tr. 420-21).

<sup>&</sup>lt;sup>57</sup> Mr. Quoyle verified that MasTec's Responses to Complainant's First Set of Discovery Requests, as supplemented by Respondent were true and correct. (Tr. 277-78; Ex. 2, RR to Interrogatory No. 22, p. 29, Ex. 3).

[redacted] had "accidentally pushed the wire out of its protective coverings." (Tr. 275-80, 384-85, 417-18; Ex. 2, Responses to Interrogatory Nos. 1, 10, pp. 13-14, 19-20, RR to RFA No. 14, p. 32). He also admitted that the phase-to-ground MAD for the job site was 2.14 feet and 2.24 feet for phase-to-phase exposure. (Tr. 280-81; Ex 3, SS Response to Interrogatory No. 1, p. 6).

Mr. Quoyle testified that all of MasTec's internal rules, including how to cover energized parts, were complied with at the job site, except "if anything that we found in the investigation that could have come into play is maybe loss of situational awareness or surroundings."<sup>58</sup> (Tr. 281-82, 417). He also testified that "Mastec does not believe that any misconduct occurred."<sup>59</sup> (Tr. 284; Ex. 2, RR to Interrogatory No. 10, p. 18-20). He also said he knew that the rubber line hose that MasTec believed was over the line that electrocuted [redacted] was darkened on the "[i]nside and outside" of the female end of that line. And he was unaware of any other line hose at the job site that had a darkened end. (Tr. 286). He testified that MasTec conducted "training about applying rubber protective cover-up, wearing rubber protective cover-up, installing that rubber protective cover-up." He said the training included securing hoses with clothespins, and further stated that [redacted] used "collar rope with some tape to tape it to the line hoist for help securing, as well." MasTec did not provide training to linemen as to how far the live part of the conductor has to be set back from the end of an open rubber hose. Nor did it have a policy "that says it [conductor] must be X inches, X feet, X miles inside of a line hose."<sup>60</sup> (Tr. 286-91, 436-

<sup>&</sup>lt;sup>58</sup> Mr. Quoyle admitted that RR to Interrogatory No. 1 stated Mastec complied with internal procedures and made no mention of any exception regarding loss of situational awareness or surroundings. (Tr. 282-83; Ex. 3, SS RR to Interrogatory No. 1, at 2-9).

<sup>&</sup>lt;sup>59</sup> During cross examination, Mr. Quoyle stated RR to Interrogatory No. 10 also stated, "Assuming for the sake of argument that misconduct did occur, it must have been attributable to [redacted]'s misconduct because [redacted] was properly trained, given proper PPE, work rules were in place, and those work rules were consistently enforced." (Tr. 418; Ex. 2, RR to Interrogatory No. 10, at pp. 19-20, Ex. 3, SS RR to Interrogatory No. 1, at pp. 2-9).

<sup>&</sup>lt;sup>60</sup> Lacking rules on how far back the conductor should be in the rubber hose, Mr. Quoyle testified that its linemen were taught to use cover-up and blankets, be mindful of the MAD, and know what the exposed or energized parts are when working with lines not knowing where the lines were in the rubber hoses and knowing the wire in the hose

37; JEx. V, p. 4, at "G"). Mr. Quoyle said he was unaware of any standard that prescribed a distance of a conductor wire from the end of a rubber hose opening where a lineman had to use a blanket as cover.<sup>61</sup> (Tr. 437). He also said there was no cap on the open end of the rubber hose; instead, only air between the wire and the end of the hose.<sup>62</sup> (Tr. 289).

Mr. Quoyle testified that MasTec did not know where the wire was inside of the rubber hose.<sup>63</sup> He said linemen were insulated so long as the wire was within the insulated hose, even if only by a half of an inch.<sup>64</sup> He also indicated that a lineman did not have to use a rubber hose to cover a conductor provided the lineman did not break the MAD. He said that because the middle line was set to the left of the pole 30 inches away, it did not matter "if that wire was inside [the rubber hose] a foot, 10 feet, a mile or whatever, it was outside the MAD." He stated he did not know what caused the wire to come within the MAD.<sup>65</sup> He said he knew that linemen might be working within the MAD next to an open line hose that has a wire just inside it. He initially testified that when doing so, MasTec's instruction and training is to cover the end up.<sup>66</sup> He then contradicted himself and said it was not necessary to use additional cover-up when a wire was

could move at any time. He said linemen needed to keep the conductor at least 2.14 feet away in order not to violate the MAD for phase-to-ground voltage. (Tr. 436-441, 454-57).

<sup>&</sup>lt;sup>61</sup> Mr. Quoyle testified that the conductor wire would be safely covered by the rubber line hose if the conductor wire was eight inches back from the opening. (Tr. 460-62).

<sup>&</sup>lt;sup>62</sup> Later, during cross-examination, Mr. Quoyle testified that line hose end caps "don't exist." (Tr. 341-42).

<sup>&</sup>lt;sup>63</sup> Mr. Quoyle testified that MasTec would expect [redacted] to have covered the wire with a blanket if the wire protruded one inch beyond the female end of the rubber hose based upon MasTec's regulations and training. (Tr. 411-12; Ex. EE). He also said MasTec would expect a lineman to either "push the hose or configuration so that it [the wire] was back further," or use a blanket with clothespins as a cover. (Tr. 412-13; Ex. FF).

<sup>&</sup>lt;sup>64</sup> Mr. Quoyle testified that "insulate" is "providing some type of protective cover-up barrier, rubber insulation, such as, you know, line hoses, blankets or rubber gloves and sleeves to insulate somebody, a person and/or energized parts, pieces or equipment." He further said "isolate" is "removing the hazard using switches, creating an open point to isolate yourself from a hazard." He said good examples include using a fiberglass link stick between two hot hoists or moving lines up and out of the way. He also said "cover-up" and "insulate" are similar terms. (Tr. 336-37, 355-56; Ex. D, p. 1183, JEx. II at p. 910-18). He further stated that air space was an acceptable method for dielectric insulation and that "dielectric" meant offering a type of protection. (Tr. 422-23).

<sup>&</sup>lt;sup>65</sup> During cross examination, Mr. Quoyle referred to RR to RFA No. 12 and stated MasTec specifically denies that [redacted] was "working" within two feet of an energized part. MasTec admits that eventually the energized wire came into contact with [redacted] during an unforeseeable accident. (Tr. 418-20; Ex. 2, RR RFA No. 12, pp. 31-32).
<sup>66</sup> Mr. Quoyle testified that he could not recall any specific information MasTec conveyed to linemen that called for a blanket or other insulating material to be used to cover an open line hose. (Tr. 296).

inside the hose since the conductor was already sufficiently insulated.<sup>67</sup> He said linemen could safely touch the rubber hose surrounding the open end with an unprotected finger, but obviously not the energized conductor line. (Tr. 291-297). Mr. Quoyle further testified that a lineman could enter the phase-to-ground MAD of 2.14 feet to touch an energized conductor when the lineman was insulated with his gloves, sleeves or line hose. (Tr. 343).

Mr. Quoyle testified that Table V-3 - Electrical Component of the Minimum Approach Distance (D; in meters) at 5.1 to 72.5 kV, 29 C.F.R. § 1926.960 (Table V-3), showed that 7,260 volts of electricity might jump .04 meters through the air phase-to-ground. (Tr. 296-305, 457).

Mr. Quoyle testified that [redacted] was originally hired by MasTec in about February 2011 for a period of time that was unknown to Mr. Quoyle. [redacted] was again employed at MasTec from August 2014 through March 10, 2015. He did not know whether [redacted] was a certified journeyman lineman. He said [redacted] was a "lineman" at MasTec.<sup>68</sup> (Tr. 306-18).

## CO Luis Cebollero, Jr.

CO Luis Cebollero, Jr. conducted the accident inspection for OSHA. (Tr. 466). He began the investigation the day after the accident by going to the worksite where the accident had occurred. (Tr. 466-67; AF Nos. 8-9). Because electrical service had to be restored for customers, the worksite was not in the same condition as at the time of the electrocution. (Tr. 466-67). Even though some conditions had changed, he took photographs at the worksite as he found it.<sup>69</sup> (Tr. 267; JEx. VI). CO Cebollero then went to MasTec's show-up work yard. (Tr. 467). He held an opening conference with two of MasTec's safety supervisors. (Tr. 469). He

<sup>&</sup>lt;sup>67</sup> During redirect examination, Mr. Quoyle contradicted himself again by stating MasTec would want its lineman to cover an open end of a line hose with a blanket where the conductor line was an inch or less from the open end of the hose. (Tr. 436).

<sup>&</sup>lt;sup>68</sup> Mr. Quoyle testified that [redacted] did not have an approved or official title of "lead lineman" at MasTec. (Tr. 309-10).

<sup>&</sup>lt;sup>69</sup> Four of the photographs that CO Cebollero took are at JEx. VI. (Tr. 467, 497; JEx. VI).

also spoke with Mr. Quoyle and a FP&L representative. (Tr. 469). He interviewed Messrs. Jinks and Bilodeau that same day. (Tr. 468-69). He said Mr. Bilodeau told him that he saw the linesman screwing the cross-arm to the pole. He also saw the phase line up in the air and after it came down he saw [redacted] tightening the bolt of the cross-arm. He told the CO that he looked down for a moment and did not see the accident; but he heard the zap. (Tr. 470). The CO did not know whether Foreman Bilodeau was on the ground or sitting in his truck at the time of the accident. (Tr. 470-71).

During the course of the CO's investigation, he gathered photographs from law enforcement and MasTec. (Tr. 467-68). Four photographs obtained from MasTec are at JEx. V; a photograph obtained from law enforcement is at JEx. VII. (Tr. 468). FP&L sent him the information that the height from the ground to the cross-arm was 38 feet. (Tr. 469).

After completing his investigation, CO Cebollero recommended that MasTec be cited for a violation of 29 C.F.R. § 1926.960(c)(1)(iii)(B). He said "[t]hat there wasn't enough insulation to protect the employee that got electrocuted." He stated that [redacted] should have stayed at least 2.14 feet from the conductor line. (Tr. 471-72, 475). The CO testified that the standard was violated because Mastec failed to adequately cover up the middle phase conductor and the conductor was too close to the front end of the line hose. (Tr. 475-77; JEx. V, p. 4).

CO Cebollero testified that the standard was violated where an uncovered conductor wire went an inch beyond the end of the hose and the lineman was not protected by rubber gloves or other protective equipment when he got within 2.14 feet of the conductor.<sup>70</sup> He said the hose had

<sup>&</sup>lt;sup>70</sup> When responding to hypothetical questions calling for a yes or no answer during cross examination concerning whether unidentified OSHA standards would be violated if the end of the conductor wire was an inch inside the hose, CO Cebollero sought to explain factors that first needed to be determined. Initially saying "No," he immediately thereafter said "Yes." Shortly thereafter, he said there would also be a violation where the end of the conductor wire was 1.5 inches inside the hose and a lineman put his bare hands up against the end of the line hose without touching the conductor. The CO also testified that a shirtless lineman would violate the insulation standard if he grabs the end of a line hose and sticks it against his chest where the conductor is six inches inside the hose

"burn marks inside the insulation hose."<sup>71</sup> He said a person "has to be [within] at least 1.57 inch or less for him to get that shock hazard or maybe get electrocuted."<sup>72</sup> He said nobody knows where the end of the conductor was when [redacted] bundled it up with the strap. But, the CO stated "[w]e do know that he came into contact at least 1.5, 1.57 inches and that's how he got electrocuted." The CO said that [redacted] was exposed to the hazard because the middle phase line was about a foot away from where he was leaning over the cross-arm and the conductor "touched his back." (Tr. 477-81, 493-96).

