



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

SECRETARY OF LABOR,

Complainant,

v.

OSHRC Docket No. 12-1496

ACTION ELECTRIC COMPANY,

Respondent.

ON BRIEFS:

Steven W. Gardiner, Attorney; Charles F. James, Counsel for Appellate Litigation;  
Joseph M. Woodward, Associate Solicitor of Labor for Occupational Safety and Health;  
M. Patricia Smith, Solicitor of Labor; U.S. Department of Labor, Washington, DC  
For the Complainant

J. Larry Stine, Esq.; Mark A. Waschak, Esq.; Wimberly, Lawson, Steckel, Schneider &  
Stine, P.C., Atlanta, GA  
For the Respondent

**DECISION**

Before: ATTWOOD, Chairman; and MACDOUGALL, Commissioner.

BY THE COMMISSION:

After an employee was fatally struck by a several-ton counterweight at a steel mill, the Occupational Safety and Health Administration issued Action Electric Company a serious citation alleging a violation of the lockout/tagout (LOTO) standard, 29 C.F.R. § 1910.147(f)(3)(ii)(D).<sup>1</sup> The judge vacated the citation, concluding that the requirements of the cited LOTO standard did not apply.

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<sup>1</sup> The cited provision requires “[e]ach authorized employee” to “affix a personal lockout . . . device to the group lockout device . . . when he or she begins work, and . . . remove those devices when he or she stops working on the machine or equipment being serviced or maintained.” 29 C.F.R. § 1910.147(f)(3)(ii)(D). The citation included a second item that was withdrawn by the Secretary.

On review, the two Commission members are divided regarding the applicability of the LOTO standard—the only remaining issue in this case.<sup>2</sup> To resolve this impasse, the members agree to vacate the direction for review, thereby allowing the judge’s decision to become the final appealable order of the Commission, with the precedential value of an unreviewed administrative law judge’s decision. *See, e.g., Texaco, Inc.*, 8 BNA OSHC 1758, 1760 (No. 77-3040, 1980) (consolidated); *Rust Eng’g Co.*, 11 BNA OSHC 2203, 2205 (No. 79-2090, 1984); *Safeway, Inc.*, 20 BNA OSHC 1021, 1023 (No. 99-0316, 2003); *Timken Co.*, 20 BNA OSHC 1070, 1072 (No. 97-0970, 2003). *See also* 29 U.S.C. §§ 659(c), 660(a)-(b), 661(i). Accordingly, the direction for review is vacated. The separate opinions of the two participating Commission members follow.

SO ORDERED.

/s/ \_\_\_\_\_  
Cynthia L. Attwood  
Chairman

Dated: July 6, 2016

/s/ \_\_\_\_\_  
Heather L. MacDougall  
Commissioner

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<sup>2</sup> The judge found that there was no dispute regarding the noncompliance, exposure, and knowledge elements of the Secretary’s prima facie case. *See Safeway Store No. 914*, 16 BNA OSHC 1504, 1508 (No. 91-373, 1993) (“A violation . . . is established whenever the following four elements exist: (1) the standard applies to the cited conditions, (2) the employer’s conduct does not conform to the requirements of the standard, (3) employees are exposed to the cited conditions, and (4) the employer knew or could have known of those conditions.”). Action does not challenge this finding on review.

## **Separate Opinion of Chairman Attwood**

ATTWOOD, Chairman.

This case is not novel. It rests on well-established legal principles underlying an employer's obligation to follow the requirements of OSHA's lock-out/tag-out (LOTO) standard to protect its own servicing and maintenance employees from the hazards of unexpected energization.

### **Factual Background**

At the Gerdau Ameristeel mill in Cartersville, Georgia, a several-ton counterweight fatally struck an employee of contractor Action Electric Company. The Occupational Safety and Health Administration issued Action Electric a serious citation under a provision of the LOTO standard, 29 C.F.R. § 1910.147(f)(3)(ii)(D), based on the company's alleged failure to ensure that its employees affixed their lockout devices to a group lockbox before performing maintenance work.

The Gerdau mill processes scrap metal into steel components used in construction. It melts and recasts the metal and sends it through a rolling mill, which produces individual pieces of steel called "billets." The billets, which have been heated to 1600 degrees, are then sent across a 325-foot-long and 100-foot-wide "cooling bed."<sup>1</sup> A series of grooved metal rakes move up and down to "walk" the billets across the bed while 110 rotary fans—bolted to a rail 4 to 6 inches below the rakes—blow air across the billets to cool them. The rakes are moved by counterweights (attached to rotating shafts, drive chains, gear boxes, and large drive motors) weighing several tons each. The counterweights make 360-degree, clockwise revolutions and are located on the underside of the cooling bed in an area known as the "basement," along with the fans, drive motors, chains, rotating shafts, gear boxes, and other cooling bed components. The cooling bed basement has a lighted, designated walkway down its center—demarcated by chains strung along both sides—that Gerdau uses when it inspects the underside of the cooling bed. The walkway is the only safe place in the basement when the cooling bed is operating.

On the day of the accident, the cooling bed had been shut down, and Action was planning to replace the final three of the seventeen fans Gerdau hired it to service. The other fans had been replaced by Action on two previous occasions. That morning, Gerdau's cooling bed

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<sup>1</sup> The mill also contains equipment that is not part of the cooling bed, including the rolling mill, a reheating furnace, rougher, straightener, and stacker-piler.

maintenance technician told the Action leadman on the project that he would—pursuant to Gerdau’s mandatory LOTO procedure and consistent with his actions on the two prior occasions—lock out the cooling bed and meet the leadman near the basement’s north entrance where the group lockout box was located. According to the administrative law judge, the maintenance technician was gone for less than 40 minutes. During that time, the leadman complied with Gerdau’s contractor requirement to fill out a Gerdau work authorization permit. But he failed to wait, as required, for Gerdau’s technician to complete the lockout process—lock out the cooling bed; place key(s) to the locked-out cooling bed components in the lock box; place personal lock on the box; and sign the form verifying that the lockout procedure was complete and Action’s work could begin. And neither the leadman, nor any of the Action employees he supervised that day, affixed a personal lock to the group lock box—another step Gerdau required.<sup>2</sup> The leadman, who knew lockout had not been completed, and an Action apprentice then entered the basement, left the designated walkway, and walked about 24 feet into the workings of the cooling bed to the area where the fans were located. Unaware that the two Action employees were in the basement, Gerdau’s technician started the cooling bed lockout procedure, which required relieving the stored energy in the counterweights by moving them to their deenergized position. When he did so, one of the counterweights fell from its resting position of one o’clock to its de-energized position of six o’clock, fatally striking the apprentice and coming within inches of hitting the leadman.

The judge vacated the citation, concluding that the requirements of the cited LOTO standard, 29 C.F.R. § 1910.147(a)(1)(i), do not apply because “Action’s servicing and maintenance work was only on the fans,” the “injury . . . resulted from an . . . adjacent counterweight,” and “[t]here [wa]s no . . . expos[ure] to the unexpected energization or release of hazardous energy from the fans.” In addition, the judge found that the “Action employees were not engaged in servicing and maintenance work” at the time of the accident because they were simply “in the basement [to] discuss[] their . . . work on the fans.”

### **Discussion**

This case poses a simple question—what “machine” was being serviced? The LOTO standard applies to “the servicing and maintenance of machines and equipment in which the

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<sup>2</sup> Under the LOTO standard, when performing group servicing or maintenance, group lockout devices shall be used as specified in 1910.147(c)(4). 29 C.F.R. § 1910.147(f)(3)(ii).

*unexpected* energization or start up of the machines or equipment, or release of stored energy, could cause injury to employees.” 29 C.F.R. § 1910.147(a)(1)(i). Its purpose is to protect those employees who are engaged in servicing and maintenance and others who are in the vicinity. The factual record in this case demonstrates that Action’s employees were servicing a complex machine—the *cooling* bed—that necessarily contains many component parts, including fans, rakes, drive chains, motors, rotating shafts, and counterweights.<sup>3</sup> Thus, contrary to the judge’s analysis and that of my colleague, before servicing of the cooling bed’s fans could begin, lockout was required of all cooling bed components because the cooling bed posed LOTO hazards to the workers performing the servicing.<sup>4</sup> And this included the several-ton counterweight at issue—which no one disputes contained stored energy that, when released, caused it to fall and fatally strike Action’s apprentice employee.<sup>5</sup>

“Machine” is commonly defined as “an apparatus, made of organized, interacting parts, which takes in some form of energy, modifies it, and delivers it in a more suitable form for a desired function.” *The New Lexicon Webster’s Dictionary of the English Language* 595 (1987). Consistent with this definition, the LOTO standard’s preamble contemplates that “machines” will have myriad “parts,” and recognizes that “[o]nce [a] machine . . . has been stopped, there remains the potential for employee injury from the unanticipated movement of a *component* of the machine . . . .” Control of Hazardous Energy Sources (Lockout/Tagout), 54 Fed. Reg. 36,644, 36,647 (Sept. 1, 1989) (final rule) (emphasis added). This fundamental concept of a

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<sup>3</sup> My colleague suggests that by identifying the cooling bed as the machine being serviced, I have “pre-ordained” the result in this case. On the contrary, it is the overwhelming factual evidence contained in the record—and detailed below—that ordains the conclusion that the fans are, indeed, part of the cooling bed.

<sup>4</sup> Gerdau, however, left to Action the task of locking out the fans themselves simply because Action needed to lock and unlock them as work progressed, so it could check if repairs were successful.

<sup>5</sup> Although this case is focused on the hazard posed by the counterweights, the other components of the cooling bed also posed hazards that required LOTO procedures. Thus, as the attached Exhibit C-1L illustrates, the fans were within a few inches of the rakes, above the counterweights, and proximate to the chains that turned the drive shafts on which the counterweights were mounted. Moreover, the fact that these other components had been shut down, and, unlike the counterweights, did not contain any residual or stored energy, is irrelevant to the LOTO analysis. If a machine poses LOTO hazards, it must be shut down, the machine isolated from all energy sources, lockout or tagout devices applied, residual energy released, and lockout verified. 29 C.F.R. § 1910.147(d).

machine being made up of component parts is also reflected in one of the preamble’s examples of accidents “typical of these [LOTO] hazards and demonstrat[es] the applicability of the pertinent provisions in the final standard”:

The hogger had been shut down, but the conveyor feeding the hogger had not been. The employee climbed onto the machine, fell onto the conveyor, was pulled into the hogger opening, and was fatally crushed.

54 Fed. Reg at 36,646. In this example, an employee was working on one machine component—a hogger—when another component—a conveyer, which could independently move materials without the hogger operating—caused the injury. OSHA considered these components part of a single “machine” for LOTO purposes.<sup>6</sup>

As noted above, the cooling bed also has a number of component parts, and they are even more interconnected than those in the preamble’s example. These include rakes, counterweights, and fans that are not only physically connected to the cooling bed but are also functionally integrated to simultaneously interact and accomplish a single goal—the cooling and moving of steel billets. Indeed, the cooling bed cannot achieve its function unless the rakes, motors, drive chains, rotating shafts, counterweights, and fans are operating simultaneously. These components serve no useful purpose if operated independently of one another—there is no point in moving hot steel billets with the rakes, counterweights, and other component parts if the fans are off, and likewise no point in running the fans if the counterweights are not rotating to move billets across the rakes.<sup>7</sup> This fact is echoed by Chad Hughes, Gerdau’s cooling bed maintenance technician, who described the machine as follows:

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<sup>6</sup> My colleague attempts to distinguish the waste hogger example on two grounds. First, she asserts that “[t]he final rule [preamble] does not identify” the waste hogger “as an example of a complex, integrated machine made up of several parts.” But the example itself explicitly identifies two discrete parts of one machine to which the final rule specifically makes the LOTO standard applicable. 54 Fed. Reg. at 36,646. Second, she points out that the hogger in the example was operating, whereas the cooling bed here was not. But this is immaterial; the critical point illustrated by the waste hogger example is that one component—the conveyor—needed to be locked out in order to protect the employee who was working on another component—the hogger. *See id.* (identifying the waste hogger example as a “[f]ailure to document and implement an effective control procedure”).

