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

SECRETARY OF LABOR, Complainant, v. GENERAL MOTORS CORP., CPCG OKLAHOMA CITY PLANT, Respondent.	:	OSHRC Docket Nos. 91-2834E & 91-2950
INTERNATIONAL UNION, UNITED AUTOMOBILE, AEROSPACE & AGRICULTURAL IMPLEMENT WORKERS OF AMERICA – UAW and LOCAL 1999, Authorized Employee Representative	:	

APPEARANCES:

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For the Complainant

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For the Respondent

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For the Authorized Employee Representative

DECISION

Before: THOMPSON, Chairman; ROGERS, Commissioner.
BY THE COMMISSION:

I. STATEMENT OF THE CASE

Early on the morning of April 4, 1991, at a General Motors Corporation ("GM") automobile manufacturing plant in Oklahoma City, Oklahoma, a motor rail conveyor lift table activated, catching the head of millwright Donald Smith, and killing him instantaneously. As a result of this fatality, the Occupational Safety and Health Administration ("OSHA") conducted an inspection of the GM plant. On September 26, 1991, nearly six months after the accident, OSHA issued to GM a single willful citation, under the Occupational Safety and Health Act of 1970 ("the Act"), 29 U.S.C. §§ 651-678, alleging fifty-seven violations of the general industry lockout/tagout ("LOTO") standard, 29 C.F.R. § 1910.147.[1]

The LOTO standard, which became effective January 2, 1990, was promulgated to prevent industrial accidents during servicing of machines that remain in an operational mode, are turned off but connected to a power source, retain stored energy, or are reactivated by another worker unaware that servicing is in progress. Control of Hazardous Energy Sources (Lockout/Tagout): Final Rule ("Lockout/Tagout I"), 54 Fed. Reg. 36,644 (Sept. 1, 1989); Control of Hazardous Energy (Lockout/Tagout): Final Rule; Suspension of Effective Date ("Lockout/Tagout II"), 54 Fed. Reg. 46,610, (Nov. 6, 1989). In general, the LOTO standard requires an employer to establish a program that includes employee training, use of energy control procedures, and periodic inspections designed to prevent employee exposure to the unexpected energization of equipment during servicing and maintenance operations, and dovetails with the requirements for the safe operation of machines during production, as prescribed by 29 C.F.R. Part 1910, subpart O.

The violations alleged here encompass GM's failure to apply LOTO during the events leading up to the accident, as well as GM's failure to establish an energy control program, utilize and adequately describe its energy control procedure, conduct a periodic inspection of that procedure, and train and retrain employees covered by the standard. The Secretary cited the training and retraining items on a per-employee basis and proposed penalties for all citation

[1] Under Section 9(c) of the Act, the citation here covered a six-month period ("limitations period") that began shortly before the accident. 29 U.S.C. § 658(c) ("[n]o citation may be issued under this section after the expiration of six months following the occurrence of any violation").

items totaling $2.78 million. Both GM and the authorized employee representative, the International Union, United Automobile, Aerospace and Agricultural Implement Workers of America ("UAW"), contested the citation.[2]

After a two-week hearing, Administrative Law Judge Stanley M. Schwartz[3] affirmed all violations before him, except for one retraining item and the five items related to the fatal accident.[4] He assessed a total penalty of $1.945 million. Both the Secretary and GM sought review of the judge's decision before the Commission. For the reasons that follow, we affirm the judge's decision in part, and reverse in part.

II. ISSUES

Under the citation items at issue on review, the Secretary alleges that GM willfully violated multiple provisions of the LOTO standard. The judge affirmed all but six of these items, as alleged, based on his conclusion that the plant's energy control procedure was deficient, training was inadequate, and lockout was "unenforced and seldom used before the accident." In vacating the alleged violations under 29 C.F.R. § 1910.147(d)(2), (d)(3), (d)(4)(i), (d)(5)(i), and (d)(6), the five citation items related to the accident, the judge determined that the Secretary failed to satisfy her burden to show the applicability of the cited standards to the circumstances of the accident.