CO Cebollero testified that "Mastec has a good [training and/or safety] program." However, he said MasTec's "training was kind of low in regards to, for the incident that happened." He said the incident would not have happened had [redacted] and Foreman Bilodeau been better trained. He also said that MasTec did not have any written document that referred to "putting a blanket over" the end of an open line hose. The CO also said that MasTec did not have any training on the hazard identified in the Citation.<sup>73</sup> (Tr. 473-74).

CO Cebollero did not know where the actual rubber line hose that was shown in JEx. VI and used by [redacted] was at the time of the hearing. He said he did not ask to have the actual rubber hose given to OSHA. He did not know if it was ever examined or tested by anyone. (Tr. 497; JEx. VI).

because he should be at least 2.14 feet away from the conductor. Although he was unable to provide a basis for his answer, he later said a conductor was properly insulated where the end of the conductor is six inches inside the line hose. The CO also agreed with MasTec's counsel that there would not be any incidental contact with a conductor that was six inches within the line hose, unless someone jammed a metal rod into the end of the hose. He also initially agreed with MasTec's counsel that a conductor two inches or more inside the line hose was properly insulated, but on redirect qualified his answer by saying "[t]here's a possibility where he could put his hands in there [inside the line hose more than two inches], yes, sir." (Tr. 480-94).

<sup>&</sup>lt;sup>71</sup> CO Cebollero testified that the burn marks extended about two inches up into the rubber line hose that was used by [redacted] at the time of the accident. (Tr. 498-99; JEx. VI, p. 4).

<sup>&</sup>lt;sup>72</sup> CO Cebollero said he agreed with MasTec counsel that [redacted] had to either physically come into contact with the conductor or had to be within an inch-and-a-half of it. (Tr. 493-94).

<sup>&</sup>lt;sup>73</sup> MasTec has admitted that it "does not have a specific written procedure for FP&L's cross-arm installation; this task, like others, are governed by well-established work rules, training and protocol." (Ex. 2, RR RFA No. 15, pp. 32-33).

### **Findings of Fact**

### The Worksite and Accident

The instant case relates to a March 10, 2015 work assignment for a crew of six MasTec employees at the worksite.<sup>74</sup> The crew was assigned to move energized electrical distribution lines from the cross-arm of the existing wooden pole to the cross-arm of a new concrete pole. That day's work was part of MasTec's project to replace wooden poles with new concrete weather-resistant poles for FP&L. Only Messrs. [redacted] and Jinks were working directly on the overhead energized power lines; the other crew members were working on the ground. Foreman Bilodeau, the only MasTec supervisor at the worksite, was designated as the qualified observer. The qualified observer was to watch the linemen working overhead, so he could give them advice or warnings about their work and distance from the energized lines. While working on the cross-arm of the new concrete pole, [redacted] was electrocuted and died at the scene. (Tr. 95, 142, 161-62, 217-8, 423-25; AF Nos. 1-2, 4, 15, 25-28).

Before starting work that morning, the crew had a pre-job briefing. Foreman Bilodeau reviewed potential hazards at the worksite. He told spotters to "watch phase to phase – phase to ground clearances M.A.D."<sup>75</sup> All six crew members signed the Pre-Job Briefing form. He summarized the need for installing protective barriers and indicated that the MAD was two feet, seven inches. The "Barriers and Defenses" he evaluated included "Cover-Up," "Follow Rules," "PPE (Last choice)," and "MAD." (Tr. 95, 161-62, 183-84; JEx. IV; AF Nos. 13-24).

After the crew's safety meeting, Messrs. Bilodeau, [redacted], and Jinks walked over to the Pole 65 to make a plan for the safest way to move the conductor lines from the wood pole to

<sup>&</sup>lt;sup>74</sup> Two other MasTec crews were nearby about a mile away. (Tr. 162; AF No. 7).

<sup>&</sup>lt;sup>75</sup> The MAD here was 2.14 feet. (AF No. 3). The MAD is defined as "the closest distance an employee may approach an energized or grounded object." 29 C.F.R. § 1926.968.

the new concrete pole. (Tr. 95). The distribution lines on the pole had an electrical voltage of 7,620 volts (7.62 kV) phase-to-ground and 13,200 (13.2 kV) volts phase-to-phase. (Tr. 84; AF No. 11; Ex. 2, RR SS RFA No. 11, pp. 1-2). A total of three conductor lines were to be moved from the cross-arm of the 45-foot wood pole to the cross-arm of the new 50-foot concrete weather-resistant pole—two power lines on the cross-arm's outer edges (field-side and road-side) and a power line in the middle. (AF Nos. 1, 4). The wood pole and concrete pole were approximately 8 to 10 feet apart. (Tr. 109-11, 129, 143, 191, 258). The height of the cross-arm on the new concrete pole was 38 feet from the ground. The wood pole's cross-arm was approximately five feet below the height of the concrete pole. (Tr. 108, 469; AF No. 1). Messrs. [redacted] and Jinks tasks were to move the energized lines while each worked from a truck-mounted insulated bucket near the poles' cross-arms about 40 feet above ground. (Tr. 142, 217-18, 423-25; AF Nos. 26, 32).

[redacted] had been working as a lineman in a bucket for about 12 to 18 months. (Tr. 90-91, 99). Mr. Bilodeau designated [redacted] as the lead lineman. (Tr. 96). Mr. Jinks had worked in the industry about 20 years, with 19 years of experience working as a lineman in a bucket truck. (Tr. 81, 85, 175-76). Mr. Jinks was a journeyman lineman in both electrical transmission and distribution.<sup>76</sup> (Tr. 81-82). [redacted] was neither a journeyman lineman nor working at a journeyman lineman skill level. (Tr. 91-99, 309).

On the day of the accident, Messrs. Jinks and [redacted] worked from two insulated truck-mounted buckets. (Tr. 188-89; AF Nos. 17-19). They used insulating materials to cover the exposed energized parts. (Tr. 111-12, 119-21, 195-96). As Mr. Jinks explained, "[a]ny

<sup>&</sup>lt;sup>76</sup> Mr. Jinks had been a journeyman lineman in electrical transmission since 2000 and a journeyman in electrical distribution for about 3 years. (Tr. 81-82).

conductor that you're going to be working above or within arms length of an energized conductor shall be covered with line hoses and blankets[.]" and "[you] cover everything as you go from ground up, and then from inside, outside, or from outside inside." (Tr. 112, 119).

The concrete pole had three energized lines: middle, field-side and road-side. The middle conductor line was the first line to be moved from the wood pole to the concrete pole; the two outer conductor lines (field-side and road-side) were to be moved after the middle conductor line was permanently attached to the concrete pole's cross-arm. (Tr. 194-95; AF No. 4). Messrs. Jinks and [redacted] covered the two conductor lines on the outer edges (field-side and road-side) with Class IV rubber protective blankets. (Tr. 120, 338; AF No. 14-15).

Messrs. Jinks and [redacted] worked on the middle conductor line from opposite sides of the pole—Mr. Jinks worked from the left side and [redacted] worked from the right side (left and right are from the perspective of one looking at the pole from the road-side and the energized conductor lines are running left to right). (Tr. 93, 109, 193; JExs. V). Because the cross-arm of the concrete pole was about five feet higher than the wood pole's cross-arm, the conductor line had to be lengthened by splicing in additional section of line. (Tr. 72-73). In order to maintain the flow of electricity for customers, a "jumper" or "jumper cable" would be installed to redirect the electrical current around the section to be spliced. (Tr. 119). This jumper cable is also referred to as a mack line or grounding chain and the process is also referred to as "macking out" the system. (Tr. 117-18, 122-24). Once a jumper cable is placed on the line and the electricity redirected, the conductor line can be cut in the macked-out section of line. (Tr. 121).

To place the jumper cable on the energized conductor line, a wire grip is installed on each end of the section of the conductor line to be macked-out. A hot hoist is then attached to each

- 31 -

wire grip.<sup>77</sup> (Tr. 122, 196-98; JEx. V, p. 1). A hot hoist consists of a fiberglass handle, ratcheting mechanism (hoist head), and a blue nylon hoist strap. (Tr. 120, 196, 395: Ex. BB at "G"). The wire grip acts as a clamp on the wire, and the hoist strap is attached to the wire grip; the ratcheting mechanism allows the linemen to "jack" the tension of the conductor line.

Messrs. Jinks and [redacted] both installed a wire grip and hot hoist on the conductor line on each side of the concrete pole, creating the macked-out section of line. (Tr. 120-24, 196-97). The jumper (mack line) was then attached on each side of the macked-out area, creating a connection to divert electricity through the jumper. (Tr. 121-23, 126; JEx. V, pp. 1, 4). Each lineman "jacked" his side of the line to achieve the proper tension for cutting the line. (Tr. 120, 123-24). Each lineman then cut the conductor line within the macked-out area between the wire grips. (Tr. 124).

The length of conductor line remaining past the wire grip, after it is cut, must be long enough so that later an automatic sleeve can be connected and used to splice in the section of new conductor line.<sup>78</sup> (Tr. 124-27). Mr. Jinks explained that a one-foot length of conductor line past the wire grip, is long enough to connect the automatic sleeve. (Tr. 121, 124-27, 143).

Messrs. Jinks and [redacted] had the same task on each side of the concrete pole, to cut the energized conductor line so the macked-out middle conductor line could then be moved to the new pole and then later spliced together with additional conductor line. (Tr. 143).

On his side of the pole, Mr. Jinks cut the conductor line about one foot away from the jumper's wire grip—leaving a one-foot "tail" of loose conductor line that extended past the wire grip. He then covered that one-foot portion of the line with an insulating blanket. (Tr. 121, 143). This resulted in a distance of six to eight feet between the cut end of the conductor line and the

<sup>&</sup>lt;sup>77</sup> A demonstrative photograph of a "Hot Hoist" is at Ex. BB at "G". (Tr. 393-95).

<sup>&</sup>lt;sup>78</sup> Ultimately, the spliced line would be connected to an insulator on the cross-arm. (Tr. 127-28).

cross-arm. (Tr. 125-27).

By contrast, on his side, [redacted] cut the conductor line much further away from the wire grip—resulting in a "tail" of loose conductor line that was much longer than on Mr. Jinks' side. [redacted] used a rubber insulating line hose to cover the cut conductor "tail." Rubber line hoses are generally six feet long. The rubber line hose cover did not "grip" the conductor, it was simply placed lengthwise over the conductor line. The conductor line could slide "pretty easy" inside the line hose cover.<sup>79</sup> The end of the rubber line hose was long and dangled very close to the new concrete pole on [redacted]'s side. (Tr. 133-34, 143-44, 153-55, 394; JEx. V, p. 4; Ex. AA at "F"; AF No. 15).

Mr. Jinks was not watching as [redacted] placed the line hose cover over the conductor line, so he did not know the distance the conductor's cut end was from the open end of the rubber line hose. (Tr. 151-52). However, he could see the tail was so long it was drooping; Mr. Jinks suggested to [redacted] that he put some tape and a collar rope on the tail to hold it up. (Tr. 152). [redacted] put collar rope on the insulated line about eight inches from the end of the line hose and another collar rope roughly two to two-and-one-half feet from that point. (Tr. 152; JEx. V, p. 4). The collar rope held the line hose in a somewhat horizontal position to help prevent the line-hose-covered conductor from drooping vertically and slipping off the conductor. (Tr. 154). The long tail on [redacted]'s side resulted in the conductor's cut end being much closer to the fiberglass cross-arm on the concrete pole than on Mr. Jinks' side. (Tr. 133, 140; JEx. V, p. 4).