<sup>7</sup> The judge completely misapprehends the meaning of “machine” in this context, and his characterization of the cooling bed as a “process that contains separate and distinct machines and equipment” that “function separately to move and cool the heated metal across the bed” is belied by the evidence.

Basically, you have the hot [metal] bars [billets] leaving the rolling mill. [The metal] comes down on a series of rolls. Then, it's kicked down onto what we call the rakes. The rakes, as the bars progressively add up to the cooling bed, it walks them across the bed, cools them underneath with air [from the fans], and then they go to the transfer chains on the other side of the bed and transfer it off, and then another roller conveyor into the straightener where they're straightened.

Additionally, Gerdau safety manager Ecky Hall testified that the cooling bed components “act as one unit” and were “all part of one big system,” and Hughes further stated that “[t]he [other cooling bed] equipment overlaps in so many different ways with the fans,” such that “[b]asically the equipment acts as one.” As one machine, it comes as no surprise that Gerdau’s practice—which Action was required to follow—is to lock out the *entire* cooling bed whenever maintenance is performed on any one of its components.<sup>8</sup> In fact, the fatality here occurred when Hughes was in the process of de-energizing/locking out the cooling bed’s counterweights and other components so that the Action employees could safely enter the cooling bed basement, leave its designated walkway (the only safe place in the basement), and access the cooling bed’s fans.<sup>9</sup> Both the testimony of Gerdau’s employees and its own lockout procedure plainly demonstrate that the cooling bed is a single “machine[.]”

Action—noting the cooling bed’s size and complexity—would have the Commission hold that the bed is nothing more than a collection of many “machines,” when, in fact, the size and complexity of the cooling bed counsels in *favor* of it being one “machine.” Applying the LOTO standard only to small machines with few parts would have the absurd result of precluding its application where the hazard of unexpected energization may be greatest. *See Unarco Commercial Prods.*, 16 BNA OSHC 1499, 1502 (No. 89-1555, 1993) (“It is well established that a . . . standard must be construed so as to avoid an absurd result.”). As the Commission has consistently acknowledged, the LOTO standard addresses “complex equipment

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<sup>8</sup> In attempting to show that the fans and counterweights are different machines, my colleague notes that Gerdau’s “written [LOTO] procedure [for the cooling bed does not] mention the fans.” Nonetheless, Gerdau’s consistent practice of locking out the entire cooling bed in order to service the fans shows that the company considered these components to be part of one machine.

<sup>9</sup> It is irrelevant whether, as my colleague puts it, Hughes “contemplated the hazard presented by the lowering of the counterweights during the lockout process.” His employer clearly “contemplated” that hazard because Gerdau included the lowering of the counterweights in its LOTO procedure—a procedure that it developed in part to protect employees specifically from the movement of the counterweights. Gerdau also contemplated that this was a hazard to anyone who deviated from the designated walkway beneath the cooling bed, as evidenced by its warning sign at the basement entrance: “Authorized Personnel Only.”

. . . serviced and maintained by numerous employees extending across multiple workshifts,” particularly in the group LOTO context, as was the case here.<sup>10</sup> *Exelon Generating Corp.*, 21 BNA OSHC 1087, 1089 (No. 00-1198, 2005). In other words, the “more complex” the machine, the “more comprehensive [the LOTO] procedures may need to be.” 29 C.F.R. § 1910.147 app. A. *See also Gen. Motors Corp.*, 22 BNA OSHC 1019, 1027 (No. 91-2834E, 2007) (consolidated) (noting inadequacy of LOTO procedure for “the plant’s more complex equipment,” which included “very complex machines” one of which—the “machine” at issue—“contained ‘15 or 16 automatics, 165 weld guns, probably 300 limit switches [and] over 150 disconnects,’ and for which at least four safety locks were necessary to lock it out.”) (quoting case record); *Dayton Tire, Bridgestone/Firestone*, 23 BNA OSHC 1247, 1258-59 (No. 94-1374, 2010), *aff’d in relevant part*, 671 F.3d 1249 (D.C. Cir. 2012) (noting the extraordinary complexity of the machines to which LOTO applied, which were various sizes and configurations and contained different combinations of energy sources).

A fundamental purpose of the LOTO standard is to eliminate the unexpected energization or release of stored energy that results when one employee is unaware of another employee’s presence within a machine—a circumstance OSHA has determined to be more likely to occur with machines that are larger and more complex:

An accident can . . . occur when another person who is not necessarily involved with the maintenance or servicing operation causes the activation of the machine or equipment being serviced. This can occur when a person . . . starts it, without knowing someone else is performing maintenance or service on it. *This . . . type of accident is more apt to occur when the machine or equipment is large and/or complex*, and the employee who is conducting the servicing activity is at a part of the system which is some distance from or not visible from the controls.

54 Fed. Reg. at 36,647-48 (emphasis added); *see also* 54 Fed. Reg. at 36,648, 36,679 (stating that “when the machine or equipment is large and/or complex, . . . [t]he generally accepted best

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<sup>10</sup> My colleague—in asserting that Action’s “work [was] on the fans only”—notes that “another contractor” was “servicing the cooling bed.” Aside from the fact that the record does not establish what the employee from this other contractor was doing, his presence would not preclude Action from being required to comply with the LOTO standard. On the contrary, it would be an additional basis for finding applicability. Even under my colleague’s conception of the “cooling bed” as a separate machine from the fans, the two Action employees would have been “affected employee[s] . . . whose job[s] require[d] [them] to work in an area in which such servicing or maintenance is being performed,” thus requiring Action to comply with the LOTO standard to protect its employees from the LOTO hazards posed by the other contractor’s work. 29 C.F.R. § 1910.147(b).

means to minimize the potential for inadvertent activation is to ensure that all power to the machine or equipment is isolated, locked or blocked,” and further referencing “large machine[s] or complex system[s] of equipment”). Here the size, configuration, and complexity of the cooling bed required Action’s employees to enter the basement and leave the designated walkway to access the fans. This put them out of sight of Hughes, who was preparing to lock out the counterweights and other component parts. As the record shows, Hughes, “couldn’t . . . keep [his] eye” on the cooling bed while performing the lockout procedure in various locations in and around it. And he did not know where the Action employees were during this time, thus exposing them to the hazards posed by the stored energy in the counterweights, as well as the hazards posed by the possible activation of the other cooling bed component parts for which the LOTO process had not yet been completed.

Action, along with my colleague, also argues that characterizing the cooling bed as one machine for LOTO purposes would “wreak havoc” by “reducing entire factories to fictional ‘single units,’ . . . [under] a stretch-to-fit ‘gotcha’ theory.” This, frankly, is preposterous. The cooling bed rakes, motors, drive chains, rotating shafts, counterweights, and fans are physically and functionally integrated in the same sense as the components of an engine or any other device traditionally understood to be a “machine.” To properly cool steel billets, the rakes must move up and down in a coordinated fashion, which they cannot do unless the counterweights move beneath them. At the same time, the fans—of which there are more than 100 interspersed among these other components—must blow the requisite volume of air through the rakes and across the billets to facilitate cooling.<sup>11</sup> By contrast, the mere fact that the contents of a factory all

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<sup>11</sup> My colleague makes much of the fact that the fans and counterweights “are not connected or attached to each other” and have separate electrical connections and lockouts. In a large, complex machine, a lack of such *direct* connections between components is hardly surprising and does not provide a meaningful basis for determining whether something is part of the same “machine” for LOTO purposes. In fact, the close physical proximity and need for simultaneous operation of the fans, rakes, drive motors, chains, and counterweights plainly reflects their complete functional integration. Indeed, when Hughes described Action’s work on the fans, he stated that “you’ve got rakes above you, you’ve got the job shafts behind you, and the counterweights are directly right there by you. You physically have to crawl up in between the rakes in order to remove the fans.” Additionally, given the size and complexity of the cooling bed, it is similarly unsurprising that the fans, counterweights, and other components would have separate electrical connections and lockouts—one cannot reasonably expect such a machine to have one, all-encompassing lockout switch. *See, e.g., Gen. Motors Corp.*, 22 BNA OSHC at 1027 (applying LOTO to “machine” that contained numerous automatics, weld guns, limit

contribute in some way to the manufacture of products is hardly sufficient to make them a single “machine” for LOTO purposes. *Dayton Tire*, 23 BNA OSHC at 1258-59 (affirming citation for failure to have machine-specific LOTO procedures for each of the types of extraordinarily complex yet distinctly different machines located in employer’s tire manufacturing plant). Indeed, in a factory with lathes, milling machines, and drill presses, each machine is neither physically nor functionally integrated with the others—in fact, one can be used while others are idle. And it is by no means (as my colleague puts it) “impossible to discern where a machine begins and ends”—Gerda had no problem discerning the beginning and end of the cooling bed when it required lockout of the entire machine in order to service the fans; nor did Gerda find it necessary to shut down and lockout the entire mill in order to perform maintenance on the cooling bed.

Finally, the Secretary’s interpretation of what constitutes a “machine” under the LOTO standard has been entirely consistent over time. An OSHA memorandum from 1999 distinguishes between an “interconnected . . . machine”—to which LOTO applies—and “adjacent machine[s] . . . in the normal production mode of operation”—to which the machine guarding standard applies.<sup>12</sup> Memorandum from Richard E. Fairfax, Director of Compliance Programs, to Michael Connors, Regional Administrator (Oct. 5, 1999). OSHA’s enforcement directive for the LOTO standard makes the same distinction, stating that the “standard does not apply to equipment or machinery that is not the subject of the servicing and maintenance activity

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switches and disconnects, and required at least four safety locks to lock it out); *Dayton Tire*, 23 BNA OSHC at 1258-59 (applying LOTO to “extraordinarily complex” machines with “different combinations of energy sources”).

<sup>12</sup> I disagree with my colleague’s suggestion that the machine guarding standard, rather than LOTO, applies here. Like the machine components in the LOTO preamble’s waste hogger example—which OSHA presented as an illustration of the need for LOTO, not guarding—the fans and counterweights in this case are physically and functionally intertwined. Thus, the hazard posed by the movement of the counterweights or any of the other components of the cooling bed is precisely the hazard the LOTO standard was designed to address. Moreover, the portion of the LOTO standard preamble that my colleague quotes at length has nothing to do with situations such as we have here, when servicing and maintenance is performed while the machine is *shut down*. The quoted discussion quite explicitly relates to “servicing and/or maintenance which takes place *during ‘normal production operations.’*” 54 Fed. Reg. at 36,646. The quoted section makes clear that in those circumstances the guarding and LOTO standards dovetail to assure that employees are protected by one or the other standard. It relates not at all to the circumstances of this case.

and that functions independently from, and is not a sub-system of, the machine/equipment being serviced or maintained.” OSHA Instruction CPL 02-00-147, Feb. 11, 2008, Chap. 1 at 10 (emphasis added). Here, as discussed, the counterweights, rakes, rotating shafts, drive chains, gear boxes, large drive motors, and fans serve no useful purpose if operated independently of one another.<sup>13</sup> They all operate as sub-systems of the cooling bed.

In light of the foregoing, I would conclude that the Secretary’s interpretation of § 1910.147(a)(1)(i) here—that the cooling bed was the pertinent “machine”—is reasonable and entitled to deference. See *Martin v. OSHRC* [“*CF&I Steel Corp.*”], 499 U.S. 144 (1991) (holding that deference is accorded to Secretary’s reasonable interpretation of ambiguous OSHA regulation); *Union Tank Car Co.*, 18 BNA OSHC 1067, 1069 (No. 96-0563, 1997) (stating that the Commission “must defer to the Secretary’s reasonable interpretation of an ambiguous regulation that otherwise sensibly conforms to the purpose and wording of the regulation, taking into account whether the Secretary has consistently applied the interpretation embodied in the citation . . . .”) (internal quotation marks and citation omitted).