The issues on review are as follows: (1) whether GM's energy control program and procedure complied with the LOTO standard; (2) whether GM failed to perform a periodic inspection; (3) whether GM failed to train or retrain, as cited, its servicing and maintenance employees; (4) whether the LOTO training and retraining provisions are susceptible to per-employee citation; (5) whether the LOTO standard applied to the motor rail conveyor work; (6) whether the affirmed citation items were properly characterized as willful; and (7) what penalty amounts are appropriate to assess for the affirmed items.

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[2] In Docket 91-2950, GM contested all the citation items, the proposed penalties, and the abatement dates. In Docket 91-2834E, the UAW elected party status and initially protested the abatement dates.

[3] The late Administrative Law Judge E. Carter Botkin presided over the hearing, but upon his death the case was reassigned to Judge Schwartz.

[4] The Secretary withdrew eight citation items by the time the judge issued his decision. The vacated retraining item is not at issue on review.

For the following reasons, we affirm the program and inspection items; affirm or vacate specific training and retraining items based on the evidentiary and legal bases discussed below; affirm the items related to the accident; recharacterize as serious the initial training violations and one sub-item relating to the energy control procedure; affirm all other violations as willful; and determine that both the initial training violations cited under 29 C.F.R. § 1910.147(c)(7)(i) and the retraining violations cited under 29 C.F.R. § 1910.147(c)(7)(iii)(B) are susceptible to citation on a per-employee basis. For the twenty-six affirmed citation items, we assess a total penalty of $692,000.

III. FINDINGS OF FACT

GM's Oklahoma City plant, which opened in 1979, employed about 5,000 workers at the time of the OSHA inspection. The plant contains hundreds of machines, many powered by multiple energy sources. "Skilled trades" employees—including millwrights, electricians, pipefitters, and toolmakers—routinely perform servicing and maintenance on these machines. In 1985, well before the cited standard was promulgated, GM laudably established as part of its joint partnership with the UAW a lockout/tagout training program superseding previous lockout training programs at the plant. GM conducted this joint training in the mid-1980s.

However, before the 1991 accident, GM management at the Oklahoma City plant did not enforce the use of lockout procedures, permitting and even encouraging employees to service machines without locking out. Supervisors observed employees servicing without locking out and took no action, neither stopping the servicing work nor retraining the employees in proper lockout procedures. GM also failed to adequately supply servicing and maintenance employees with necessary safety locks.

IV. GENERAL PRINCIPLES OF LAW

The general industry LOTO standard, effective January 2, 1990, "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 defines servicing and/or maintenance as "workplace activities" exposing an employee to the possibility of unexpected energization such as "constructing, installing, setting up, adjusting, inspecting" as well as "cleaning or unjamming" machines or equipment. 29 C.F.R. § 1910.147(b). Energization is "unexpected" in the absence of some mechanism to provide adequate advance notice of machine activation. *Burkes Mech.*

Inc., 21 BNA OSHC 2136, 2139 n.4 (No. 04-1475, 2007) (distinguishing *Gen. Motors Corp., Delco Chassis Div.*, 89 F.3d 313 (6th Cir. 1996)).

Under the standard, an employer is required to establish an energy control program "consisting of energy control procedures, employee training and periodic inspections to ensure" machines are securely isolated from any and all energy sources before the commencement of service and/or maintenance activities. 29 C.F.R. § 1910.147(c)(1). The energy control procedure must be "developed, documented and utilized" and must "clearly and specifically outline the scope, purpose, authorization, rules, and techniques to be utilized for the control of hazardous energy, and the means to enforce compliance." 29 C.F.R. § 1910.147(c)(4)(i), (c)(4)(ii). Additionally, the LOTO standard prescribes a specific sequence for the application of energy controls to incorporate into each procedure. 29 C.F.R. § 1910.147(d). The standard further requires employers to conduct an annual periodic inspection of the energy control procedure "to ensure that the procedure and the requirements of this standard are being followed." 29 C.F.R. § 1910.147(c)(6).