The wire grip acted as a stop for the end of the line hose next to it, but not at the opposite end of the rubber line hose that was open. (AF. No. 15). Nothing was installed to keep the open end of the rubber line hose at a particular distance from the cut end of the energized conductor

<sup>&</sup>lt;sup>79</sup> Mr. Quoyle confirmed the diameter of the line hose cover has a larger diameter than the conductor line. (Tr. 416).

inside. (Tr. 154).

Next, the concrete pole's cross-arm was to be installed by [redacted]. Installing the cross-arm required screwing in and tightening two fourteen-inch two bolts through the cross-arm and pole—a top and bottom bolt. (Tr. 223-25). The usual process is to attach and tighten the bolts while the conductor line is held above. (Tr. 226). After the cross-arm is installed, the middle conductor line is attached to an insulator attached to the cross-arm. (Tr. 255). The insulator can be attached to the concrete pole's cross-arm either while the conductor line is temporarily secured to the cross-arm or while the conductor line is being held above the cross-arm. (Tr. 131-32).

To install the cross-arm, Mr. Jinks lifted the macked-out middle conductor line up about 10 feet above [redacted]'s head using the mechanical arm (known as a jib arm or jib hoist) attached to his bucket. (Tr. 128, 198-200; AF Nos. 18-20). Mr. Jinks' bucket was about five or six feet higher than [redacted]'s bucket. (Tr. 147, 199). The line was "far enough that you could get clearance in so the other bucket and the person working in it can safely install the cross-arm."<sup>80</sup> (Tr. 128, 200). [redacted] then began to install the new cross-arm. (Tr. 145). To install the cross-arm, [redacted] balanced the cross-arm on the edge of his bucket, put the two bolts through and tightened the nuts from the back side of the pole. (Tr. 131, 225-26). Mr. Jinks watched [redacted] install the cross-arm, saw him tighten the nut on the top bolt, then saw him place the nut on the bottom bolt and "thought he had tightened it up" as well. (Tr. 147).

After installing the two bolts, [redacted] asked Mr. Jinks to lower the middle conductor line to the cross-arm–Mr. Jinks believed this meant [redacted] was finished with the bolts on the cross-arm. (Tr. 147, 226). Mr. Jinks then lowered the middle conductor line to the cross-arm on

<sup>&</sup>lt;sup>80</sup> Mr. Jinks testified: "So, basically what I'd raise it far enough up that he couldn't reach up standing in the bucket and touch the conductor that I'm holding." (Tr. 131).

the concrete pole. (Tr. 147-49). As Mr. Jinks watched, [redacted] secured the middle conductor line to the cross-arm with the hoist strap and non-conductive collar rope. (Tr. 149, 227-29, 233-34). [redacted] tied the middle conductor at a point about 30 inches from the cross-arm's center point.<sup>81</sup> (Tr. 233-34, 256). [redacted] had some difficulty tying the knot to secure the conductor line to the cross-arm. (Tr. 148-50, 234). After securing the middle conductor to the cross-arm, [redacted] told Jinks to boom down to the ground to get the insulators and other equipment needed for the next step. (Tr. 145-47, 197, 229). Mr. Jinks began rolling in the jib arm, so that he could boom down to pick up the insulators, automatic sleeves, and additional conductor line for splicing. (Tr. 146-48). Before he could boom down, Mr. Jinks heard a buzzing sound, looked over and saw [redacted] slouched over the cross-arm with a wrench in his hand. (Tr. 147-48). The incident occurred at about 2:41 PM, March 10, 2015. (Ex. 3, SS RR to Interrogatory No. 1, p. 4). Only about one to two minutes had passed from the time Mr. Jinks started to roll up the jib line until the accident occurred. (Tr. 148-50). At the moment of the electrocution, no one was looking directly at [redacted]—Mr. Jinks was rolling in the jib line and Foreman Bilodeau was looking down. (Tr. 146-48, 418; AF No. 26-27).

As [redacted] was being electrocuted, Foreman Bilodeau jumped out of his truck and came around and hollered to [redacted]. He then jumped up on the back of [redacted]'s bucket truck to use the lower controls to move [redacted]'s bucket and [redacted] away from the concrete pole's cross-arm. The middle phase was caught on the lip of [redacted]'s bucket. Mr. Jinks went up in his bucket to hold the middle phase up and off of [redacted] so that Mr.

<sup>&</sup>lt;sup>81</sup> Mr. Jinks marked the spot where he believed the middle phase had been tied to the cross-arm as "D" in JEx. V, p. 3. (Tr. 233). Later, upon prompting from Secretary's counsel, Mr. Jinks said that the line hose-covered middle phase was in fact on the opposite side, to the left of the cross-arm, still approximately 30 inches from the center. (Tr. 256-59). Later still, he said "I don't remember what side, the left or right." (Tr. 258-59). Either way, which side from the cross-arm's center the conductor was tied to does not affect the outcome of this case and thus does not need to be resolved by the Court. *Accord*, R. Br., p. 23, n. 6.

Bilodeau could bring [redacted]'s bucket to the ground. Once on the ground, cardiopulmonary resuscitation (CPR) was attempted even though [redacted]'s right side was badly burnt with internal organs exposed. Within five minutes the ambulance arrived. [redacted] died shortly thereafter from electrocution. (Tr. 148, 160-61; AF Nos. 26, 28).

Wounds on [redacted]'s body indicated an energized part was close enough to cause an electrical contact with his back at the same moment the front of [redacted]'s body touched the cross-arm, which had acted as a ground. (Tr. 418-20; AF No. 25; R. Br., p. 25). Mr. Dickie sent Mr. Spicer up in Mr. Jinks' bucket about an hour after the accident to take pictures at pole-top. (Tr. 107, 158, 163-65). The photograph at JEx.V, p. 4, depicts the conductor lines as they were at time of the electrocution. (Tr. 145-46). The conductor line inside the rubber line hose was the energized part closest to [redacted] and it was the part that electrocuted him. (Tr. 157). Mr. Jinks verified that a photograph taken by Mr. Spicer shows "the conductor was like an inch to an inch-and-a-half inside the line hose with a burnt mark on it, and then he took a picture of the, the bolt that was on the cross-arm that still had the flesh that made contact from phase to ground." (Tr. 157-58, 164; JEx. V, p. 4). Mr. Jinks testified that "if you look at all that dark black around the end of that line hose, that's [] because that wire was only that far in there. So, when he made contact for, that's where all the actual contact and the, you know, the actual electricity was making contact to his body." (Tr. 160; JEx. VI, pp. 3-4). Further, Mr. Jinks stated:

"[W]hile Jason was up there taking the pictures he realized what had happened, you know. It was obvious because there, there was a, there the line was inside the hose that far back in it, and then there, his flesh was on the bolt, and that's where the two contacts were made. And so, and then your whole part of your back is burned out and the front of your chest is, you know, here, so that was the two contact parts of the incident that happened." (Tr. 164).

MasTec has admitted in various ways that [redacted]'s body "came into direct contact

with an energized part" on March 10, 2015.<sup>82</sup> (Ex. 2, RR RFA No. 14, p. 32). At one point, MasTec's safety director, Mr. Quoyle, admitted that "contact of some sort was made and/or close enough to draw an arc or make contact." (Tr. 384). Mr. Quoyle admitted, and confirmed, the conductor was pushed out of its protective covering when it came into contact with [redacted]. (Tr. 280). Additionally, MasTec agreed the line hose cover was burnt, on the inside and outside, at the open end of the line hose where the cut end of the conductor had been. (Tr. 286). Finally, the parties stipulated that [redacted]'s wounds were consistent with an energized part having come into contact, or close enough to cause an arc, with his back at the same moment the front of [redacted]'s body touched a part of the cross-arm, which acted as a ground. (AF No. 25; R. Br., p. 25).

## Causes of the Electrocution of [redacted]

The Court finds that [redacted] was electrocuted when his back either touched a portion of the conductor protruding from the end of the rubber hose or got within 1.575 inches of the conductor enveloped by and within the rubber hose, while he was leaning over and touching the concrete pole's cross-arm tightening a bolt. He got closer to an exposed energized part than the 2.14 feet MAD permitted. The end of the conductor was not effectively insulated. No effective means were used to grip the wire within the rubber line hose and prevent the hose from sliding.

There were many contributing commissions and omissions that contributed to the demise of [redacted]. [redacted] should not have been within the MAD when the conductor was not adequately insulated. He could have used a rubber blanket to wrap the end of the rubber hose that enveloped the conductor. He could also have used a rubber blanket to cover the cross-arm he leaned over to tighten a bolt. [redacted] could have cut his conductor a foot in front of his

<sup>&</sup>lt;sup>82</sup> It is not necessary for the Court to determine whether the electrocution was caused by direct contact with the line or an indirect electrical arc.

grip and provided for a distance of about 5  $\frac{1}{2}$  to 6 feet away from the concrete pole's cross-arm to allow himself a clear work space to work around the cross-arm, to include tightening bolts.<sup>83</sup> The rubber line hose and the conductor were about a foot to a foot-and-a-half from the cross-arm atop the concrete pole. (Tr. 140-41, 246; S. Br., p. 4). The rubber line hose and the conductor were close, within ten to twelve inches, to [redacted]'s body. (Tr. 246-47; S. Br., p. 4). Foreman Bilodeau failed to adequately perform his role as a qualified observer. He knew [redacted] was an inexperienced lineman who needed guidance to perform even simple tasks a lead lineman should know how to do. Foreman Bilodeu should have been closely observing and coaching [redacted] as he worked atop the concrete pole. This he failed to do. Instead, Foreman Bilodeau sat in his truck from the time [redacted] started working atop the concrete pole until he was electrocuted. The foreman did not exercise reasonable diligence. Foreman Bilodeau was in a position to see that [redacted] was working within the MAD and that the end of the conductor was not adequately insulated. Foreman Bilodeau should have stopped [redacted] when he leaned over the cross-arm without first insulating the cross-arm with a blanket. The foreman should also have stopped [redacted] from working near the conductor line's open end. MasTec should have provided training for and enforced, rules that: 1) prescribed how close an uninsulated cut conductor could be to a cross-arm, 2) stated how close a cut conductor could be to an uncovered end of a rubber hose, and 3) specified how blankets and other insulating material are used to cover the open end of rubber hoses containing energized conductors. (Tr. 94-100, 140-42, 154-

<sup>&</sup>lt;sup>83</sup> Normally, the line would be cut leaving just one foot of line inside the grip of the jumper to connect an automatic sleeve that would then reconnect the two pieces of wire. Only a foot should be left for safety, but also because the automatic sleeve that will slip onto the end of that cut line must be six to eight feet away from the cross-arm. [redacted] left much more than a foot beyond the grip. The conductor reached almost to the concrete pole unnecessarily as it would have needed to be cut again before splicing in new wire to ensure the sleeve was six to eight feet away from cross-arm. Because [redacted] left so much extra conductor line, he attempted to cover it with an insulating hose rather than a blanket. The female end of the line hose closest to the concrete pole was completely open so that there was only air between the end of the phase line inside the hose and the end of the rubber hose. (Tr. 121-27, 133, 143-44. 289; S. Br., pp. 3-4).