The only remaining question is whether Action’s work at the time of the alleged violation constituted “servicing and maintenance.” 29 C.F.R. § 1910.147(a)(1)(i). The standard defines “[s]ervicing and/or maintenance” as follows:

Workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying, and maintaining and/or servicing machines or equipment. These activities include lubrication, cleaning or unjamming of machines or equipment and making adjustments or tool changes, where the employee may be exposed to the *unexpected* energization or startup of the equipment or release of hazardous energy.

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<sup>13</sup> My colleague devotes considerable attention to a non-precedential decision in which the two participating commissioners—in separate opinions—agreed that the cited “traverser” and “teeming cars” were not subject to the LOTO standard because they operated independently, yet vacated the direction for review because they could not agree on the disposition of an alternative charge. See *Timken Co.*, 20 BNA OSHC 1070 (97-970, 2003) (“*Timken I*”). But there is a later, also non-precedential decision—*Timken II*—in which one of the two sitting commissioners distinguished the two *Timken* cases, noting that in *Timken I* the “traverser” was completely independent of railcar repairs performed on a separate track and therefore not covered by LOTO, while in *Timken II* “all of the machinery and equipment worked together to produce tubes from steel billets [and] [i]t is undisputed that it all should have been locked out . . . .” *Timken Co.*, 20 BNA OSHC 2034, 2045 n.4 (No. 97-1457, 2004). And the OSHA Directive on which my colleague also relies merely distinguishes between interconnected and adjacent equipment—the former requiring application of LOTO and the latter not. See CPL 02-00-147. This only begs, rather than answers, the question.

29 C.F.R. § 1910.147(b). Action acknowledges in its brief on review that its employees were “view[ing] the fans they were going to replace . . . to see where the last worker had stopped working on the fan wiring so [they] could know where to start.” And the Action leadman agreed that looking at the fans to see where the last worker had left off was a “necessary” and “integral part of the job.” Thus, Action’s employees were “inspecting”—that is, “view[ing] closely in critical appraisal,” and “examin[ing] formally, e.g. for completeness or quality”—the cooling bed. *Webster’s New Collegiate Dictionary* 592 (1979); *The New Lexicon Webster’s Dictionary of the English Language* 501 (1987); *Gen. Motors Corp.*, 22 BNA OSHC at 1041-42 (holding that “observing or inspecting equipment when it is stationary” is a servicing and maintenance activity to which LOTO applies, and affirming violation for failure to utilize LOTO when exposed employee was performing servicing and maintenance activity while equipment was stationary and for which deenergization and use of LOTO were possible but not used). I agree with the Secretary’s statement in his brief on review that this type of “visual observation of equipment that is reasonably related to hands-on servicing and maintenance, and puts employees within the zone of danger . . . constitutes ‘inspecting’ activity within the meaning of” the LOTO standard.<sup>14</sup>

In these circumstances, the LOTO standard requires following a mandated sequence of “elements and actions”: machine shutdown, energy isolation; application of the necessary lockout devices; restraint and rendering safe any hazardous stored or residual energy; and verification that the isolation and deenergization of the machine is complete. 29 C.F.R. § 1910.147(d)(2)-(6); see *Gen. Motors Corp.*, 22 BNA OSHC at 1040-41. As noted, however, Action’s leadman did not obtain Gerdau’s required verification that the lockout procedure was complete, nor did he affix his lock to the group lockbox, as the standard requires. Accordingly, Action was in violation of the standard’s requirements.

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<sup>14</sup> My colleague’s contention that the activity here was not servicing and maintenance because “the Action leadman was pointing out the three remaining fans that needed to be replaced . . . and said ‘that one, that one, and that one’ ” is inaccurate. The transcript reveals that the quoted statement was made by Action’s counsel during his opening remarks at the hearing, which is not evidence. Moreover, according to the leadman, just prior to the accident he was discussing the scope of work he and the apprentice would be performing, which fans would be replaced, and how the replacement would be done, and agreed that they “couldn’t actually perform the replacement of the fans without having done that activity first.”

For all of the foregoing reasons, I would find that the LOTO standard applies here, and I would affirm the serious citation item at issue and assess the \$7,000 proposed penalty.<sup>15</sup>

Dated: July 6, 2016

/s/ \_\_\_\_\_  
Cynthia L. Attwood  
Chairman

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<sup>15</sup> Action did not dispute characterization or penalty before the judge, nor does the company do so on review. *See KS Energy Servs., Inc.*, 22 BNA OSHC 1261, 1268 n.11 (No. 06-1416, 2008) (affirming alleged characterization and assessing proposed penalty where characterization and penalty were not in dispute).

# **Attachment: Exhibit C-1L**



## Separate Opinion of Commissioner MacDougall

MACDOUGALL, Commissioner:

My colleague's separate opinion misreads the LOTO standard to the extent new obligations would be created for employers that the standard does not impose or contemplate. By her assertion right from the start that "Action's employees were servicing a complex machine—the *cooling* bed—that necessarily contains many component parts," the opinion charts a pathway to a pre-ordained result. Its fundamental flaw is that Action's employees were not servicing the cooling bed; indeed, another contractor was hired to do so at the same time Action was engaged in its work—on the fans only. For the reasons detailed below, I would agree with the judge that the cited standard is inapplicable and, thus, vacate this citation item.

### Factual Background

Gerdau operates a steel rolling mill in Cartersville, Georgia, where scrap metal is recast into structurally useful forms. Action was working as a contractor at the mill when a fatal accident involving one of its employees occurred. As part of the recasting process at the Gerdau mill, steel is melted and formed into "billets"—lengths of metal—which then travel across a "cooling bed." The cooling bed is approximately 325 feet long and 100 feet wide with a series of grooved metal rakes that move up and down to "walk" the billets across the bed. The rakes are moved by counterweights, spaced about every 15 feet along the length of the cooling bed, which weigh several tons each. The rake counterweights make 360-degree, clockwise revolutions and are located beneath the cooling bed in an area known as the "basement," along with drive motors, rotating shafts, gear boxes, and other devices. When production is shut down, the counterweights will be raised to a one o'clock position, but when the cooling bed machines are de-energized for lockout, the counterweights rotate down to the six o'clock position. Spread out along the west side of the cooling bed and bolted to a rail four to six inches below the rakes, are 110 rotary fans, which blow air across the billets to expedite cooling. Gerdau hired Action to service and replace the fans, as needed.

The basement has a designated walkway down its center—partially demarcated by rope chains strung along both sides—that Gerdau normally uses when it inspects the underside of the cooling bed. The walkway is accessed by proceeding through an unlocked gate. Gerdau had no machine guarding on the counterweights, and while it sought to limit exposure by restricting

access to the area beneath the cooling bed,<sup>1</sup> its written LOTO procedure for the cooling bed does not require verifying that no one is in the zone of danger presented when the counterweights drop during the lockout process.<sup>2</sup> Nor does the written procedure mention the fans.

When the plant is shut down for large scheduled repairs and maintenance, as it was on the day of the accident, Gerdau locks out the cooling bed. Gerdau's LOTO procedure permits only its own "authorized" employees to lock out the cooling bed because, according to Gerdau's Safety Manager, contractors "are not familiar with the equipment." Gerdau did, however, permit contractors, including Action, to lock and unlock a single power source on equipment on which they were working, such as the fans. For example, on previous days during the course of this

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<sup>1</sup> After the accident, Gerdau replaced the rope chains with a chain link fence. It appears that Gerdau generally recognized the hazard presented beneath the cooling bed by its written rule that authorized personnel were only allowed to enter the basement during normal operations if they stayed on the designated walkway. Action's leadman testified that Action employees were never told that they were not "authorized personnel" who could not go under the cooling bed. Further, he testified that Gerdau's maintenance technician had previously led him to a portion of the basement without following the designated walkway when the machines in the cooling bed were not locked out. In addition, it is not clear, based on the hearing testimony, whether Gerdau's maintenance technician contemplated the hazard presented by the lowering of the counterweights during the lockout process. According to Action's leadman, Gerdau never informed him about the hazard or the step in the lockout process that releases the counterweights.

<sup>2</sup> Gerdau written lockout procedure for the cooling bed provides as follows:

1. Start—Lockout cooling bed hydraulic unit[.]
2. Proceed to the 4 crank local station. Rotate rake counter weights to down position by using the E-stop for the cooling bed rake which trips the rake drive and allows counter weights to fall to the zero energy state (down).
3. Proceed to #1 chain disconnect, under the cooling bed, lockout chain 1 motor disconnect.
4. Proceed to #2 chain disconnect, under the cooling bed, lockout chain 2 motor disconnect.
5. Proceed to #2 chain lift disconnect, under the cooling bed, lockout the chain 2 lift motor disconnect.
6. Proceed to East side of cooling bed and lockout run out roll line disconnects on East wall.
7. Proceed to the North mezz and rack out the cooling bed rake drive and lock it in the open position.
8. Proceed to the cooling bed wiper (deflector) drive and lockout the drive disconnect.
9. Proceed to the cooling bed run in roll drives (two drives) and lock out the drives disconnects.
10. Tryout cooling bed equipment by call mill operations members to try each piece of equipment.

project,<sup>3</sup> Action did not lockout the cooling bed per Gerdau's policy prohibiting it from doing so, and Gerdau locked out everything but the fans, leaving those unlocked so that Action could test the repairs as its work progressed.

On the morning of the accident, Gerdau's cooling bed maintenance technician told the Action leadman on the project that he would meet the leadman at the basement's entrance after locking out the cooling bed. Gerdau's maintenance technician, however, got diverted on unrelated matters for about 50 minutes and then began the lockout procedure for the cooling bed, which normally takes about 20 minutes.<sup>4</sup> When the maintenance technician began the lockout, he did not know where the Action employees were and admitted that he could not have seen them if they were underneath the cooling bed; nor did he require the Action employees to be present for the lockout so that they could witness the shutdown and isolation of necessary energies and the verification process. After meeting with the Gerdau maintenance technician, the Action leadman and an apprentice proceeded to the basement to view the area where the remaining fans were to be replaced. Prior to entering the basement, the Action leadman filled out a Gerdau work authorization permit, a form required of all Gerdau contractors.<sup>5</sup>

However, because its leadman, Action contends, did not believe that they had begun work on the fans by viewing them from the basement, he did not have Gerdau's maintenance technician sign the work permit to verify that the lockout procedure was complete and Action's work could begin, nor did he or the apprentice affix their locks to the group lockbox<sup>6</sup>—both steps Gerdau also required before work could begin. Once in the basement, the Action leadman and apprentice left the walkway, as the leadman had previously done with the Gerdau

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<sup>3</sup> Action had already replaced 14 of the 17 fans deemed as needing replacement.

<sup>4</sup> Regarding his notice to the Action employees, the maintenance technician stated:

Q: And, at no time did you ever tell anybody in Action Electric, "Hey, I'm doing this lockout/tagout. I'm releasing stored energy down there"?

A: Correct.

<sup>5</sup> The work permit states that "[t]he following sections . . . shall be filled out in full by the Contractor prior to any work being performed." According to Action's leadman, "as long as we weren't physically working on the equipment or whatever, you didn't have to have a work permit." Nevertheless, the portion of the work permit that was completed indicated that the work to be performed was "replace fans." In addition, the permit indicated that lockout was to be performed. However, there is no indication as to what machine or equipment required lockout.