In addition, the LOTO standard mandates both initial training and retraining in lockout procedures for servicing employees, and other employees who work near machines that are being serviced. 29 C.F.R. § 1910.147(c)(7)(i), (c)(7)(iii). Specifically, the standard requires initial lockout training to "ensure that the purpose and function of the energy control program are understood by employees and that the knowledge and skills required for the safe application, usage, and removal of the energy controls are acquired by employees." 29 C.F.R. § 1910.147(c)(7)(i). Retraining must be provided for servicing employees when "there is a change in their job assignments, a change in machines, equipment or processes that present a new hazard, or when there is a change in the energy control procedures." 29 C.F.R. § 1910.147(c)(7)(iii)(A). Additionally, the employer must provide retraining "whenever the employer has reason to believe[] that there are deviations from or inadequacies in the employee's knowledge or use of the energy control procedures." 29 C.F.R. § 1910.147(c)(7)(iii)(B). The employer must also certify "employee training has been accomplished and is being kept up to date." 29 C.F.R. § 1910.147(c)(7)(iv).

V. CITATION ITEMS—MERITS

A. WILLFUL CITATION 1, ITEMS 1a, 1b, and 1c – ENERGY CONTROL PROGRAM AND PROCEDURES

Under this grouped citation item, the Secretary alleges that GM violated three separate provisions of the LOTO standard by failing to (1) have a compliant energy control program; (2) utilize proper energy control procedures; and (3) articulate its energy control procedures with adequate specificity. The judge found GM in violation of each of the three cited provisions and affirmed this item. For the following reasons, this grouped item is affirmed.

PRINCIPLES OF LAW

The LOTO standard mandates that an employer "shall establish a program consisting of energy control procedures, employee training and periodic inspections to ensure" that machines are deenergized and locked out before an employee performs covered servicing or maintenance. 29 C.F.R. § 1910.147(c)(1). The energy control procedures "shall be developed, documented and utilized for the control of potentially hazardous energy when employees are engaged in" covered activities. 29 C.F.R. § 1910.147(c)(4)(i). These procedures "shall clearly and specifically outline the scope, purpose, authorization, rules, and techniques to be utilized for the control of hazardous energy, and the means to enforce compliance." 29 C.F.R. § 1910.147(c)(4)(ii). Additionally, procedures must include "specific" statements of the intended use of the procedure, procedural steps for performing both shutdown and lockout, and requirements for testing and verifying lockout. 29 C.F.R. § 1910.147(c)(4)(ii)(A)-(D).

ANALYSIS

1. Item 1a—29 C.F.R. § 1910.147(c)(1) (energy control program)

Under this sub-item, the Secretary alleges that GM lacked a program containing sufficient energy control procedures and employee training to ensure effective use of LOTO "in accordance with [the provision specifying energy control procedures]." As a threshold matter, we reject GM's argument—raised for the first time on review—that this sub-item should be vacated because it is duplicative of sub-items 1b and 1c, which allege deficiencies pertaining to the effective implementation of GM's energy control program. Violations are duplicative "where the standards cited require the same abatement measures, or where abatement of one citation item will necessarily result in the abatement of the other item as well." *Rawson Contractors, Inc.*, 20 BNA OSHC 1078, 1082 n.5, 2002-04 CCH OSHD ¶ 32,657, p. 51,328 n.5

(No. 99-0018, 2003). The three provisions cited under this grouped citation item separately require the establishment of an energy control program as well as the implementation of prescribed components of that program. Thus, establishing a fully compliant energy control program would not abate a failure to implement the components of that program, nor would implementation of required energy control procedures abate a failure to establish a program. *See W.G. Fairfield Co.*, 19 BNA OSHC 1233, 1238 n.15, 2000 CCH OSHD ¶ 32,216, p. 48,867 n.15 (No. 99-0344, 2000) ("[T]he requirement to establish a program . . . [is] not duplicative of the requirement to train employees in the elements and implementation of that program, even though the program requirement may derive from the training requirement."), *aff'd*, 285 F.3d 499, 504 (6th Cir. 2002) (affirming both program and training violations, court noted that "[s]tated simply, one citation was for not making the proper policies, and the other was for not instructing employees on those policies").