57, 164, 217-19, 246, 277-86, 300-05, 384, 411-20, 436, 458, 495; Ex. 2, RR RFA No. 12, pp. 31-32; AF Nos. 24-26; JPHS, p. 9, ¶ 3; S. Br., pp. 4-5).

## MasTec's Safety Program

MasTec submitted evidence of its safety program including: an Employee Safety Handbook (Safety Handbook) (JEx. I); an ET&D Partnership 10-hour OSHA Training Course Student Handout (Ex. D); a New Employee Training Introduction to Safety Video Training<sup>84</sup> (Tr. 357-58, 370; Ex. E); MasTec's Competency Assessment Manual (Ex. F); Safety and Health Management System, Safety & Health Inspections guidelines (Ex. L); the DynaQ Safety and Health Audit Form (Ex. M); and six Corrective/Disciplinary Action Forms. (Ex. N).

Mr. Quoyle testified that Messrs. [redacted] and Jinks viewed the two videos as part of their training. (Tr. 371; Ex. E).

## MasTec's Work Rules

Employees received a copy of the Safety Handbook during their new hire orientation.

(Tr. 346-47; JEx. I). The Safety Handbook, Second Edition, dated January 2014, covers 85

subject areas, such as: general safety rules, pre-job briefing, rubber gloves & sleeves, electrical

<sup>&</sup>lt;sup>84</sup> The electrical PPE training video's audio states: "For starters, the minimum approach distance is from the upper grip of the hand on the insulated tool to the energized circuit or equipment." It further states: "The rule of thumb is protective cover should be installed to cover everything within your extended reach, plus two feet of your work area." (Tr. 359-62; Ex. E). The electrical awareness video's audio states: "Electrical incidents are generally caused by unsafe conditions, unsafe acts, or combinations of the two. Some unsafe electrical equipment and insulations can be identified by the presence of faulty insulation, improper grounding, loose connections, defective part, ground fault in equipment, or unguarded live parts." It further sates: "The minimum approach distance, MAD, for qualifying personnel must be maintained when working on or near, in proximity to, exposed live parts. This applies to the distance from your fully extended arm plus any connective object in your hand to the exposed live parts. The minimum approach distance, MAD, is the closest distance a qualified employee can bring a noninsulated or conductive object, including their body, to an object energized in a different potential. Likewise, the same distances apply to taking in energized objects in proximity to a grounded object or an object of a different potential." It also states: "Unintentional contact with an electrical voltage can cause current to flow through the body resulting in shock, burns and death. Electricity is a serious workplace hazard if not controlled.... It only takes one-tenth of an amp of electricity going through the body for just three seconds to cause death.... You'll experience an electrical shock if a part of your body completes an electrical circuit by touching an energized part and an electrical ground ...." (Tr. 363-67; Ex. E).

safety precautions for distribution & transmission, working on or near energized lines, insulating

equipment, and working on downed lines. (JEx. I).

Each subject area included a list of work rules. For example, in the "Working On or Near

Energized Lines" section, it stated (in part):

166 e. Minimum Approach Distances: No qualified electrical employee shall approach or take any conductive object closer to the extended reach of the exposed energized parts set forth in Table R-6, Minimum Approach Distance unless:

166 f. The employee is insulated from the energized part.

166 g. The energized part is insulated from the employee and from any other conductive object at a different potential.... For Voltage Phase-to-Phase, 1.1 to 15.0 kV, the Distance Phase-to-Phase Ground Exposure -2 ft. -1 in., Distance Phase-to-Phase Exposure -2 Ft. -2 in. ...

166 i. Employees doing work near exposed energized lines shall devote their undivided attention to the work at hand.  $\dots^{85}$ 

166 n. Proper minimum approach distances between the employee and the energized conductor shall be maintained.

166 o. All exposed energized conductors and equipment within reaching distance shall be covered.

166 p. Guards and barriers shall be erected as necessary to adjacent energized lines.

166 q. Employees shall not reach beyond the protective equipment. ...

166 s. A member of the crew shall be identified to act as a qualified observer to ensure clearances are maintained, PPE, and effective cover-up is installed. The qualified observer shall be capable of identifying nominal voltages, energized components, minimum approach distances, and proper safe work practices while crew-members are working on energized lines (i.e., qualified electrical employee).

(Tr. 347-50; JEx. I, pp. 143-46).

The Safety Handbook's section for "Insulating Equipment" at ¶174 stated: "[w]hen it is

necessary to work on or near energized conductors or equipment, sufficient protective equipment

shall be used to prevent accidental contact with the energized conductor or equipment[.]" and

"[w]hen applying cover-up, employees shall cover-up their extended reach plus two (2) feet at a

minimum." (¶¶ 174 c-d). (JEx. I at MasTecMI000239). Per Mr. Quoyle, the Handbook did not

<sup>&</sup>lt;sup>85</sup> Mr. Quoyle called this "situational awareness." (Tr. 347-48).

include a rule for insulating the open end of a line hose or where within a line hose the cut end of the energized conductor must be to achieve an insulating effect.<sup>86</sup> (Tr. 341-43).

# MasTec's Safety Training

MasTec provided training when employees were hired, training sessions after hire, and through weekly safety topics, safety recognition bulletins (SRBs), and toolbox talks each morning. (Tr. 105-06, 346-49). Training included a New Hire Training Introduction to Safety DVD that covered subjects, such as, insulating energized parts, wearing rubber gloves cradle-tocradle, working near energized lines, and an employee's stop work authority. (Tr. 188-89, 357-71; Ex. E). One component of the initial safety training was a review of MasTec's Safety Handbook. (Tr. 344-49; JEx. I).

In about 2013, MasTec began using the ET&D Partnership's training course to train its linemen, foremen, and supervisors. (Tr. 327-28, 332, 446; AF No. 35). MasTec also used the ET&D 10-hour OSHA Training Course Student Handout (OSHA Student Handout) that covers subjects such as: electrical safety awareness, covering energized lines, and stop work authority. (Tr. 344; Ex. D). The OSHA Student Handout is a copy of all the slides from the ET&D training course, so an employee can follow the training presentation and take notes during the training. (Tr. 334-35; Ex. D). This training consisted of 9 subject matter sections, including electrical safety, personal protection grounding, personal protective equipment, and job briefings. (Ex. D). Mr. Quoyle testified that the OSHA Student Handout included slides that instructed employees to "[e]liminate second point of contact hazards" that could include the pole with the metal bolts and things sticking out. He said if Foreman Bilodeau had seen [redacted] leaning over the

<sup>&</sup>lt;sup>86</sup> MasTec identified documents containing work rules designed to prevent electrical exposure in its SS RR to Interrogatory No. 1. (Ex. 3, SS RR to Interrogatory No. 11, at pp. 8-9).

concrete pole without a blanket in place, the foreman should have stopped the work. (Tr. 450; Ex. D, p. MasTecM1001186).

MasTec performed a competency assessment to determine if an employee is qualified to work as a lineman. (Tr. 307-08). MasTec's Competency Assessment Manual was over 400 pages of information and questionnaires on safety topics, such as, "Basic Electricity," "Use of Rubber Gloves, Sleeves, Protectors, and Liners," "Installing & Removing Protective Equipment," and "Line Installation & Removal." (Tr. 371; Ex. F). Each topic was assessed through a combination of written questions and hands-on demonstration. (Tr. 318-19; Ex. H, pp. 4-7). Finally, each employee completed a two-page competency self-assessment form to document competence for a list of skills and tasks. (Ex. F, MasTecMI000332-334). The completed self-assessment was then given to a foreman or other management who had to verify, within 30 days, the skills the employee had assessed as competent. (Ex. F, MasTecMI000334).

After initial orientation training, safety training was offered either at instructor-led classes or online. (Tr. 345). Training was tracked through classroom rosters or online records. (Tr. 320-21). The training summary for Foreman Bilodeau showed he took several training classes between 2002 and 2011, including basic overhead training and bucket rescue. (Ex. J).

Mr. Jinks completed his new hire orientation on March 2, 2015. (Ex. I). The initial safety training took about 3 hours and included a test. (Tr. 105-06). Mr. Jinks stated that he had completed a pole-top rescue class during a previous employment period with MasTec. (Tr. 106).

MasTec provided several documents related to [redacted]'s training from 2011 and 2014. (Tr. 314-15, 318-320, 374-376; Exs. G-H, K). Exhibit K, a general employee training summary for the employees at the worksite, showed [redacted] had completed training classes on October 3, 2014, October 10, 2014, and February 25, 2015. (Tr. 315, 320-21; Ex. K). Mr. [redacted]

- 42 -

signed an acknowledgement that he had read and understood the Employee Safety Handbook dated August 8, 2014. (Ex. H, MasTecMI000051).

Mr. Quoyle testified that [redacted]'s August 18, 2014 competency self-assessment showed that he had checked himself as competent for subjects that related to overhead distribution work. (Tr. 374-77; Ex. G). He said the checkmarks under the Not Yet Competent column all related to underground electrical distribution work.<sup>87</sup> Mr. Quoyle confirmed that the use of rubber gloves and placing blankets and line hoses on conductor lines were included in [redacted]'s self-assessment. (Tr. 371-73).

Training information for [redacted]'s period of employment prior to August 2014 with MasTec was also submitted. (Ex. H). On February 8, 2011, [redacted] signed an acknowledgement that he had read and understood the Employee Safety Handbook. (Tr. 319; Ex. H, MasTecMI000044). A February 2011 competency assessment for the line installation and removal training module was provided. (Tr. 312, 318-19, 375-76; Ex. H, MasTecMI000045-48). A roster for the February 10, 2011 classroom training on poletop rescue, bucket rescue and line installation and removal training showed [redacted] had attended. (Ex. H, MasTecMI000049). A roster for classroom training on bucket rescue, work zone, first aid, and hazard communication training from February 8, 2011, included [redacted]. (Ex. H, MasTecMI000041). A February 8, 2011 review, signed by the general foreman, showed [redacted] was assessed as proficient in bucket operations. (Ex. H, MasTecMI000042).

In addition to training classes, one of 52 pre-selected topics was presented to the crew each Monday. (Tr. 104-05, 346). Toolbox talks were conducted each morning, during which an

<sup>&</sup>lt;sup>87</sup> During cross examination, Mr. Quoyle admitted that there was one task on the self-assessment form where a checkmark appeared in the Not Yet Competent column for a task related to overhead work; i.e. Task 210 - Installing Pole-Mounted Single-Phase Transformers. (Tr. 446-48, Exs. F-G). He later said Messrs. [redacted] and Jinks were not working on a pole-mounted single-phase transformer at the work site. (Tr. 462-63).

employee would read a subject from the safety manual that the crew would then discuss. (Tr. 104, 182-83; JEx. III). Further, a JSA was conducted each day. (JEx. IV). A JSA for March 5, 2015 showed "Cover up!! Cover up!! Cover up!!" written on the form. (AF No. 29; JEx. IV, MasTecMI000322).

The training instructions for rubber insulating blankets stated that "[b]lankets are used folded, wrapped, or suspended in any position to provide an insulating barrier. They are used to cover secondary racks, cutouts, arresters, guy wires, transformers, potheads, or other live or grounded parts that are within the area of physical reach." (Ex. F, MasTecMI000535).