<sup>6</sup> The group lockbox is a portable box generally kept in the area north of the cooling bed.

technician,<sup>7</sup> and walked to the area where the fans were located. The Action leadman and apprentice had no tools or equipment with them. Unaware that the two Action employees were in the basement, Gerdau's technician started the cooling bed lockout procedure. When he did so, one of the counterweights fell from its resting position of one o'clock to its de-energized position of six o'clock, fatally striking the Action apprentice and coming within inches of hitting the leadman. Action does not dispute that while the employees were discussing their work on the fans, the counterweights fell because of the release of stored energy during the process of locking out the cooling bed.

### **Discussion**

The Secretary issued Action a citation alleging that it violated 29 C.F.R. § 1910.147(f)(3)(ii)(D) by failing to affix personal lockout or tagout devices on the group lockbox before its employees began servicing work on the fans.<sup>8</sup> While there is no dispute that the work Action was engaged to do—repairing and/or replacing the fans—constitutes servicing and maintenance work, *see* § 1910.147(b) (definition of “servicing and/or maintenance” includes “constructing” and “installing”), what is in dispute is the LOTO standard's application to the activities of Action's employees at the time of the accident.

On review, Action reiterates the argument it made before the judge—that the LOTO standard is inapplicable here because the cooling bed was not the “machine or equipment” that Action was to service. Further, Action contends that even if the cooling bed and fans were viewed as one machine, its employees were performing no covered work—service or maintenance—when the accident occurred but were only viewing the area where the work was to be performed. It is the Secretary's position that under the LOTO standard the cooling bed includes not only component parts, such as the rakes, motors, rotating shafts, gear boxes, and

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<sup>7</sup> As previously noted, according to Action's leadman, the Gerdau maintenance technician had, on other occasions in order to survey and identify the fans, led the Action leadman to a portion of the basement without following the designated walkway and without locking out the machines in the cooling bed.

<sup>8</sup> This provision states that “[e]ach *authorized* employee shall affix a personal lockout or tagout device to the group lockout device, group lockbox, or comparable mechanism when he or she begins work, and shall remove those devices when he or she stops working on the machine or equipment being serviced or maintained.” 29 C.F.R. § 1910.147(f)(3)(ii)(D) (emphasis added). The LOTO standard defines an “authorized employee” as “[a] person who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment.” 29 C.F.R. § 1910.147(b).

counterweights, but also the fans—constituting a single, integrated operating system. The Secretary asserts, under this theory, that the cooling bed and fans are components of a single machine; thus, because Action was to work on the fans, its “authorized” employees were responsible for affixing their locks to the group lockbox of the entire cooling bed, including the counterweights and fans. On the second issue, the Secretary contends that, given his theory that the cooling bed and fans are a single machine, Action’s activities at the time of the alleged violation constituted “servicing and maintenance” work because “visual observation of equipment that is reasonably related to hands-on servicing and maintenance, and puts employees within the zone of danger . . . constitutes ‘inspecting’ activity” within the meaning of the LOTO standard.

The judge rejected the Secretary’s argument that the cooling bed and fans operated as a single, integrated system; rather, he found that they operated independently and were subject to separate lockouts. Further, he found that Action had not violated the LOTO standard with respect to the fans to be serviced on the day in question because service or maintenance work on these fans had not begun when the accident occurred; so, Action’s employees could not have been exposed to the unexpected energization or release of hazardous energy from the fans. Therefore, the judge concluded that the Secretary had failed to prove that the cited standard applied and vacated the citation.

#### **I. The LOTO Standard Applied Only to Action’s Work on the Fans.**

The scope provision of the LOTO standard states that “[t]his standard covers the servicing and maintenance of machines and equipment in which the *unexpected* energization or start up of the machines or equipment, or release of stored energy, could cause injury to employees.” 29 C.F.R. § 1910.147(a)(1)(i). The LOTO standard further provides in § 1910.147(a)(2) that “[t]his standard applies to the control of energy during servicing and/or maintenance of machines and equipment.” Thus, the predicate issue for determining applicability is whether the cooling bed and fans constitute one machine.<sup>9</sup> My colleague’s desire to reach a preordained result is evident by her constant and not-so-subtle references to the “machine” in question as the *cooling bed*. Repeatedly signaling her conclusion before conducting the necessary analysis is the epitome of putting the cart before the horse.

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<sup>9</sup> The second issue before the Commission is whether a covered machine was being serviced. See 29 C.F.R. § 1910.147(a)(2) (requiring “servicing and/or maintenance” of “machine” in order for LOTO to apply).

The LOTO standard does not define “machine.” The dictionary definition of “machine” is “an apparatus, made of organized, interacting parts, which takes in some form of energy, modifies it, and delivers it in a more suitable form for a desired function.” *The New Lexicon Webster’s Dictionary of the English Language* 595 (1987). In order to meet the “machine” requirement for applicability, the Secretary bundles an entire process—the cooling and transporting of hot steel, using a series of machines and procedures—into a “single integrated system.” However, this novel “single integrated system” theory is not found anywhere in the LOTO standard, its preamble, or subsequent publications related to the standard.<sup>10</sup>

The Commission previously faced the issue of what constitutes a “machine” under the LOTO standard in *Timken Co.*, 20 BNA OSHC 1070 (No. 97-970, 2003). In *Timken*, a steel plant employee was repairing a drive bar on a teeming car, which is a railroad type of car. The teeming car was designed to transport steel from various points in the plant with the assistance of a traverser, an independent motorized unit with railroad tracks on top of it that allowed teeming cars to move from slots onto the traverser. The *Timken* employee was injured while servicing the teeming car when a traverser moved past the slot where the employee was working and amputated her right foot and the toes of her left foot. The teeming car was locked out but the traverser was not. The Secretary cited *Timken* for a serious violation of the LOTO standard for failing to require lockout of the traverser while repairs were made to teeming cars. The Secretary argued that the traverser and the teeming car were part of the same piece of equipment. The judge and Commission disagreed. While two Commissioners agreed in *Timken* that the LOTO standard did not apply, they could not agree on the appropriate disposition of the case on

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<sup>10</sup> My colleague states that this case is not novel. However, apart from the separate opinions in *Timken Co.*, 20 BNA OSHC 1070 (No. 97-970, 2003), the Commission has not addressed the issue of what “machine” was being serviced. Additionally, as the discussion that follows demonstrates, the *Timken* separate opinions do not even support my colleague’s conclusion that the result she would reach is based on “well-established legal principles.” Instead, my colleague makes liberal use of foreshadowing phrases such as “useful purpose,” “functionally integrated,” “single goal,” and “coordinated fashion” when describing the relationship between the fans and the cooling bed to suggest that separate machines or equipment became one and thus fit within the scope provision of the LOTO standard. Such catch-phrases have not been, and are not, the proper test. It remains: what was the machine being serviced?

the merits. Thus, the Commission vacated the direction for review, leaving the judge’s decision as unreviewed, with no precedential effect.<sup>11</sup>

Still, the separate opinions in *Timken* are instructive regarding what constitutes a “machine” within the meaning of the LOTO standard. In *Timken*, in finding the Secretary’s interpretation unreasonable, then-Commissioner Rogers highlighted a 1999 OSHA memorandum based on a factual scenario substantially similar to those present in *Timken*, which cast doubt on the consistency of the Secretary’s interpretation in that case regarding the LOTO standard’s applicability. 20 BNA OSHA at 1073 (citing Memorandum from Richard E. Fairfax, Director, OSHA Directorate of Compliance Programs, to Michael Connors, Regional Administrator (Oct. 5, 1999), available at <http://www.osha.gov>). Specifically, the memorandum stated: “[T]he machine guarding Subpart O requirements would apply in the scenario where an authorized employee is performing servicing or maintenance activities on one machine and is exposed to machine hazards from an adjacent machine or piece of equipment in the normal production mode of operation.” *Id.* Then-Chairman Railton similarly reasoned that the LOTO standard was inapplicable because the traverser and teeming cars “functioned independently” and were “not part of the same equipment.” *Id.* at 1072, 1076.

Both Chairman Railton and Commissioner Rogers determined that the traverser and the teeming cars operated independently, highlighting that the traverser was not fixed nor

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<sup>11</sup> *Timken* is not precedent because while the participating Commission members did “agree[] that the LOTO standard [did] not apply,” they were “divided on the . . . merits regarding the section 5(a)(1) alternative charge. *Timken Co.*, 20 BNA OSHC at 1072. I am not certain why my colleague points to another case involving the same employer, because it is clear that this later *Timken* case did not involve the issue of what constitutes a “machine” under the LOTO standard. The issue in *Timken Co.*, 20 BNA OSHRC 2034 (No. 97-1457, 2004), was whether the employer had met the LOTO standard’s training requirements. Again, the two Commission members could not agree on the disposition of the case, and the direction for review was vacated. My colleague highlights a footnote in this later, non-precedential decision in which former-Commissioner Rogers states, regarding the machines and equipment at issue, “It is undisputed that it all should have been locked out . . .” *Id.* at 2045 n.4. However, it does not appear that former-Chairman Railton agreed in his separate opinion that this was undisputed. In any event, I do not find the later *Timken* case to be instructive here. If anything, “*Timken II*” reiterates that the two participating Commission members agreed that the LOTO standard did not cover the separate machines in the earlier case. *See id.* (then-Commissioner Rogers’s footnote stating, while describing the earlier *Timken* case, that “both sitting Commissioners affirmed [the judge’s] finding that movement of [the traverser] . . . was completely independent of employee repairs performed on railcar . . . and thus [LOTO] standard did not apply . . .”).

permanently attached to the teeming car and that the sole function of the traverser was to transport the teeming cars. In sum, in *Timken*, both Commission members drew an important distinction between the function of an entire plant, in which many components may work together or in a series to produce a product, and systems within a plant that function independently and can be separately locked out for service and maintenance.

Following *Timken*, OSHA issued Directive CPL 02-00-147, which states, in relevant part:

BB. *Servicing and/or maintenance.* Workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying, maintaining and/or servicing machines or equipment. These activities include lubrication, cleaning or un-jamming of machines or equipment and making adjustments or tool changes, where the employee may be exposed to the unexpected energization or start-up of the equipment or release of hazardous energy . . . .

NOTE: Activities where servicing and/or maintenance activities are not being performed on the associated machines or equipment are not covered by the LOTO standard. For example, some rescue activities may basically involve the removal of persons (e.g., elevator rescue) without any equipment disassembly or servicing . . . .

Also, the standard requires employers to establish an energy control program to control hazardous energy that otherwise might injure or kill employees who service or maintain machines/equipment. ***However, the LOTO standard does not apply to equipment or machinery that is not the subject of the servicing or maintenance activity and that functions independently from, and is not a sub-system of, the machine/equipment being serviced or maintained. If authorized employees are exposed to hazardous energy associated with such an adjacent machine/piece of equipment while performing servicing/maintenance work on an independent, unrelated machine/piece of equipment, an employer's obligations are established by Section 5(a)(1) of the OSH Act or other relevant standards, such as the Machine guarding (Subpart O) requirements. See The Timken Company (OSHRC Docket No. 97-0970, 2003).***

OSHA Instruction CPL 02-00-147, Feb. 11, 2008, Chap. 1 at 10 (emphasis added). Thus, in light of *Timken*, OSHA's directive clarifies that maintenance or servicing of "associated machines or equipment" is not covered by the LOTO standard.<sup>12</sup> The directive specifically cites *Timken* and unambiguously states that "the LOTO standard does not apply to equipment or

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<sup>12</sup> I note that the CPL is not binding on the Secretary. However, the Commission has relied on CPLs to support an interpretation of a standard in the past. See, e.g., *Drexel Chem. Co.*, 17 BNA OSHC 1908, 1910 n.3 (No. 94-1460, 1997).

machinery that is not the subject of the servicing and maintenance activity and that functions independently from, and is not a sub-system of, the machine/equipment being serviced or maintained.” *Id.* OSHA also reiterates that the LOTO standard is intended to supplement the guarding standards. *Id.*

Despite what OSHA states in its directive, the Secretary repeats the errors of *Timken* here and again attempts to blur the line between a “single piece of equipment” and an “adjacent, independent machine” by coining a new phrase for his theory—a “single integrated system.” Like the judge, I would find that relying on this theory for the application of the LOTO standard in this case is unreasonable. Similar to the traverser and teeming cars in *Timken*, the fans and counterweights at issue here operate independently and are not directly connected or attached to each other. The fans have no electrical or hydraulic connection with the rakes, counterweights, drive shaft, drive motors, or chains of the cooling bed.<sup>13</sup> For example, there are no electrical connections between the drive chains that move the rakes up and down and the heated metal across the bed and the fans—connections that, for example, turn the fans on when the drive chains turn on. To lock out the fans, according to Gerdau’s cooling bed maintenance technician, “[a]ll you’ve got to do to turn the power off on the fans is to throw those knife switches and lock them out.”<sup>14</sup> At the fan’s disconnect, there is a place to put the lock. Unsurprisingly, this step is not included in Gerdau’s written procedure for locking out the cooling bed. Indeed, the fans and counterweights serve very different purposes: the sole function of the counterweights is to move the rakes, which in turn move the billets; the sole function of the fans is to circulate air.<sup>15</sup> In

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<sup>13</sup> My colleague attaches an exhibit—a photo of the cooling bed area—to her separate opinion. I have attached another exhibit, Exhibit C-1R, a photo of the basement, which shows the support structure for the cooling bed. Concrete pillars support the steel cross-beams, on top of which the rake frame sits. Depicted in the far left corner of the photograph are the fans, which are simply attached to a rail by four bolts.

<sup>14</sup> Gerdau’s cooling bed maintenance technician testified that he believed, “if [he was] not mistaken” there might be heat sensors that read the temperature and turn the fans off and on. It is not clear whether the judge credited this equivocal statement. In any event, if credited, I would not find that such a fact means the fans are connected to the cooling bed, rendering this a single machine.

<sup>15</sup> In fact, on the day of the accident, while four Action employees were scheduled to work on the fans, an employee of another contractor was present to work on the cooling bed. As my colleague points out, the record is not developed as to whether this contractor had commenced work—or “servicing and/or maintenance”—necessitating lockout of the cooling bed at the time of the accident. We only know that this contractor was there to perform maintenance on the

sum, the fans and counterweights cannot be interconnected components constituting a single machine,<sup>16</sup> and so I would conclude that the Secretary's interpretation of "machine" in this case is not reasonable and, therefore, not entitled to deference.<sup>17</sup>

The preamble to the LOTO standard further supports the conclusion that the LOTO standard is not a one-size-fits-all solution for citing hazards from energized machinery.<sup>18</sup> The preamble provides:

With regard to servicing and/or maintenance which takes place during "normal production operations," it is important to note that this standard is intended to work together with existing machine guarding provisions of Subpart O of part 1910, primarily §§ 1910.212 (general machine guarding) and 1910.219 (guarding of power transmission apparatus). When a machine is used for production, § 1910.212 requires that the point of operation be guarded. For example, when an employee is using a table saw to cut wooden parts, the employee would be protected by guards around the blade of the saw. If the employee needs to reach into the point of operation in order to adjust the work piece as part of the production process, § 1910.212 requires that the guarding protection be maintained. As long as guarding is not removed or bypassed, the lockout/tagout standard is not intended to apply to these types of situations. By contrast, using the same table saw, it may be necessary for the employee to remove a piece of wood which has become jammed against the blade of the saw. In doing so, the

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"grease system" for the cooling bed. Therefore, given the scarcity of the record on this point, the presence of this other contractor's employee cannot be, as my colleague contends, "an additional basis for finding applicability."

<sup>16</sup> As noted, the counterweights are included in Gerdau's written lockout procedure for the cooling bed; the fans are not. Thus, even if the cooling bed were locked out pursuant to the written procedure, each Action "authorized employee" performing service or maintenance on the fans—the job the company was hired to do—still would have needed to lock out the fans in order to repair/replace them.

<sup>17</sup> The Commission defers to the Secretary's reasonable interpretation of an ambiguous regulation if it "sensibly conforms to the purpose and wording of the regulation" taking into account "whether the Secretary has consistently applied the interpretation embodied in the citation," "the adequacy of notice to regulated parties," and "the quality of the Secretary's elaboration of pertinent policy considerations." *Martin v. OSHRC*, 499 U.S. 144, 150-51, 157-58 (1991). While the definition of "machine and equipment" under the LOTO standard is ambiguous, as discussed, I would conclude that the Secretary's novel "single integrated system" theory is not reasonable and is not entitled to deference.

<sup>18</sup> See *Martin v. Am. Cyanamid Co.*, 5 F.3d 140, 145 (6th Cir. 1993) (holding preamble to regulation may be consulted in determining administrative construction and meaning of regulation); *Phelps Dodge Corp.*, 11 BNA OSHC 1441, 1444 (No. 80-3203, 1983) (stating standard's "preamble is the best and most authoritative statement of the Secretary's . . . intent"), *aff'd*, 725 F.2d 1237 (9th Cir. 1984).

employee might need to bypass or remove the guard on the saw and reach into the point of operation. Although this action takes place “during” normal production operations, it is not actually production, but is servicing of the equipment to perform its production function. When such servicing may expose the employee to the unexpected activation of the machinery or equipment, or to the release of stored energy, this Final Rule will apply. If the servicing is performed in a way which prevents such exposure, such as by the use of special tools and/or alternative procedures which keep the employee’s body out of the areas of potential contact with machine components or which otherwise maintain effective guarding, this standard will not apply. Thus, lockout or tagout is not required by this standard if the employer can demonstrate that the alternative means enables the servicing employee to clean or unjam or otherwise service the machine without being exposed to unexpected energization or activation of the equipment or release of stored energy.

Control of Hazardous Energy Sources (Lockout/Tagout), 54 Fed. Reg. 36,644, 36,647 (Sept. 1, 1989). The preamble emphasizes that the LOTO standard was not intended to cover every situation where there is a risk of unanticipated release of stored energy and did not repeal, but rather was intended to supplement, the machine guarding standard and the general duty clause.<sup>19</sup> Extending the language of the LOTO standard to a “single, integrated system,” when there are separate, independent pieces of equipment or machines, is contrary not only to the language of the standard but to the intent of the standard as expressed in its preamble.

In this case, “the LOTO standard does not apply to equipment or machinery that is not the subject of the servicing and maintenance activity and that functions independently from, and is not a sub-system of, the machine/equipment being serviced or maintained.” *See* OSHA Instruction CPL 02-00-149, Chap. 1 at 10. The counterweights were not the “subject of the servicing and maintenance activity” undertaken by Action, and they “function[ed] independently from, and [were] not a subsystem of, the machine/equipment [the fans] being serviced or maintained.” I would therefore find that the cited LOTO standard did not apply.

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<sup>19</sup> The Secretary (and my colleague) points to the waste hogger example in the preamble to the LOTO standard as an example of a complex, integrated machine made up of several parts. The final rule does not identify it as such, stating only that it is an example of a “[f]ailure to document and implement an effective control procedure.” 54 Fed. Reg. at 36,646. The example is not preceded or followed by any discussion supporting the conclusion that this is an example of a complex, integrated machine made up of several parts. In the waste hogger example, the conveyor was an operating component of the hogger upon which the work was being performed—in other words, the conveyor fed the hogger during its operation. The hogger had been shut down, but the conveyor feeding the hogger had not been when the accident occurred. Thus, as noted by the judge, this example is distinguishable from the facts in this case.

It is true that overlapping hazards can arise from adjacent, but independent, pieces of machinery. Indeed, the LOTO standard contemplates numerous protections, including guarding and multiple lockouts that may need to occur to safely perform work—without turning complex, albeit separate machines, into a single machine.<sup>20</sup> See 54 Fed. Reg. at 36,682 (discussing 29 C.F.R. § 1910.147(f)(4) and recognizing that “servicing of some complex equipment may take days or weeks, and that in some cases, hundreds of lockout or tagout devices may be necessary”); cf. *Drexel*, 17 BNA OSHC at 1913 (“Because the standard requires the lockout procedures for each type of machine to be specifically defined, and because there are different types of machines at the plant, [respondent] must have more than one lockout procedure.”). This case is not about the indisputable proposition that an employer has a duty to protect employees under all applicable standards; rather, it is about whether a specific standard applies in the first place.<sup>21</sup> See *Se. Contractors, Inc.*, 1 BNA OSHC 1713, 1716 (No. 1445, 1974) (Moran, Chairman, dissenting) (“[T]here can be no violation of the Act by a respondent for failure to comply with a standard which charges some other employer with the duty of implementing the standard.”), *dissent adopted on appeal*, 512 F.2d 675 (5th Cir. 1975) (per curiam); see also *Unarco Commercial Prods.*, 16 BNA OSHC 1499, 1499 (No. 89-1555, 1993) (vacating citation

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<sup>20</sup> As the introduction to the standard's Appendix—which contains a “typical minimum lockout procedure”—states: “For more complex systems, more comprehensive procedures may need to be developed, documented and utilized.” 29 C.F.R. §1910.147 app. A. My colleague, in asserting that the fans’ “close physical proximity” to the other pieces of equipment translates into “complete functional integration” with them (and thereby rationalizing the leap to one “machine” under the LOTO standard), makes much of the Gerdau maintenance technician’s testimony regarding the need to be “between the rakes in order to remove the fans.” However, immediately following the maintenance technician’s referenced testimony, was this exchange:

Q: So, when you’re referring to the words, “cooling bed equipment,” you’re referring to a multiple number of pieces of equipment and machines?

A: Yes.

<sup>21</sup> My colleague claims that the judge failed to recognize the hazard faced by the Action leadman and apprentice, but this is not true. There is no doubt that the two Action employees were exposed to the hazard of the counterweights falling from the release of stored energy. However, this does not make the cited standard applicable. To the extent that the Secretary’s choice of language does not effectuate what the Secretary may have intended, the remedy lies in further rulemaking by the Secretary, not asking for deference to an unreasonable interpretation that is not supported by the standard and its preamble as promulgated. See *Diamond Roofing v. OSHRC*, 528 F.2d 645, 650 (5th Cir. 1976) (regulations cannot be construed to mean what an agency intended but did not adequately express).

based on plain language of standard, and stating that “the test for the applicability of any statutory or regulatory provision looks first to the text and structure of the statute or regulations whose applicability is questioned”) (citations omitted).

Moreover, the notion that separate machines—like the fans and counterweights, which completely lack any physical, hydraulic, or electrical connection—should be considered one machine for LOTO purposes obliterates the language of the LOTO standard, as well as the interplay between LOTO and the guarding of adjacent machines, which the standard already considered and the Secretary addressed in his post-*Timken* guidance. Additionally, this notion is unworkable. For example, an automobile plant consists of hundreds of machines. Like the cooling bed and fans in this case, many of those machines have no physical, hydraulic, or electrical inter-connection. However, they are all used to produce car components and, ultimately, cars. Under the Secretary’s single integrated system theory, it is impossible to discern where a machine begins and ends.<sup>22</sup> Are all the machines connected by a conveyor system that builds the car a single integrated system? Or are the machines connected by a conveyor system that builds just the doors of a car a single integrated system? Under the Secretary’s theory, any of these could be a single integrated system as, according to the Secretary, “they’re all part of one big system.”