According to Mr. Quoyle, MasTec provided training on the MAD and general training that energized parts must be covered. (Tr. 289, 343, 436-37). Mr. Quoyle stated that employees were trained on how to install rubber line hoses, rubber line clips (clothespins), and rubber line blankets. (Tr. 288, 291, 436-37). There was no training about insulating cover for the open end of a line hose. (Tr. 290).

Mr. Quoyle could not recall if there was training on how to keep the line hose from sliding along the conductor's length. (Tr. 287-88). The Court reviewed the training materials provided and found there was only general instruction on placing the line hose over the conductor.<sup>88</sup> This general instruction, which described how to place the line hose onto the conductor, also noted that a line hose could slide on the conductor. (Ex. F, MasTecMI000534). However, this instruction did not address insulating the cut end of an energized conductor line.

<sup>88</sup> The "INSTALLING AND REMOVING RUBBER PROTECTIVE EQUIMENT section states: I. Line Hoses

A. Line hoses are long split-tube, rubber-insulated devices for covering live wire, leads to apparatus, jumpers, and grounded wires. A self-locking lip prevents the hose from becoming detached or exposing the conductor....a) Hold the line hose near each end, and install the hose on the conductor by placing the hose end on the conductor with enough pressure to force the conductor between the split end. b) With continued pressure on the hose, <u>slide</u> the hose on the conductor, parallel with the conductor until the entire length of the hose has covered any exposed part of the conductor....

C. Blankets ... provide an insulating barrier. They are used to cover ... other live or grounded parts that are within the area of physical reach. ... (Ex. F, MasTecMI000534) (emphasis added).

Mr. Quoyle confirmed that MasTec did not provide any training to employees on how far back the cut end of a live conductor line must be set from the open end of a rubber line hose. He also confirmed that MasTec did not have a specific rule that required linemen to cover the end of an open line hose with a rubber blanket. He also acknowledged that MasTec did not have a policy that told linemen how far back a live conductor must be inside a line hose. (Tr. 290-91, 341). Mr. Quoyle also testified that OSHA's ET&D training handout did not say anything about: 1) closing the ends of a line hose, 2) using blankets on the ends of a line hose, or 3) energized wires needed to be a certain number of inches or feet inside a line hose. (Tr. 340-43; Ex. D).

## MasTec's Worksite Safety Audits

Exhibit L, MasTec's Safety and Health Management System, Safety & Health Inspections procedure stated that the Safety Department developed an inspection schedule for worksites and that "Supervisors, General Foreman and designated Foremen shall conduct at least one. . . formal inspection of a project, job site or task within their area of responsibility each week." Further, "Managers, Project Managers or equivalent shall conduct at least one . . . formal inspection within their operational area each month." (Ex. L, MasTecMI000002-MasTecMI000005).

MasTec's internal safety inspections were called DynaQ inspections. DynaQ inspections were the documented field observations of work crews by all levels of management. (Tr. 345, 378; Ex. M; AF No. 34). The inspection consisted of a four-page checklist of items to observe for safety compliance, such as, whether the crew had adequately covered lines and secondary points of contact, and whether the MAD had been observed. (Tr. 379-80; Ex. M, MasTecMI000011-12).

The DynaQ inspections were documented using a handheld device or a paper form. (Tr. 378). Mr. Quoyle stated that Foreman Bilodeau's crew had been inspected five or six times in the months before the incident. (Tr. 380). However, Mr. Quoyle did not provide details about those particular inspections nor did MasTec enter any examples of completed DynaQ inspections into evidence. The record is silent on the total number of DynaQ inspections done per year. The record is also silent as to how the information gathered from the DynaQ inspection is used for training or discipline.

## MasTec's Disciplinary Policy

MasTec had a corrective disciplinary action policy for employees found violating work rules. (Tr. 381-82; Ex. N). Documented disciplinary actions were utilized by all management employees. (Tr. 382-83). As the foreman on site, Mr. Bilodeau had authority to discipline crew members. (Tr. 423-24).

MasTec provided evidence of six documented corrective/disciplinary actions from its Southern Division, which had 350 employees.<sup>89</sup> (Tr. 381-83, 451; Ex. N). The documents were the result of a records search of the disciplinary records for MasTec's Southern Division (which Bilodeau's crew was part of) for the time period approximately 14 months before March 15, 2015. (Tr. 451; Ex. 2, RR to Interrogatory No. 13, at p. 22). From that search result Mr. Quoyle found six disciplinary actions related to electrical safety. (Tr. 451-52). These six actions appear to be primarily related to incidents where contact was made with a part or where there was a power interruption. The following is a summary of those six actions:

 on May 9, 2014, a lineman received a verbal warning for "got new wire into top of switch no cover." It was noted that failure to improve would result in a 2-day suspension (Ex. N, MasTecMI000284);

<sup>&</sup>lt;sup>89</sup> Ernie King is the name of the supervisor/manager/foreman that appears on four of the six corrective/disciplinary action forms that range from May 9 through September 23, 2014. Foreman Bilodeau's name does not appear on any of these action forms. (Tr. 451; Ex. N).

- on May 15, 2014, a lineman received a written warning and was suspended for 5 days without pay because he "did not remove arrestor jumper or use cover up before moving conductor, while loosening clamp to move conductor the wrench made contact with arrestor bracket." It was noted that failure to improve would result in immediate termination (Ex. N, MasTecMI000283);
- on July 15, 2014, a lineman received a written warning after he "terminated one end of primary cable (URD) and plugged elbow on to (A) bushing. That resulted in energizing the cable with the other end laying on top of the ground exposed. The loop was kicked off resulting in 12 consumers being without power." It was noted that failure to improve would result in discipline up to and including termination (Ex. N, MasTecMI000288);
- on September 22, 2014, a lineman received a written warning for "knocked line out with armor rods." It was noted that failure to improve would result in discipline up to and including termination (Ex. N, MasTecMI000285);
- on September 23, 2014, a groundsman received a written warning and was suspended for 4 days because he "was not watching [employee in bucket] while working around energized conductors. [Employee in bucket] made contact with phase & neutral causing an at fault outage." It was noted that failure to improve would result in discipline up to and including termination (Ex. N, MasTecMI000286);
- on September 23, 2014, a lineman received a written warning and 4-day suspension without pay because he "set up bucket truck and did not have a clear view of boom causing an at fault outage. Improper cover up." It was noted that failure to improve would result in discipline up to and including termination (Ex. N, MasTecMI000287).

# THE CITATION

## Secretary's Burden of Proof

To establish a violation of an OSHA standard, the Secretary must show by a

preponderance of the evidence that: (1) the cited standard applies; (2) the terms of the standard

were violated; (3) the employer knew, or with the exercise of reasonable diligence could have

known, of the violative condition; and (4) one or more employees had access to the cited

condition. Astra Pharm. Prods., 9 BNA OSHC 2126, 2129 (No. 78-6247, 1981), aff'd in

relevant part, 681 F.2d 69 (1st Cir. 1982).

# Citation 1, Item 1

The Secretary cited Respondent for a serious violation of 29 C.F.R. §

1926.960(c)(1)(iii)(B) which requires:

(c) *Live work*—(1) *Minimum approach distances*....

(iii) The employer shall ensure that no employee approaches or takes any conductive object closer to exposed energized parts than the employer's established minimum approach distance, unless:

(A) The employee is insulated from the energized part (rubber insulating gloves or rubber insulating gloves and sleeves worn in accordance with paragraph (c)(2) of this section constitutes insulation of the employee from the energized part upon which the employee is working provided that the employee has control of the part in a manner sufficient to prevent exposure to uninsulated portions of the employee's body), or

(B) The energized part is insulated from the employee and from any other conductive object at a different potential, or

(C) The employee is insulated from any other exposed conductive object in accordance with the requirements for live-line barehand work in § 1926.964(c).

The Secretary alleged that "on or about March 10, 2015, at the work site, (Wood pole

marker #65) an employee working from the basket of a truck aerial lift, installing a new cross-

arm on a concrete pole and moving the existing power distribution lines from a wood pole to the

concrete pole was electrocuted when the energized lines were not properly insulated and made

contact with the employee." See Citation and Complaint.

Respondent asserts the Citation must be vacated because the Secretary did not establish

two elements in his prima facie case: 1) that MasTec violated the standard and 2) that MasTec

had knowledge of the violative condition. (R. Br. 26).

# The standard is applicable

The cited standard applies to "work on exposed live parts, or near enough to them to

expose the employee to any hazard they present." 29 C.F.R. § 1926.960(a). Here, linemen

Messrs. [redacted] and Jinks were working on energized overhead power lines.<sup>90</sup> (AF No. 11). The Court finds the standard applies.

### An employee was exposed

"Exposure to a violative condition may be established either by showing actual exposure or that access to the hazard was reasonably predictable." *Phoenix Roofing, Inc.*, 17 BNA OSHC 1076, 1079 (No. 90-2148, 1995), *aff'd*, 79 F.3d 1146 (5th Cir. 1996). If an employee is in the zone of danger and exposed to the hazardous condition, exposure is established. *See Gilles & Cotting, Inc.*, 3 BNA OSHC 2002, 2004 n. 4 (No. 504, 1976).

Here, the facts establish that [redacted] was in the zone of danger and exposed to the hazard of contact with energized lines. (AF Nos. 4, 13-15). *See generally, S&G Packaging Co.*, 19 BNA OSHC 1503, 1506 (No. 98-1107, 2001) ("[Employee's] injuries establish actual exposure"); *Phoenix Roofing, Inc.*, 17 BNA OSHC at 1079 (fact that an employee fell through a skylight established actual exposure to a fall hazard). [redacted] was electrocuted when he either came into contact with, or within 1.575 inches of, the energized line. (Tr. 156-57, 300-05, 458, 481, 495; AF No. 25). The Court finds employee exposure is established.

### The standard was violated

The cited standard requires an employer to implement additional safety precautions when an employee is working closer than the MAD to an energized part.

#### Employees were working within the Minimum Approach Distance

The MAD is the "closest distance an employee may approach an energized or a grounded object." 29 C.F.R. § 1926.968. The MAD is based on the formula set forth in Table V-2 of the

<sup>&</sup>lt;sup>90</sup> Because the electrical distribution system was being upgraded the requirements of the electrical construction standards apply. (AF Nos. 1, 4, 11). The construction standards are applicable to construction, alteration, and/or repair of electric transmission and distribution lines and equipment. *See* 29 C.F.R. § 1910.12(b).

standard<sup>91</sup> and consists of three primary components: a component for altitude adjustment (the "A"), a component for ergonomic movement (inadvertent movement) to account for errors in judging the approach distance (the "M"), and the electrical component (the "D"), which represents the size of the "air gap that must be present to prevent arc-over." 29 C.F.R § 1926.960 at Table V-2; *see also, Final Rule, Electric Power Generation, Transmission, and Distribution; Electrical Protective Equipment Standard,* 79 Fed. Reg. 20316, 20421-22, 20425, (April 11, 2014) (Final Rule, Electric Power Generation). (Tr. 455-62, 488).

The "ergonomic-movement component of the minimum approach distance is a safety factor designed to ensure that the employee does not breach the electrical component of the minimum approach distance in case he or she errs in judging and maintaining the minimum approach distance. . . the ergonomic-movement factor must be sufficient for the employee to be able to recognize a hazardous approach to an energized line and withdraw to a safe position so that he or she does not breach the air gap required for the electrical component of the minimum approach distance." *Final Rule, Electric Power Generation*, 79 Fed. Reg. at 20425.