Action rightly states that this approach would “wreak havoc . . . by reducing entire factories to fictional ‘single units,’ dumping the existing [regulatory] scheme which pairs specific hazards with specific requirements in favor of a stretch-to-fit ‘gotcha’ theory.” In this case, the Secretary chose to issue a single LOTO citation for all the machines he claims made up the cooling bed. However, in *Dayton Tire*, 23 BNA OSHC 1247 (No. 94-1374, 2010), *aff’d in part, rev’d in part*, 671 F.3d 1249 (D.C. Cir. 2012), the Secretary cited *Dayton* on a per-machine-type basis under § 1910.147(c)(4)(i), the LOTO standard’s energy control procedure

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<sup>22</sup> My colleague takes issue with this point. Her broad claim that the cooling bed cannot achieve its function without the operation of the fans merely amplifies my concerns. As with many production lines, the manufacturing process will include equipment and systems that control factors such as temperature, humidity, air, and moisture. The very nature of an assembly or production line requires separate machines or pieces of equipment to work together to achieve a single goal—whether that is turning scrap metal into structurally useful forms, curing a baked coating to “paint” a car, extruding a plastic film on a food packaging line, or assembling a car door or an entire car. That equipment controlling such factors is critical to the output or quality of a finished product does not make everything that contributes to the process one collective “machine.”

provision, because the separate machines were “differently configured, ha[d] multiple energy sources, or [were] particularly complex.” *Id.* at 1258 (noting that Dayton’s single LOTO procedure “was particularly ineffective for employees attempting to utilize LOTO before servicing the particular piece of equipment at issue” and noting seven different complex machines that were differently configured). Utilizing his new single integrated system theory, the Secretary now wants to claim that multiple pieces of equipment at a worksite constitute either a single-integrated machine or separate types of machines, leaving the regulated community with no way of knowing what the Secretary will identify as a machine.

An employer lacking fair notice of a standard cannot be found in violation of the Act for failure to comply with that standard. *See, e.g., S.G. Loewendick & Sons, Inc. v. Sec’y of Labor*, 70 F.3d 1291, 1297 (D.C. Cir. 1995) (“Congress and the courts require that agency action reflect clear, rational decision making that gives regulated members of the public adequate notice of their obligations.”); *Diebold, Inc. v. Marshall*, 585 F.2d 1327, 1335-39 (6th Cir. 1978) (“[S]tatutes and regulations which purport to govern conduct must give an adequate warning of what they command or forbid.”); *Cardinal Indus.*, 14 BNA OSHC 1008, 1011, (No. 82-427, 1989); *Lisbon Contractors, Inc.*, 11 BNA OSHC 1971, 1974 (No. 80-97, 1984) (“A construction of a standard that bears no reasonable relationship to the standard’s plain words cannot be expected to guide employers in their conduct.”). In my view, the Secretary’s “single integrated system” theory does nothing to guide employers or employees through the lockout process. In light of its dubious legal foundation, if the citation had been affirmed here, the single integrated system theory would have far reaching consequences that could afford the Secretary almost unfettered discretion as to the breadth of the LOTO standard, thereby eliminating fair notice to the regulated community.

## **II. Action’s Employees Were Not Engaged in Servicing or Maintenance**

Because I would agree with the judge that the fans were not part of a single “machine or equipment” that includes the cooling bed, there is no need to reach the issue of whether Action employees were engaged in service or maintenance work at the time of the accident. However, even if I were to disagree with the judge on the predicate issue, I would find that viewing the fans from basement was not “servicing or maintenance” work covered by the LOTO standard. The irrationality of the first part of the Secretary’s analysis—determining what is a machine—figures prominently in assessing whether such work occurred. Because of the Secretary’s

unreasonably broad view of “machine,” simply looking at a fan becomes servicing or maintenance—or as the Secretary posits, “visually observing.” Again, using the auto assembly line as an example, when does “visually observing” a line become service or maintenance? Under the Secretary’s theory, anytime an employee is looking at the line, he or she is in the zone of danger sought to be protected by the LOTO standard.

Rather, the LOTO standard “covers the servicing and maintenance of machines and equipment,” 29 C.F.R. § 1910.147(a)(1)(i), and defines “[s]ervicing and/or maintenance” as follows:

Workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying, and maintaining and/or servicing machines or equipment. These activities include lubrication, cleaning or unjamming of machines or equipment and making adjustments or tool changes, where the employee may be exposed to the *unexpected* energization or startup of the equipment or release of hazardous energy.

29 C.F.R. § 1910.147(b) (emphasis in original). Nowhere can “visually observing” be found in the definition of “servicing and/or maintenance.” In attempting to fit within one of the examples included in the definition, the Secretary contends that the activities of Action’s employees constituted “inspecting” activities within the meaning of section 1910.147(b). Although “inspect” is not defined in the LOTO standard, “inspect” means “to view closely in critical appraisal,” or “to examine formally, e.g. for completeness or quality.” *Webster’s New Collegiate Dictionary* 592 (1979); *The New Lexicon Webster’s Dictionary of the English Language* 501 (1987).

The judge concluded that “the two Action employees were not engaged in servicing and maintenance work when in the basement discussing their replacement work on the fans,” because “[t]here is no showing that [they] were exposed to the unexpected energization or release of hazardous energy from the fans while engaged in their viewing and discussing activities.” I would agree. The critical issue contemplated by OSHA’s definition of “servicing and/or maintenance” is whether the employee is exposed to an “unexpected energization or start up of the machines or equipment, or release of hazardous energy.” In this case, Action’s employees were not in contact with the fans, nor were they even within eight feet of them.<sup>23</sup> The Secretary

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<sup>23</sup> The preposterousness of the contention that such activities are “servicing and/or maintenance” is more apparent when considering that, while in the basement, the Action leadman merely pointed out the three remaining fans—“that one, that one, and that one”—they were *going to*

has made no showing that Action's leadman or apprentice was exposed to the unexpected energization or release of hazardous energy from the fans while engaged in viewing or discussing the work to be done on the fans. Again, any other interpretation would lead to absurd consequences, as it would lead to the safe activity of looking at a piece of equipment (even from across the room or through a window) as being "inspecting" subject to the LOTO standard. Therefore, I would conclude that Action's work on the fans at the time of the alleged violation does not constitute "servicing and maintenance."

For all the foregoing reasons, I would affirm the judge's decision and vacate the citation.

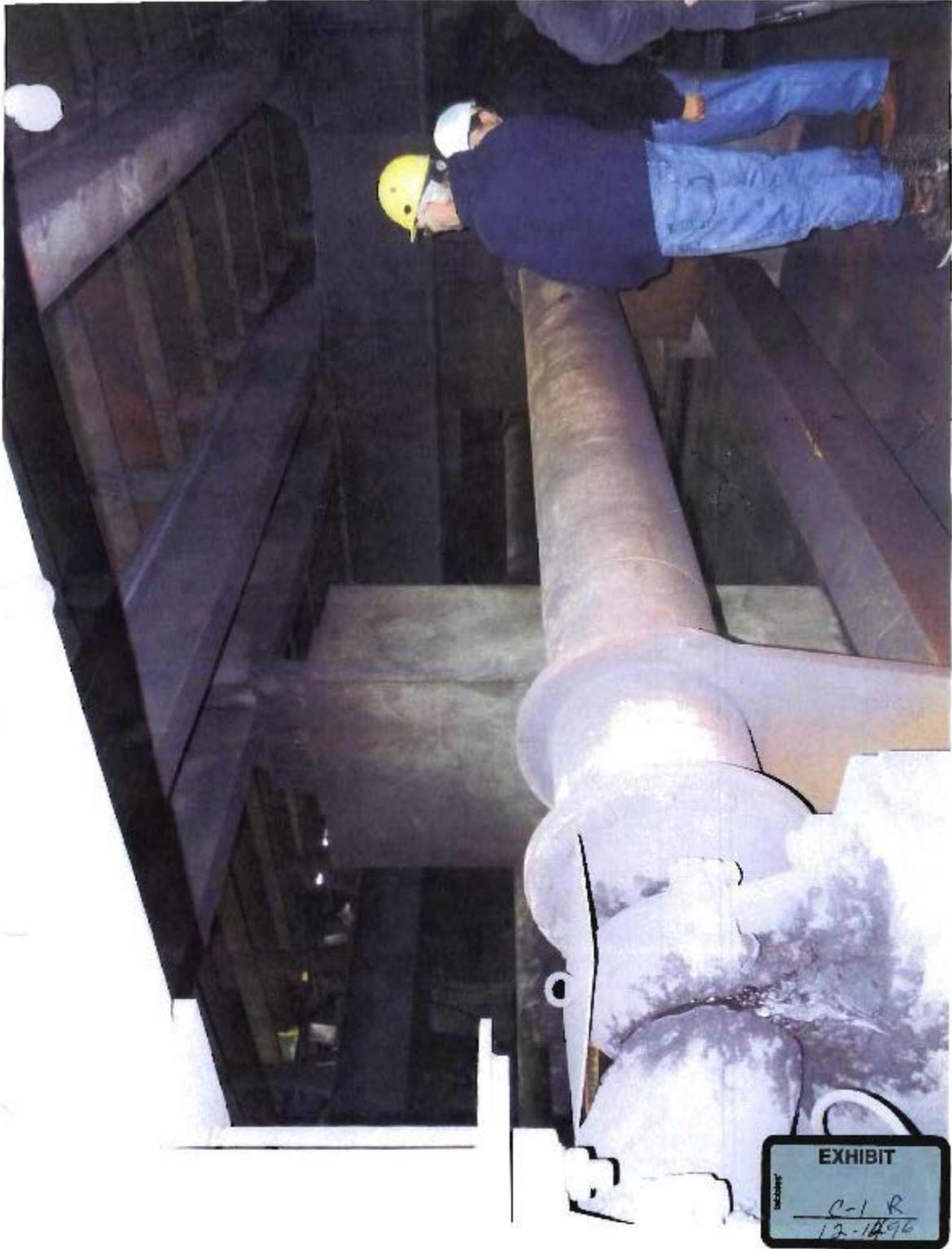
Dated: July 6, 2016

/s/  
\_\_\_\_\_  
Heather L. MacDougall  
Commissioner

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replace. According to his testimony, "we [were] looking at the fans," because the Action apprentice had not worked on this project previously, and so "I had to show [him] because he . . . wouldn't know which ones to replace."

# **Attachment: Exhibit C-1R**



United States of America  
**OCCUPATIONAL SAFETY AND HEALTH REVIEW COMMISSION**  
1924 Building - Room 2R90, 100 Alabama Street, SW  
Atlanta, Georgia 30303-3104

Secretary of Labor,

Complainant,

v.

Action Electric Company,

Respondent.

OSHRC Docket No. 12-1496

**Appearances:**

Melanie L. Paul, Esq.  
Office of the Solicitor, U. S. Department of Labor, Atlanta, Georgia  
For the Complainant

J. Larry Stine, Esq., and Mark A. Waschak, Esq.  
Wimberly, Lawson, Steckel, Schneider & Stine, Atlanta, Georgia  
For the Respondent

**Before:** Administrative Law Judge Ken S. Welsch

**DECISION AND ORDER**

Action Electric Co., Inc. (Action) provides electrical services to businesses. On December 7, 2011, under a contract with a steel mill in Cartersville, Georgia, to replace seventeen fans at the cooling bed during a shutdown, an Action leadman/electrician and an apprentice went into the cooling bed basement to discuss replacing the last three fans. While discussing their work, a counterweight which provided movement to the racks on the cooling bed fell from an upright position to the down position when the steel mill maintenance technician initiated the mill lockout procedures. When the counterweight fell, the apprentice was fatally struck from behind and it narrowly missed the leadman. As a result of an inspection by the Occupational Safety and Health Administration (OSHA), Action was issued a serious citation on May 31, 2012. Action timely contested the citation.

The serious citation alleges that Action violated 29 C.F.R. § 1910.147(c)(7)(i) (item 1) by failing to train its employees on the purpose and function of an energy control program and

29 C.F.R. § 1910.147(f)(3)(ii)(D) (item 2) by failing to affix personal lockout or tagout (LOTO) devices on the group lockbox before the employees began servicing work on the fans. The serious citation proposes a \$7,000.00 penalty for the alleged item 2 violation.