OSHA determined that it was "necessary only to come too close to, rather than contact, an energized object to sustain an electric shock." *Id.* at 20428. Thus, to account for electric shock injuries related to arc-over, OSHA included the electrical component in the MAD. *Id.* "[T]he air gap that must be present to prevent arc-over. . . . [t]his gap is the electrical component of the minimum approach distance." *Final Rule, Electric Power Generation*, 79 Fed. Reg. at

<sup>&</sup>lt;sup>91</sup> The standard at 29 C.F.R. § 1926.960, **Working on or near exposed energized parts[.]** states: "(c) *Live work.* (1) *Minimum approach distances.* (i) The employer shall establish minimum approach distances no less than the distances computed by Table V–2 for ac systems or Table V–7 for dc systems." 29 C.F.R. § 1926.960(c)(1)(i).

20421-22. Table V-3 describes the electrical component for the 5.1 to 15.0 voltage energized line as .04 meters (1.575 inches) for phase-to-ground exposure and .07 meters for phase-to-phase exposure. 29 C.F.R. § 1926.960 at Table V-3.

The parties agree the MAD at this worksite was 2.14 feet. (Tr. 43; JPHS, p. 9,  $\P$  3). Of that, 1.575 inches represents the electrical component of the formula related to potential for shock from arc-over.<sup>92</sup> *See* 29 C.F.R. § 1926.960 at Table V-3. The Court finds that [redacted] was closer to an exposed, uninsulated and unguarded, energized part than the MAD permitted.

The work here required employees to be closer to the energized part than the MAD. For example, when [redacted] tied the line-hose-covered conductor to the cross-arm, he was necessarily closer than the MAD. Because there is no dispute that [redacted] encroached the MAD, the dispute at issue is whether Respondent complied with an exception provided at 29  $C = R_{\rm e} + 1026 \, 060(a)(1)(iii)$ 

C.F.R. § 1926.960(c)(1)(iii).

## Respondent did not meet the exceptions' requirements

The standard provides exceptions<sup>93</sup> that allow an employee to work closer than the MAD if the employee is insulated from the energized line by wearing rubber gloves and sleeves (exception at A) or the energized part itself is insulated (exception at B).<sup>94</sup> 29 C.F.R. § 1926.960(c)(1)(iii)(A)-(B).

The Exception at (A)

<sup>&</sup>lt;sup>92</sup> Respondent agrees that 1.57 inches is significant and argues that "the electrical component of 1.57 inches is the only relevant measurement in this case." (emphasis in original). (Reply Br., p. 3).

 $<sup>^{93}</sup>$  "Paragraphs (c)(1)(iii)(A) and (c)(1)(iii)(B) in the final rule recognize the protection afforded to the employee by an insulating barrier between the employee and the energized part. As long as the insulation is appropriate and is in good condition, current will not flow through the worker, thereby protecting the worker." *Final Rule, Electric Power Generation*, 79 Fed. Reg. at 20452.

<sup>&</sup>lt;sup>94</sup> Another exception is provided when employees are engaged in live-line barehand work. 29 C.F.R. § 1926.960(c)(1)(iii)(C). The employees were not engaged in this type of work; thus, this exception is not at issue here.

The exception at (A)—insulating the employee using rubber gloves and sleeves—applies

only when the employee has such control over the energized part the employee can keep it away

from the uninsulated parts of the employee's body. 29 C.F.R. § 1926.960(c)(1)(iii)(A).

As the preamble to this standard explains:

The provision requires additional insulation on the energized part when the employee does not have sufficient control to prevent contact with uninsulated parts of his or her body. When it is not possible for the employee to maintain sufficient control, the final rule provides several options: (1) Maintain the minimum approach distance . . .; (2) insulate the employee by installing an insulating barrier, such as a rubber insulating blanket, between the employee and the energized part . . .; or (3) install a rubber insulating line hose or a rubber insulating blanket on the energized part (per final paragraph (c)(1)(iii)(B)). Allowing the employee to work on an energized part that is not under the employee's full control, with rubber insulating gloves and sleeves as the only insulating barrier from the energized part, would not protect employees sufficiently.

Final Rule, Electric Power Generation, 79 Fed. Reg. at 20451.

Further, OSHA emphasized that control over the conductor includes the entire conductor, not just the section being worked on. OSHA provides an example to further explain that the entire conductor line must be considered. "[W]hen the employee takes the slack from a conductor under tension and must cut the conductor to remove any excess, the employer must consider whether the conductor . . . will break from the employee's control after it is cut. . . if the conductor is hanging down and is not under the employee's full control, the employer must ensure that the employee is protected from exposure to the lower portion of the conductor that could come too close to his or her leg." *Final Rule, Electric Power Generation*, 79 Fed. Reg. at 20421-22. This shows that a hazard of contact with unprotected areas of body must be considered when only gloves and sleeves are used.

The evidence shows that [redacted] was not in control of the energized line at the time of the accident, thus exception (A) does not apply.<sup>95</sup> [redacted] was leaning over the cross-arm tightening a bolt. (AF No. 24). Because he was not in control of the energized conductor, the exception at (A) is inapplicable to the exposure at issue here, and thus exception (B) applies.

### *The Exception at (B)*

The exception at (B) requires the energized part itself be insulated when an employee is within the MAD.<sup>96</sup> The standard defines "insulated" as "[s]eparated from other conducting surfaces by a dielectric (including air space) offering a high resistance to the passage of current." 29 C.F.R. § 1926.968.

The Secretary asserts the evidence demonstrates the cut end of the energized conductor was less than 1.575 inches from the open end of the line hose leaving the cut end of the energized line without insulation. (S. Br. 10-11).

Respondent asserts the energized conductor line was insulated by the combination of the rubber line hose cover that had been installed along the length of the conductor, plus the air gap distance at the open end. (R. Br. 27). Respondent asserts the cut end of the energized line had the needed distance from the open end of the rubber line hose to provide adequate insulation against electric shock. (R. Br. 29-30).

The Court rejects Respondent's assertion the conductor line was fully insulated for two reasons. First, the electrical injury to [redacted] proved there was an insufficient air gap distance.<sup>97</sup> The marks on [redacted]'s body indicate his back inadvertently made contact with

<sup>&</sup>lt;sup>95</sup> The long phase line here could droop down, swing or otherwise move and contact some part of [redacted]'s body, as it eventually did, other than his hands and arms that gloves, and sleeves protected.

<sup>&</sup>lt;sup>96</sup> Respondent has the burden of proving that it complied with the requirements of exception B. *See Cent. Fla. Equip. Rentals, Inc.*, 25 BNA OSHC 2147, 2150 (08-1656, 2016) (citations omitted).

<sup>&</sup>lt;sup>97</sup> Once inside the 1.575-inch insulation distance, air acts as a conductor permitting an arc to travel from the energized part through the air to the ground.

the energized line while he was tightening a bolt on the cross-arm. (AF No. 25). The end of the rubber line hose that had been next to [redacted] was charred where it had made contact with him. (Tr. 157-58, 164). Mr. Jinks explained the charring at the end of the line hose showed where the energized conductor made the connection to ground and electrocuted [redacted]. (Tr. 160). Further, Mr. Quoyle testified that the end of the energized conductor was pushed out of its protective covering when it contacted [redacted]. (Tr. 280). There was insufficient air distance to insulate the cut end of the energized conductor line.

Second, there is no credible evidence showing that [redacted] ever included an insulating air gap distance from the end of the line hose to the conductor's cut end. Neither Messrs. Jinks nor Bilodeau saw the exact placement of the open end of the line hose relative to the cut end of the energized conductor. Mr. Jinks stated the photographs show the cut end of the conductor line was closer than 1.575 inches to the end of the line hose. Further, Mr. Jinks stated the line hose "slides real easy over the conductor" and he explained there was nothing inside the line hose to "grip" or hold the conductor in place at a certain point inside the line hose. After [redacted] placed the rubber line hose over the conductor, Mr. Jinks lifted the middle conductor line several feet above [redacted]'s head and then lowered back down onto the cross-arm. This provided another opportunity for the conductor to slide within the line hose and not maintain an adequate insulating air gap, in addition to Mr. Jinks' conjecture that [redacted]'s body or his bucket may have caused the conductor to slide.

The Court finds that the cut end of the energized conductor was less than 1.575 inches from the end of the line hose at the time of [redacted]'s electrocution. The Court further finds the cut end of the conductor was not insulated either by air or anything else. The evidence shows that [redacted] covered the length of the energized conductor with a rubber line hose, but did not

- 54 -

install, or allow for, an insulating barrier (either rubber blanket or air gap) to prevent contact with the energized conductor's cut end. Thus, MasTec did not comply with the requirements of the exception at (B) and therefore, violated the cited standard. (Tr. 156-57, 300-05, 458, 481, 495). *An attempt to comply is not sufficient.* 

Respondent also asserts the cited standard is only violated when an employer makes no attempt to insulate the energized part. (R. Br. 28). Respondent relies on three cases to support its position. (R. Br. 28.) *See, L.E. Myers Co.,* 16 BNA OSHC 1037, 1047-48 (No. 90-945, 1993) (finding willful violation occurred where employees transferring lines pole to pole chose to not wear insulating gloves, ground the boom truck, or insulate the energized lines); *Davis H. Elliot Constr. Co.,* No. 04-0836, 2005 WL 1379393, at \*5 (O.S.H.R.C.A.L.J. June 1, 2005) vacated citation because Secretary had not proved the element of employer knowledge where an experienced lineman inexplicably did not wear available personal protective equipment or cover energized lines when working within the MAD and was electrocuted); *Kan. Power & Light Co.,* 5 BNA OSHC 1202, 1207 (No. 11015, 1977) (finding serious violation occurred where employees failed to maintain the required minimum distance from energized lines, while not wearing personal protective equipment or covering the energized lines).

The Court finds these cases do not support Respondent's argument. None of the cases set forth the proposition that a violation of the cited standard only occurs when an employer has done nothing to protect the employee. Further, the standard and the accompanying preamble description do not support Respondent's argument. To the contrary, the cited standard's purpose is to make sure "current will not flow through the worker" - incomplete insulation does not achieve that purpose. *See Final Rule, Electric Power Generation,* 79 Fed. Reg. at 20452. Respondent's argument, that an attempt to insulate the energized lines is sufficient to meet the

- 55 -

cited standard's requirements, is rejected.98

## Respondent's Notice Argument

Additionally, MasTec asserts that with this Citation OSHA is attempting to set forth a new requirement, that MasTec had no notice of. (R. Br. 36-37). Respondent asserts that OSHA is attempting to add a specific requirement for the location of a conductor line within a rubber line hose cover. (R. Br. 36-37).

The Court rejects Respondent's assertion. First, the Citation states that a violation occurred because the conductor "[was] not properly insulated and made contact with the employee." (Citation, p. 6). The Secretary did not set forth a new interpretation or requirement through the Citation.

Second, the cited standard is clear about the action required to abate the hazard—the energized part must be fully insulated when an employee is working within the MAD. *See Cent. Fla. Equip. Rentals, Inc.,* 25 BNA OSHC at 2151 (the issue is whether the employer "had fair notice of what actions are required under the standard"). The standard does not specify the exact method that must be used. MasTec is allowed "a certain degree of discretion" in its method to insulate the energized part. *See Id.* Nonetheless, the required compliance is clear. MasTec was on notice the energized part must be insulated. MasTec's notice argument is rejected.

The Court finds MasTec violated the requirements of the cited standard.

## **Knowledge**

The Secretary has the burden to establish the employer either knew, or with the exercise of reasonable diligence could have known, of the violative condition. *Contour Erection* &

<sup>&</sup>lt;sup>98</sup> An attempt at compliance can be considered when evaluating the severity of a violation. *See generally, Elliot Constr. Corp.*, 23 BNA OSHC 2110, 2117 (No. 07-1578, 2012) citing *A.E. Staley Mfg. Co.*, 19 BNA OSHC 1199, 1202 (No. 91-0637, 2000) (consolidated), *aff'd*, 295 F.3d 1341 (D.C. Cir. 2002) (conduct may not be found willful if employer "made a good faith effort to comply with a standard or eliminate a hazard, even though [its] ... efforts were not entirely effective or complete").

*Siding Sys., Inc.*, 22 BNA OSHC 1072, 1073 (No. 06-0792, 2007). It is not necessary to show that the employer knew or understood the condition was hazardous. *Phoenix Roofing, Inc.*, 17 BNA OSHC at 1079-80. The employer's knowledge is directed to the physical conditions that "form the basis of the alleged violation." *Cent. Fla. Equip. Rentals, Inc.*, 25 BNA OSHC at 2155.

Constructive knowledge can be established by showing that "with the exercise of reasonable diligence [the employer] could have known of the violative condition." *KS Energy Servs., Inc.*, 22 BNA OSHC 1261, 1265 (No. 06-1416, 2008) (citations omitted). "In assessing reasonable diligence, the Commission considers several factors, including an employer's obligations to implement adequate work rules and training programs, adequately supervise employees, anticipate hazards, and take measures to prevent violations from occurring." *S.J. Louis Constr. of Tex.*, 25 BNA OSHC 1892, 1894 (No. 12-1045, 2016).

There is no dispute Foreman Bilodeau was MasTec's foreman at the worksite. Under Commission precedent Mr. Bilodeau's knowledge as foreman is imputable to MasTec. *See Am. Eng'g & Dev. Corp.*, 23 BNA OSHC 2093, 2095 (No. 10-0359, 2012) (citations omitted) (knowledge is imputed through an employer's supervisory employee). With the record before it, the Court is unable to make a determination that Foreman Bilodeau did not know that [redacted] had improperly insulated the cut energized conductor. Foreman Bilodeau did not testify at the hearing.<sup>99</sup> Incredibly, MasTec's lead accident investigator never discussed where the conductor was inside the rubber hose at the time of the accident with Foreman Bilodeau, or any crew

<sup>&</sup>lt;sup>99</sup>There is no credible evidence as to whether Foreman Bilodeau actually saw where [redacted] placed the conductor within the rubber line hose. Mr. Jinks testified that Foreman Bilodeau said a day after the accident that the conductor was eight to twelve inches inside the line hose and that the conductor was further inside the line hose than when Mr. Spicer took his photographs. The Court finds this hearsay statement by Foreman Bilodeau to be self-serving and gives it little weight. There is insufficient evidence for the Court to find that the end of the conductor was at any time six or more inches inside the rubber line hose before the accident.

member. MasTec never measured how far back the conductor wire was inside from the opening end of the rubber hose after the accident. Although nearby, MasTec's lead investigator never visited the site where the accident occurred. These deficiencies in the way Mr. Quoyle conducted MasTec's accident investigation are telling.

As the qualified observer, the foreman was at the worksite to observe [redacted]'s overhead work. He could and should have seen what occurred at pole-top. He should have seen Mr. Jinks use an insulating rubber blanket to cover the one-foot of wire sticking out past his grip. In contrast, he should have seen [redacted] cut the conductor line much further away from the wire grip, resulting in a significantly longer "tail" than on Mr. Jinks' side of the pole. He should also have seen [redacted] cover the loose conductor tail with a rubber line hose instead of an insulating blanket. While watching [redacted]'s work that morning, Mr. Bilodeau could have known there was no measure taken to provide sufficient insulating air distance or other insulation for the energized conductor's cut end.

Foreman Bilodeau knew [redacted] was an inexperienced lineman who needed a lot of coaching to complete even simple lineman tasks. He should have been closely watching [redacted] work atop the concrete pole. Although sitting in his truck, there is no evidence that the foreman was not able to observe [redacted]'s work.<sup>100</sup> As an experienced foreman, Foreman Bilodeau knew the diameter of the conductor was such that the line hose could easily slide along the conductor line. The foreman knew the work process required the cut and macked-out conductor line to be lifted up several feet above [redacted]'s head and then lowered back down to the cross-arm. He should and would have seen [redacted] secure the bundle about 30 inches away from the cross-arm's center point after it was lowered by Mr. Jinks—so that the open end

<sup>&</sup>lt;sup>100</sup>Indeed, Respondent argues Foreman Bilodeau "had a 'plain view' to the linemen working from the bucket trucks so that he could coach the linemen if he saw a mistake." (R. Br., p. 25).

of the line hose was close to [redacted] as he tightened the bolt on the cross-arm. He should have observed that [redacted] had not covered the cross-arm with a rubber blanket. Foreman Bilodeau would and should have also known MasTec had no work rule or training on how to insulate the cut end of a conductor. The Court finds Foreman Bilodeau had constructive knowledge that [redacted] took inadequate steps to insulate the cut end of the energized conductor. He knew or could have known that [redacted] was well within the MAD to the uninsulated energized part in violation of the cited standard. The Court finds with reasonable diligence the foreman could have known of the violative condition and thus had constructive knowledge.

Respondent asserts that the hazardous condition occurred in less than two minutes, when Foreman Bilodeau had looked away and it is not reasonable to expect a supervisor to monitor an employee every minute. (R. Br. 32). The Court finds the hazardous condition did not solely exist in the one to two minutes that Foreman Bilodeau had looked away and [redacted]'s body contacted the energized conductor. The Court finds the violative condition—lack of adequate insulation for an energized line—began with [redacted]'s actions after cutting the energized line. [redacted] did not implement effective insulation for the cut end of energized conductor line. The rubber line hose provided insulation along the conductor's length; however, there was no insulating material or insulating air gap placed at the cut end. Here, the violative condition occurred when [redacted] did not implement measures to insulate the energized conductor's cut end during the work process that preceded [redacted]'s fatal contact with the energized conductor line. Respondent's assertion the violation only existed for one to two minutes is rejected.

Respondent also asserts it could not have reasonably anticipated [redacted] leaning over the cross-arm to tighten a bolt. The Court disagrees. Respondent is again focusing on the

- 59 -

moment of [redacted]'s accidental contact with the energized conductor. The violative condition here is the lack of insulation for the cut end of the energized conductor, which had occurred earlier. The foreman could have known the conductor was not secured within the line hose in such a way that air distance could not supply the needed insulation and there was no insulating material over the open end of the line hose. Without effective insulating protection, the conductor's cut end moved inside the line hose until it had pushed out to be less than 1.575 inches from the end of the line hose or close enough to make contact with [redacted]'s back. The requirements of the cited standard are specifically for the instance where an employee is working closer than the MAD to an energized part, which is what occurred here. Foreman Bilodeau knew [redacted] would be working inside the MAD, with the potential of accidental contact with a live wire. Had the cut end been effectively insulated, [redacted] would have been protected from electrocution when he inadvertently contacted the rubber line hose with the energized conductor too close to its end.

The Court finds Foreman Bilodeau, and thus the Respondent, had at least constructive knowledge of the violative, hazardous condition.

An employer can rebut the Secretary's showing of constructive knowledge if it can prove that it "had a work rule that satisfied the requirements of the standard, which it adequately communicated and enforced." *Aquatek Sys., Inc.*, 21 BNA OSHC 1400, 1401-02 (No. 03-1351, 2006) (citations omitted).

Cutting and splicing a conductor line so that it can be transferred to a new pole was a routine work process; however, MasTec had no work rule for effectively insulating the end of a cut energized conductor. MasTec had a general work rule that an employee must cover all energized parts with protective insulating equipment, such as line hoses and rubber blankets.

- 60 -

But, MasTec had no rule on how to properly select and use the equipment so that adequate insulation was achieved. MasTec asserts air distance was the insulation method used by [redacted], yet MasTec had no work rule or training on how to set-up and maintain an effective insulating air gap.

Here, lacking an applicable work rule or appropriate training to follow, [redacted] devised his own inadequate process to cut and cover the energized conductor. An employer cannot hope that an employee will devise his own adequate safety procedures for hazards. See Pride Oil Well Serv., 15 BNA OSHC 1809, 1815 (No. 87-692, 1992) ("An employer who has failed to address a hazard by implementing and enforcing an effective work rule cannot shift to its employees the responsibility for assuring safe working procedures."). An employer must provide work rules specific enough that an employee is able to comply with the standard's requirements to insulate an energized part. See, e.g., Beta Constr. Co., 16 BNA OSHC 1435, 1444 (No. 91-102, 1993) ("In order to be considered effective, an employer's work rule must be clear enough to eliminate employee exposure to the hazard covered by the standard [citation omitted] or, as we have said, must be 'designed to prevent the cited violation' [citation omitted] Generally speaking, the work rule must be sufficiently precise to implement the requirements of the standard or be functionally equivalent to it.") (citations omitted). Further, the Commission has held that the absence of an applicable work rule evinces a lack of reasonable diligence in the prevention of hazards. See N. Landing Line Constr. Co., 19 BNA OSHC 1465, 1474-75 (No. 96-0721, 2001).

MasTec had no work rule or training on how: 1) close an uninsulated cut conductor could be to a cross-arm; 2) close the cut end of the conductor could be to an uncovered end of a rubber hose; and 3) to effectively insulate the cut end of a conductor. To that extent, MasTec's

- 61 -

work rules are inadequate and do not rebut a finding of knowledge. The Court finds Foreman Bilodeau had constructive knowledge of the hazardous condition because he was the onsite, qualified observer and should and could have seen that the method used by [redacted] did not provide adequate insulation for the cut end of the energized conductor. Further, MasTec had no work rule or training for the task of cutting and covering a line so that is energized cut end was insulated. With reasonable diligence, Foreman Bilodeau could have known [redacted] was at risk to inadvertently contact the uninsulated energized conductor.

The Court finds the cited standard applies, [redacted] was exposed, its terms were violated, and Respondent had the requisite knowledge. Citation 1, item 1 is affirmed.

#### Unpreventable Employee Misconduct

The Secretary asserts that MasTec did not properly assert the affirmative defense of employee misconduct. (Tr. 284; S. Br. 17). As support, the Secretary asserts that during discovery MasTec had certified that no misconduct had occurred at the worksite. (S. Br. 17). The Secretary relies on an interrogatory response in which MasTec stated that "[s]ubject to and without waiving any objection, MasTec does not believe that any misconduct occurred" as support for this assertion. (Tr. 284; Ex. 2, RR to Interrogatory No. 10, at p. 19). This is the sole basis the Secretary provides the Court to support its contention Respondent cannot assert the unpreventable employee misconduct defense.

However, the above selected excerpt from Respondent's interrogatory response does not fully represent the tone of the response. In the paragraph preceding the selected excerpt, Respondent stated "MasTec objects to this discovery because it is premature as discovery in this case has just commenced and MasTec has not made any final determinations regarding the defenses." (Ex. 2, RR to Interrogatory No. 10, at p. 19). Two sentences following the selected excerpt, Respondent stated:

[t]he moment when the energized wire came into contact with [redacted], which was an unforeseeable accident, the Minimum Approach Distance was breached. Assuming for the sake of argument that misconduct did occur, it must have been attributable to [redacted]'s misconduct because [redacted] was properly trained, given proper PPE, work rules were in place, and those work rules were consistently enforced. (*Id.*).