The hearing was held on December 18-19, 2012, in Atlanta, Georgia. The parties stipulated jurisdiction and coverage (Tr. 4). The Secretary withdrew item 1, alleged violation of 29 C.F.R. § 1910.147(c)(7)(i) (Tr. 3). The post-hearing briefs were filed on February 22, 2013.

Action denies the applicability of § 1910.147, the LOTO standards, because at the time of the accident the employees were not servicing the fans and the counterweight was not connected to or associated with the operation of the fans. Also, Action claims the steel mill technician failed to ensure that the Action employees were free from hazard before locking out the cooling bed.<sup>41</sup>

For the reasons discussed, § 1910.147(f)(3)(ii)(D) is found not applicable. The citation item 2 is vacated and no penalty is assessed.

#### *The Accident*

Action is in business to provide electrical services to commercial and industrial companies. Action employs more than 100 employees. Its office is located in Smyrna, Georgia (Tr. 185, 456).

Since 2004, Action, as an approved contractor, has provided electrical service and repair work to the Gerdau Ameristeel US steel mill in Cartersville, Georgia. The steel mill operates 24/7 in melting scrap metal, casting it, and rolling it into angles, channels, flats, and I-beams for structural uses. When the metal is heated and rolled, it is hot, approximately 1600 degrees, and must be cooled before it goes through the straightener (Tr. 24, 39).

To cool the heated metal, the mill moves the metal by conveyor onto the cooling bed from the east side and rakes with grooves “walk” the metal across the bed as the bed moves up and down until it reaches the conveyor which carries the metal to the straightener. The cooling bed is approximately 325 feet long and 100 feet wide. The heated metal is on the cooling bed for approximately one hour. Along the west side of the cooling bed, there are one hundred ten, 3-foot by 3-foot, rotary fans which blow air across the cooling bed. The fans are bolted to a rail

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<sup>41</sup> Issues that are not briefed are deemed waived. See *Georgia-Pacific Corp.*, 15 BNA OSHC 1127 (No. 89-2713, 1991). At the hearing, Action withdrew its employee misconduct defense and represented that it is not claiming “the employees did anything wrong” (Tr. 7).

underneath the cooling bed, approximately 8 feet above the basement floor. The fans are powered by electricity and there are four disconnects to disconnect all the fans (Exhs. C-1, C-9; Tr. 25, 82, 191, 229, 241, 250, 252, 285).

The basement under the cooling bed houses numerous mechanical devices including drive motors, rotating shafts, counterweights, chains, drive pulleys, gear boxes, walking beams, and other equipment which lift the cooling bed and move the rakes. There are four access points to the basement; the main ones at the north and south ends, and two others at entrances on the east and west sides that are used infrequently. From the north/south entrances, there is a designated walkway through the basement demarcated by overhead lights, faded yellow paint on the floor, and chain ropes on both sides wrapped from column to column extending almost the entire length of the basement. The designated walkway is the only safe place to walk in the basement when the cooling bed is in operation. Signs at the entrances to the basement state “authorized personnel only.” There are other signs around the cooling bed which state “Do not enter without lockout/tagout.” No mill employees work in the basement. While the cooling bed is in operation, the designated walkway is occasionally used by quality control employees to observe the metal on the cooling bed (Tr. 83, 209-210, 230-232).

The counterweights, which move the rakes, make one to three, 360 degree revolutions in a clockwise direction during operation and are located in three rows approximately every 15 feet in a north/south direction throughout the cooling bed basement. As with other mechanical devices in the basement, there are no guards around the counterweights other than the chain at the designated walkway. During operation, the counterweights’ resting position is at one o’clock. When the cooling bed is de-energized and locked out, the counterweights which weigh “tons of pounds” each, fall from gravity to the six o’clock position (Tr. 84-85, 215, 230).

During shutdown, when servicing and maintenance work is scheduled in the cooling bed basement, the steel mill requires that the machines and equipment be locked out. The lock out is performed by the mill’s cooling bed maintenance technician and takes approximately 20 minutes. It involves locking out the machines and equipment at various locations around the bed (Tr. 233, 247).

In October 2011, the steel mill requested Action to service and replace, as needed, the approximate one hundred ten fans at the cooling bed. An Action leadman and the mill technician

responsible for the cooling bed made an evaluation of the fans and determined that seventeen fans needed to be replaced. To replace the fans, Action needed access to the basement (Tr. 243).

On December 9, 2011, during the mill shut down, the Action leadman and an apprentice met at the technician's office at 7:15 a.m. to prepare to replace three fans. Action had already replaced fourteen of the fans on two earlier occasions. The Action leadman, a journeyman electrician, had worked at the steel mill since 2005. The technician told the leadman that he would lockout the cooling bed and meet him later. The leadman understood that they were to meet at the north end entrance to the basement. After the conversation, the mill technician moved the three new fans by forklift to the north end of the cooling bed before initiating the mill's cooling bed lockout procedures (Exhs. C-12A, R-3; Tr. 74, 290, 292-293, 388, 413).

In the meantime, the Action leadman filled out the mill's work permit without the technician's signature and left it at the north end of the cooling bed with the group lockbox. He then sent the helpers to retrieve the tools and took the apprentice into the cooling bed basement by the north entrance. The leadman and apprentice walked through the basement, not on the designated walkway but over conduit, pipes, air lines, and under beams, to the location of the three fans. They were approximately 24 feet off the designated walkway. The cooling bed was shutdown so none of the machines and equipment was running. The apprentice had not worked on the fans and the leadman was discussing with him what work they were going to be doing. They did not physically touch or start any work on replacing the fans. The leadman knew the mill technician had not completed locking out the cooling bed (Tr. 116, 146-147, 197, 255, 369, 373, 376, 397, 423).

The technician did not know and could not see the Action employees were in the basement when he began the lockout procedure. When he initiated the counterweight lockout, the counterweight behind the leadman and apprentice fell from its resting position to the down position. As it fell, it fatally struck the apprentice from behind and missed the leadman by inches. The accident occurred at approximately 7:53 a.m. (Tr. 245, 294, 375, 383).

A compliance safety officer and her supervisor initiated an OSHA inspection at 9:30 a.m. She took photographs/video of the cooling bed and basement, observed the cooling bed in operation on another date, reviewed documents involving the steel mill lockout procedures, and

interviewed employees of the steel mill and Action. As a result of the inspection, Action was issued the serious citation. The steel mill was not issued a citation (Tr. 420, 424, 455).

The steel mill investigation into the accident determined that the cooling bed equipment was not locked out and the leadman did not verify that it was locked out although signing the work permit before entering the basement. The steel mill placed Action on conditional approval status as a contractor requiring Action to submit written specific safety plans for each job and hire a third party consultant to oversee its employees for two years. The leadman was removed from working at the steel mill but remains employed by Action. He was retrained on Action's LOTO procedures (Exh. C-10; Tr. 142-143, 378, 381, 405).

#### *Discussion*

#### **Alleged Violations**

In order to establish a violation of a safety standard as in this case,

the Secretary has the burden of proving: (a) the applicability of the cited standard, (b) the employer's noncompliance with the standard's terms, (c) employee access to the violative conditions, and (d) the employer's actual or constructive knowledge of the violation (*i.e.*, the employer either knew, or with the exercise or reasonable diligence could have known, of the violative conditions). *Atlantic Battery Co.*, 16 BNA OSHC 2131, 2138 (No. 90-1747, 1994).

There is no significant factual dispute. Although the Secretary has the burden of proof to establish a *prima facie* case, the only issue argued in Action's post-hearing brief is the application of the LOTO standards at § 1910.147 to the work its employees were performing at the time of the accident.

#### **Citation No. 1**

#### **Alleged Violation of § 1910.147(f)(3)(ii)(D) (Item 2)**

The citation alleges that at "Rolling Mill Area: The employer (outside employer) did not ensure that each employee performing servicing and maintenance activities were in control of the hazardous energy throughout the entire period of exposure. Employees did not affix their personal lockout device to physically secure the isolating device(s) during the servicing or maintenance work performed as specified in the requirements of the group LOTO procedure nor

did they avoid working in this area until the lockout process was completed by the host employer, exposing themselves to struck-by hazards.”

Section 1910.147(f)(3)(ii)(D) provides:

Each authorized employee shall affix a personal lockout or tagout device to the group lockout device, group lockbox, or comparable mechanism when he or she begins work, and shall remove those devices when he or she stops working on the machine or equipment being serviced or maintained.”

The alleged violation relates to the failure of the Action employees to affix their locks on the group lockbox before entering the basement and beginning their servicing and maintenance work. The Action employees were part of a group lockout and were authorized employees who were there to replace three fans.<sup>42</sup> There is no dispute that the employees did not affix their locks on the group lockout box prior to entering the basement (Tr. 367-368). The leadman acknowledges that “putting locks on group lock box is a necessary step to protect from unexpected energization of equipment” (Tr. 358). Also, replacing the fans constitutes servicing and maintenance work. See § 1910.147(b) definition of *Servicing and/or maintenance* which includes “constructing, installing.”

Action does not dispute that while the employees were discussing their work on the fans, the counterweight fell because of stored energy when being locked out. As stated in the steel mill’s *Cooling Bed LOTO Steps*, “2. Proceed to the 4 crank local station. Rotate rake counter weights to down position by using the E-stop for the cooling bed rake which trips the rake drive and allows counter weights to fall to the zero energy state (down)” (Exh. C-12). Such stored energy, as described by the Secretary, is kinetic energy (motion) which is caused by the conversion of potential energy to kinetic energy after shutting down the machine or equipment. 54 FR 36644, 36647 (September 1, 1989).

Also, there is no issue that the two Action employees were exposed to the hazard of the counterweight falling from stored energy. The employees were standing within the swing radius (zone of danger) of the counterweight discussing their work on the fans. The apprentice was fatally struck by the counterweight and the leadman was within inches of being struck (Tr. 383, 412, 421).

With regard to employer knowledge, the leadman knew the cooling bed was not locked out when he entered the basement. He admitted that he had neither verified lockout nor affixed

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<sup>42</sup> “An affected employee becomes an authorized employee when the employees’ duties include performing servicing or maintenance covered under this section.” 29 C.F.R. § 1910.147(b) definition of *authorized employee*.

his lock to the group lockout box. The lockout was not complete because the technician had not returned to perform verification and sign the work permit (Exh. C-11; Tr. 375-376). Also, the dangers of the cooling bed were visible and obvious. As the mill safety manager testified, “anybody with common sense watching it run will say all this stuff has to be turned off and shut down and locked out before you go down there” (Tr. 200). The leadman had worked at the mill since 2005. There was signage around the bed area warning employees not to enter the basement without locking it out and restricting access to only authorized personnel.

The leadman’s knowledge is imputed to Action because as a supervisor, he was in charge of and supervised the apprentice and other Action employees. He assigned and directed the work. He conducted the job safety analyses, led safety meetings, had authority to issue verbal warnings, was responsible for crew safety, and could stop work (Tr. 343-345).

In terms of failing to place their locks on the group lockbox, there is no dispute regarding the lack of compliance with the terms of the cited standard, employees’ exposure to the falling counterweight, and Action’s knowledge of the failure to lockout the fans and counterweight.

The issue in dispute is the application of the LOTO standards to the counterweights and the work being performed by the Action employees at the time of the accident. Action argues that the standard does not apply because (1) OSHA’s LOTO requirements apply to the “servicing and maintenance” of the fans and did not apply to the counterweights, and (2) the employees were not performing “servicing and maintenance” work on the fans when the accident occurred. The court agrees with Action that the cited LOTO standard did not apply under the circumstances in this case.

### **Application of LOTO**

The scope of the LOTO standards provides that “[t]his standard covers the servicing and maintenance of machines and equipment in which the *unexpected* energization or startup of the machines or equipment, or release of stored energy could cause injury to employees.” 29 C.F.R. § 1910.147(a)(1)(i). There is no dispute that servicing and maintenance work on the fans would require compliance with LOTO. The issue is whether the LOTO requirements apply to the counterweights if the servicing and maintenance work is only on the fans.