As required by Commission Rule 34(b), the Respondent asserted the affirmative defense of unpreventable employee misconduct in its Answer.<sup>101</sup> (Answer, p. 5). Further, the Court finds, in reading the entirety of the interrogatory response, Respondent did not waive its right to assert the affirmative defense and that it had not abandoned this defense.

Finally, the Secretary asserts that even if the unpreventable employee misconduct defense is considered, it fails because MasTec did not have a work rule that addressed proper selection and implementation of insulation for the cut end of an energized conductor line.

Unpreventable employee misconduct is an affirmative defense that must be established by the employer. *Am. Eng'g & Dev. Corp.*, 23 BNA OSHC at 2096-97. To establish the defense of unpreventable employee misconduct, the evidence must show that the employer: (1) had a work rule designed to prevent the violative condition, (2) adequately communicated that work rule, (3) took reasonable steps to discover violations of the rule, and (4) effectively enforced the rule when it was violated. *Stark Excavating, Inc.*, 24 BNA OSHC 2218, 2220 (No. 09-0004, 2014)

<sup>&</sup>lt;sup>101</sup>(b) Answer. . . . (3) The answer shall include all affirmative defenses being asserted. Such affirmative defenses include, but are not limited to, "infeasibility," "unpreventable employee misconduct," and "greater hazard." (4) The failure to raise an affirmative defense in the answer may result in the party being prohibited from raising the defense at a later stage in the proceeding, unless the Judge finds that the party has asserted the defense as soon as practicable. 29 C.F.R. § 2200.34(b).

Respondent asserts it must have been employee misconduct because MasTec is a leader in the electrical distribution industry and safety is their primary goal. (R. Br. 4). MasTec further asserts that its safety program incorporates all the best practices of the industry so [redacted]'s behavior was an unforeseeable act of misconduct. (R. Br. 34-35). Respondent asserts that [redacted]'s action, in leaning over the cross-arm to tighten the bolt, after the conductor had been secured to the cross-arm, was not foreseeable because it was not routine procedure. Further, MasTec asserts it was not foreseeable the line hose would not provide adequate insulation for the cut conductor line. (R. Br. 4, 34).

For the reasons discussed below, the Court finds MasTec did not have adequate work rules or communicate its work rules, thus its affirmative defense of unpreventable employee misconduct fails.

#### MasTec did not have a work rule to prevent the violative condition

MasTec asserts that it had adequate work rules that included a rule that everything within arm's reach must be insulated, a rule that secondary points of contact must be insulated, and a rule that an employee must wear rubber gloves and sleeves at all times when working from the bucket. (Tr. 110-12, 132, 363-71; JEx. I at MasTecMI000228, MI000239). Respondent also asserts it had a rule that an employee must always be aware of his surroundings while working (situational awareness).<sup>102</sup> (Tr. 282, 347-48; R. Br. 35).

A work rule is only effective when it is specific enough to eliminate an employee's exposure to the hazard and must be precise enough to realize the cited standard's requirements. *See Beta Constr. Co.*, 16 BNA OSHC 1435, 1444 (No. 91-102, 1993); *Propellex Corp.*, 18 BNA

 $<sup>^{102}</sup>$  Mr. Quoyle testified the only possible work rule that might not have been followed was a loss of situational awareness. (Tr. 281-82).

OSHC 1677, 1682 (No. 96-0265, 1999) (finding the employer had provided general safety training but had not communicated the specific rule).

MasTec did not have a work rule for the hazard presented when working near the cut end of an energized conductor. (Tr. 296, 341-43; Ex. 2, RR RFA No. 15, pp. 32-33). MasTec's general rule that an employee must insulate energized parts, did not provide the necessary guidance for insulating the loose, cut end of an energized conductor wire at an open end of a line hose. (Tr. 290). It did not have a rule that specified a certain distance as to when a covering blanket was needed, where the energized conductor was at or near the open end of a line hose. (Tr. 437). There was also no rule on how far inside a line hose an energized part must be from a hose's open end. (Tr. 291). There was no work rule on how close an uninsulated cut conductor could be to a cross-arm. Further, MasTec had no rule in its Safety Handbook on how to implement an insulating air gap. MasTec did not provide any specific training to its employees that addressed these issues. (Tr. 151, 296, 473-74).

The Court finds MasTec did not have a work rule to address the hazard identified in the cited standard.

#### MasTec did not communicate a process or work rule to its employees for the cited hazard.

Employees received training when hired and periodically thereafter. A review of the training materials shows MasTec's training program was too general and lacked comprehensive guidance for some routine work processes. MasTec simply had a general instruction on how to place a line hose over a conductor. The rule only directed an employee on how to attach the line hose to the conductor through the self-locking lip that ran the length of the line hose; it did not address the need to insulate the cut, loose end-point of a conductor line when using a line hose. (Ex. F, MasTecMI000534).

There was no training on how to select the correct insulating material for MasTec's routine work process of splicing and transferring lines. Mr. Quoyle thought employees received hands-on training for the process to install rubber line hoses and rubber blankets, yet he provided no support for this assertion or to what work process this training applied. (Tr. 288, 291, 436-37). Mr. Quoyle confirmed there was no training or instruction on how to insulate the cut end of the energized conductor. (Tr. 287, 341).

Here, [redacted], in the absence of appropriate guidance, essentially devised his own inadequate process to cut and cover the energized conductor. "An employer who has failed to address a hazard by implementing . . . an effective work rule cannot shift to its employees the responsibility for assuring safe working procedures." *Pride Oil Well Serv.*, 15 BNA OSHC at 1815.

The necessity for training employees on the adequate way to insulate the cut end of an energized conductor line when moving lines to a new pole is illustrated by contrasting the method used by Mr. Jinks on his side of the pole as compared to the method [redacted] used. Mr. Jinks cut the conductor so that there a short amount, about one foot, of "loose" conductor past the wire grip and then wrapped the conductor's loose end with a rubber insulating blanket. On the other side, [redacted] cut the conductor so that there was a significantly longer tail of loose conductor, such that the six-foot line hose was insufficient to cover the conductor's tail and provide the necessary air distance insulation. [redacted]'s method allowed the cut end of the energized conductor to come too close to the end of the line hose where it ultimately caused the electrocution of [redacted].

MasTec did not communicate a process or work rule to employees for covering the cut end of an energized conductor line. The Court finds that MasTec did not provide the necessary

- 66 -

training or instruction for this work process and instead relied on a lineman to devise his own method, which was ineffective in this case.

#### MasTec took reasonable steps to discover safety violations

To demonstrate it had an effective safety program, an employer must show it implemented reasonable supervision to detect violations of its work rules. *Ragnar Benson, Inc.*, 18 BNA OSHC 1937, 1940 (No. 97-1676, 1999) (citations omitted). The DynaQ program required worksites to be routinely inspected for violations by a MasTec manager. (Tr. 345, 378; Ex. M). Mr. Quoyle stated that Foreman Bilodeau's crew had five or six DynaQ inspections in the months before the accident. (Tr. 380). A blank checklist that was used to conduct a DynaQ inspection was submitted into evidence, but no examples of completed forms were provided.<sup>103</sup> (Ex. M). The Secretary did not refute MasTec's claim that its DynaQ inspection program was routinely implemented and was an effective way to discover safety violations. Despite the scant evidence, the Court finds MasTec conducted reasonable oversight to discover safety violations at its worksites.

### MasTec's disciplinary program

As discussed above, MasTec had a disciplinary program for violations of safety rules. (Ex. N). Based on the documents submitted, it appears MasTec effectively enforced its rules with progressive disciplinary actions. Four of the six disciplinary actions in evidence resulted in an employee's suspension from work for two to five days. (Ex. N). None of the actions in the record documented a termination for a safety violation—however, most stated that a second safety violation could result in that employee's termination of employment. The Secretary presented no evidence to rebut MasTec's contention it effectively enforced its work rules. The Court finds that MasTec had a disciplinary program that was progressive and enforced.

<sup>&</sup>lt;sup>103</sup> The Court finds it troubling that no example of a completed DynaQ inspection was provided for the record.

MasTec has not proved the affirmative defense of unpreventable employee misconduct because it did not have a work rule or training that provided guidance to employees for insulating the cut end of an energized conductor. The Court finds the affirmative defense of unpreventable employee misconduct fails. Citation 1, Item 1 is affirmed.

### Serious Characterization

The Secretary classified the cited violation as serious in nature. A violation is classified as serious under section 17(k) of the Act if "there is a substantial probability that death or serious physical harm could result." 29 U.S.C. § 666(k). *See Pete Miller, Inc.,* 19 BNA OSHC 1257, 1258 (No. 99-0947, 2000) (Serious characterization requires a finding that "a serious injury is the likely result should an accident occur").

As demonstrated here, the hazard—contact with an energized part—can result in death or serious physical harm. The Court affirms the cited violation as serious in nature.

## Penalty Amount

"Once a citation is contested, the Commission has the sole authority to assess penalties." *Valdak Corp.*, 17 BNA OSHC 1135, 1138 (No. 93-0239, 1995) (citation omitted), *aff'd*, 73 F.3d 1466 (8th Cir. 1996). The penalty amount proposed in the Citation is given no deference. *See Hern Iron Works*, 16 BNA OSHC 1619, 1621 (No. 88-1962, 1994). Section 17(j) of the Act requires the Commission to give due consideration to four criteria in assessing penalties: the size of the employer's business, the gravity of the violation, the employer's good faith, and its prior history of violations. *Valdak*, 17 BNA OSHC at 1138.

The Secretary proposed the maximum penalty of \$7,000 for this serious Citation.<sup>104</sup> 29 U.S.C. § 666(b). The gravity was calculated as high severity and a greater probability. (Tr. 472). Because MasTec had over 250 employees it was too large to qualify for a penalty discount for size. (AF No. 5). OSHA provided no discount for good faith because of the severity of the accident. Because there was no record of prior inspections, there was no discount or increase provided for inspection history. (Tr. 472-73). The Court finds the Secretary has given due consideration to all the necessary criteria established by the Act.

The Court agrees that no reductions to the statutory maximum are appropriate. The Court assesses a penalty of \$7,000 for Citation 1, Item 1.

## **Findings of Fact and Conclusions of Law**

All findings of fact and conclusions of law relevant and necessary to a determination of the contested issues have been made above. See Fed. R. Civ. P. 52(a). All proposed findings of fact and conclusions of law inconsistent with this decision are denied.

#### ORDER

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

Citation 1, item 1, alleging a serious violation of 29 C.F.R. § 1926.960(c)(1)(iii)(B) is

AFFIRMED, and a penalty of \$7,000 is assessed.

<u>/s/</u> The Honorable Dennis L. Phillips U.S. OSHRC Judge

<sup>&</sup>lt;sup>104</sup> OSHA established new penalties effective August 1, 2016 for violations occurring after November 2, 2015, pursuant to the Inflation Adjustment Act of 2015, Pub. Law 114-74 § 701, 129 Stat. 559-602 (2015). 81 Fed. Reg. 43430 (July 1, 2016). The violation in the instant case occurred prior to November 2, 2015, thus the statutory maximum of \$7,000 applies here.

Dated: May 21, 2018 Washington, D.C