The application of the LOTO standards as described in § 1910.147(a)(2) provides, in part:

- (i) This standard applies to the control of energy during servicing and/or maintenance of machines and equipment.

It is the Secretary's position that under the application of the LOTO standards, all the machines and equipment in the cooling bed including the counterweights and fans constituted an operating system that posed a hazard during servicing and maintenance work. The Secretary argues that the fans and counterweights functioned together to move and cool the heated metal on the cooling bed before conveyed to the straightener. In order to safely replace the fans, the other machines and equipment including the counterweights, needed to be locked out to prevent the unexpected energization, startup, or release of stored energy from the machines and equipment around the fans and within the zone of danger of the work. The mill's lockout procedures required locking out all the machines and equipment under the cooling bed before servicing and maintenance work was to be performed in the basement (Exh. C-12A; Tr. 247). As described by the technician responsible for implementing the lockout procedure, "[T]he equipment overlaps in so many different ways with the fans. You have chains that overlap with the fans, brakes. Basically the equipment acts as one, and if you were to go in and try to work on the fan, you would be directly in harm's way by several different pinch points" (Tr. 276).

### **1. OSHA's LOTO Applied Only To The Fans**

The cooling bed consists of various machines and equipment such as rakes, chains, counterweights, drive shafts, motors, pulleys and fans which function separately to move and cool the heated metal across the bed. The cooling bed is not itself a machine or piece of equipment. It is a process that contains separate and distinct machines and equipment. The cooling bed is a system of rakes which move the heated metal by counterweights, drive shafts, motors, and chains (Tr. 288). The rakes are jagged so that the metal is caught inside the grooves, picked up and moved over the bed (Tr. 81). The rakes are powered by a system of gear boxes, chains, drive motors, walking beams, and counterweights (Tr. 83).

The counterweights rotate on drive shafts and are powered by drive motors which move the rakes up and down and move the heated metal across the cooling bed (Tr. 230). The counterweights are in three rows approximately every 15 feet in a north/south direction. At least one row of counterweights is near the row of fans.

The function and purpose of the fans is independent of the counterweights. The fans are not fixed nor permanently attached to the counterweights and rakes. The fans provide air movement to assist in cooling the heated metal as it moves across the bed. The fans are bolted to a beam or rail running the length of the bed below the rakes, approximately 8 feet above the basement floor (Tr. 120, 252). There are four disconnects that control the electric power to all one hundred ten fans (Tr. 276, 285).

The mill's written cooling bed lockout procedure shows that the various machines and equipment need to be separately locked out. The written procedure in place at the time of the accident did not include locking out the fans, which was the only equipment Action was authorized to work on and the only equipment Action could lockout when replacing/repairing the fans (Exh. C-12A; Tr. 392).<sup>43</sup> The omission of the fans from the written lockout procedures underscores the fact the fans operated independently of the cooling bed.

The record shows that the counterweights and fans are not connected or attached. The rakes, counterweights, drive shaft, drive motors, and chains were not the subject of Action's servicing and maintenance work nor were the fans a component of or secured to the rakes and counterweights. The fans and counterweights serve different purposes and function differently, although part of the cooling bed process. The fans and counterweights are not interconnected components and have separate lockouts.

According to the steel mill technician, there is no interconnection or sensor to make the fans operate when the counterweights are operating. There are no electrical connections between the fans and drive chains that tells the fans to turn on when the chain drives are on (Tr. 287). The fans are not part of a single integrated system such as the counterweights, drive shafts, drive motors, and chains which move the cooling bed up and down and the heated metal across the bed. The fans operated independently of the counterweights.

Despite the Secretary's attempt to characterize the cooling bed as one system, it is not "material" based on the language in OSHA's directive CPL 02-00-147 (November 11, 2008) (Exh. R-5). As shown by the directive, the LOTO standards do not apply to the counterweights

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<sup>43</sup> The steel mill written procedure showing the lockout of the fans was rejected at the hearing because it could not be authenticated. The date of the document was after the accident and the technician could not remember seeing or using the document (Exh. C-21B; Tr. 277, 327).

because it was not the subject of Action's servicing of the fans and it functioned independently from and was not a sub-system of the fans being serviced. Chapter 1, IX. BB (p. 1-10) of the CPL which cites *The Timken Company*, 20 BNA OSHC 1070 (No. 97-0970, 2003) as a reference,<sup>44</sup> provides that:

the LOTO standard does not apply to equipment or machinery that is not the subject of the servicing and maintenance activity and that functions independently from, and is not a sub-system of, the machine/equipment being serviced or maintained. If authorized employees are exposed hazardous energy associated with such an adjacent machine/piece of equipment while performing servicing/maintenance work on an independent, unrelated machine/piece of equipment, an employer's obligations are established by Section 5(a)(1) of the OSH Act or other relevant standards, such as the Machine guarding (Subpart O) requirements" (Exh. R-5).

By its own language, OSHA's CPL limits the application of LOTO to a "subsystem of, the machine/equipment being serviced or maintained." The counterweights were not a sub-system of the fans. The fans were not an operating component of the counterweights.

In the *Timken* case, an employee was repairing a drive bar on the teeming car in a slot adjacent to the traverser pit. *Timken Co.*, 1998 CCH OSHD 31,688, p. 43,956-43,957 (No. 97-0970, 1998, ALJ). The traverser and the teeming car were designed to transport the steel from points in the plant. The employee was injured while servicing the teeming car when the traverser car, an independent motorized unit that assisted in moving the teeming car, moved past the slot in which the employee was working and amputated his feet. The teeming car was locked out but the traverser car was not. The ALJ found that LOTO did not apply because the traverser was not a component of the teeming car. They were not interconnected or appurtenant components of a machine or equipment. They functioned independently; the traverser only moved the teeming cars, which held the ingot molds, from station to station for various processes. Once the traverser had moved the teeming car into a slot, it moved on to another assignment. In the case at issue, the fans also functioned independently of the counterweights.

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<sup>44</sup> The Review Commissioners disagreed on the appropriate disposition of the case and vacated the direction for review, allowing the ALJ decision to become a final order with no precedential value as an un-reviewed ALJ decision. *Timken Co.*, 20 BNA OSHC 1070, 1072 (No. 97-0970, 2003).

Also, it is noted that the Secretary in the LOTO standards uses the prepositions “on” or “of” when addressing the application of servicing and maintenance. See *i.e.* § 1910.147(a) and § 1910.147(c). The standard at issue, § 1910.147(f)(3)(ii)(D), prohibits employees from “working on the machine or equipment being serviced or maintained” before putting their locks on the gang lockbox. The use of such prepositions connote “belonging to or connected with” and “in contact with” the machine and equipment. The Secretary’s definition of “servicing and maintenance” and her language throughout the LOTO standards make it clear that the equipment must be connected with, or in contact with, the machine and equipment being serviced and maintained.

The preamble to the LOTO standard identifies seven typical accidents/hazards covered by LOTO and also shows the Secretary’s intent in applying LOTO. 54 FR 36644, 36,646 (September 1, 1989). The examples used by the Secretary are distinguishable from the circumstances in this case. For example, the conveyor in #2 was an operating component of the hogger upon which the work was being performed *i.e.* the adjacent conveyor fed the hogger during its operation. The hogger had been shut down, but the conveyor feeding the hogger had not been when the accident occurred. Similarly, the other examples show the servicing and maintenance work being performed on the machine and equipment when it was unexpectedly energized or started up. In the Secretary’s examples, the machines and equipment were more permanently interconnected in a single, integrated system distinctly different from the independently functioning fans and counterweights in this case.

The injury here resulted from an unguarded, adjacent counterweight and does not support a LOTO citation. The fans and counterweights operated separately with separate lockouts procedures. Action’s servicing and maintenance work was only on the fans, not the counterweights. The release of stored energy hazard from the counterweight may be covered, but was not alleged, by § 5(a)(1) of the Occupational Safety and Health Act (Act) or the machine guarding standards at 29 C.F.R. § 1910.211 *et seq.*

## **2. The Employees Were Not Servicing the Fans**

It is undisputed that the Action employees were in the basement visually observing the fans to be replaced and discussing the work to be performed (Tr. 374, 397). The employees were no closer to the fans than 8 feet. The leadman testified that visual observation was an important

part of replacing the fans (Tr. 416). The two employees were not working on or touching the fans. They were not exposed to the hazard of an unexpected energization, startup, or release of stored energy from the fans.

The Secretary argues that the Action employees were working. Their discussion about the fans to be replaced was “servicing and maintenance” work. OSHA defines “servicing and/or maintenance” in § 1910.147(b) as:

Workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying, and maintaining and/or servicing machines or equipment. These activities include lubrication, cleaning or unjamming of machines or equipment and making adjustments or tool changes, where the employee may be exposed to the *unexpected* energization or startup of the equipment or release of hazardous energy.

Viewing a machine and equipment such as a fan may be considered an inspecting or setting up activity contemplated by the definition of “servicing and/or maintenance.” Such activities encompass preparation work. “Setting up” is defined as “any work performed to prepare a machine or equipment to perform its normal production operation.” § 1910.147(b). “Inspecting” is not defined by OSHA and, therefore, reference to a common definition is appropriate. Action does not dispute that its employees were authorized employees and replacing the fans is servicing and maintenance for the purpose of LOTO.

However, the critical part of the activity contemplated by OSHA’s definition of “servicing and/or maintenance” is whether the employee is exposed to an “unexpected energization, start up or equipment release of hazardous energy” from the machine and equipment. In this case, the Action employees were not in contact with the fans or within 8 feet of the fans. There is no showing that the leadman and apprentice were exposed to the unexpected energization or release of hazardous energy from the fans while engaged in their viewing and discussing activities.

Therefore, the two Action employees were not engaged in servicing and maintenance work when in the basement discussing their replacement work on the fans.

### **3. Action’s Claim that the Steel Mill Violated LOTO**

According to steel mill procedure, only the steel mill technician had the authority to lock out the machines and equipment for the cooling bed. He was the LOTO authorized employee.

The OSHA standard on group lockout procedure requires the authorized employee to “ascertain the exposure status of individual group members with regard to the lockout or tagout of the machine or equipment.” § 1910.147(f)(3)(ii)(B). The technician testified that when he initiated the mill lockout procedure, he did not know where the Action employees were located (Tr. 294-295).

Although the mill technician should not have locked out the counterweight without verifying the location of the employees, it was clearly his understanding that no employees would be in the basement in a zone of danger. Regardless, Action is not relieved of its responsibility to ensure its employees were safe from hazard. The leadman should not have gone into the basement without ensuring the cooling bed was locked out in accordance with the mills’ procedures.

The Secretary failed to prove the applicability of the cited LOTO standard to the facts in this case. Even if the fans had been properly locked out before the accident occurred, it would not have prevented the counterweight’s release of stored energy that fatally injured the apprentice. Although the court agrees that the Action employees were exposed to hazardous energy associated with the counterweight, the Secretary did not allege a violation under § 5(a)(1) of the Act or the machine guarding standards at 29 C.F.R. § 1910.211 *et seq.* Action’s violation of §1910.147(f)(3)(ii)(D) is not established.

#### **FINDINGS OF FACT AND CONCLUSIONS OF LAW**

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

#### **ORDER**

Based upon the foregoing decision, it is hereby ORDERED:

1. Citation No. 1, Item 1, alleged serious violation of § 1910.147(c)(7)(i), is withdrawn by the Secretary; and
2. Citation No. 1, Item 2, alleged serious violation of § 1910.147(f)(3)(ii)(D), is vacated and no penalty is assessed.

/s/ Ken S. Welsch

KEN S. WELSCH

Judge

Date: May 10, 2013

Atlanta, Georgia