With respect to the merits of this sub-item, the record shows that GM's energy control program was deficient. GM's plant safety and ergonomics manager, William Young, admitted that GM never established the periodic inspection component of its energy control program. Young "thought [the plant's] existing program was compliant, with one exception . . . [t]he need to conduct a periodic audit." According to Young, not only had the plant failed to conduct a periodic inspection "in the context of the provisions of the standard" by the time the accident occurred, but plant management was still "discussing the audit" and "reviewing" the standard's inspection provision at that time. Moreover, when asked to recite what elements formed the plant's energy control program, Young noted only the plant's written energy control procedures and the joint UAW-GM training manual—he made no mention of periodic inspections.

Based on this evidence, GM failed to establish a compliant energy control program as required under § 1910.147(c)(1). Accordingly, Item 1a is affirmed.

2. Item 1b—29 C.F.R. § 1910.147(c)(4)(i) (development, documentation and utilization of energy control procedures)

Under this sub-item, the Secretary alleges that GM failed to use required lockout procedures to deenergize "motor rail conveyors and other machinery," subjecting authorized

employees[5] to hazards caused by unexpected energization.[6] More than thirty GM employees testified at the hearing. Numerous employees testified that they performed servicing and/or maintenance during the limitations period without locking out. Some of these employees explained that they could not lock out because they were not given a safety lock until after the accident. Additionally, several testified they had been injured or could have been injured by unexpected energizations while performing servicing and/or maintenance without locking out. *Cf. Interstate Brands Corp.*, 20 BNA OSHC 1102, 1106, 2002 CCH OSHD ¶ 32,656, p. 51,321 (No. 00-1077, 2003) (rejecting allegation that employer failed to properly utilize LOTO where record lacked evidence about the type of work performed, whether equipment could unexpectedly energize and cause injury, and whether employee worked in danger zone).

Moreover, numerous employees testified that supervisors had observed them performing service and maintenance work on equipment without locking out. According to several employees, pressure from supervisors to avoid production delays discouraged employees from locking out.[7] As electrician Patrick Parker stated in a written statement to an OSHA investigator:

> To use the LOTO program would rock the boat and [employees] could lose a good position/job. Basically GM was aware of the hazards created by not having a LOTO program, but they made no effort to implement a good program because

[5] The LOTO standard defines an "[a]uthorized 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).

[6] In affirming this sub-item we do not rely on evidence pertaining to the motor rail conveyor accident, which is separately cited in Items 53-57 under the more specific standards that "'set[] forth the measures that . . . must [be] take[n] to protect employees from [the] *particular hazard.*'" *Brock v. L.R. Willson & Sons, Inc.*, 773 F.2d 1377, 1381 (D.C. Cir. 1985) (citation omitted); 29 C.F.R. § 1910.5(c)(1) ("If a particular standard is specifically applicable to a condition, . . . it shall prevail over any different general standard which might otherwise be applicable to the same condition . . . ."). Accordingly, the penalty amount for grouped Item 1a-c is adjusted to reflect the narrower evidentiary grounds on which this sub-item is affirmed. *Cf. Burkes Mech. Inc.*, 21 BNA OSHC at 2142 (assessing grouped penalty for interrelated LOTO citation items where both citations pertained to one single event—the failure to utilize LOTO for a single piece of equipment while employees cleaned debris from its underside).

[7] The record also contains numerous examples of a pervasive management effort at the plant to encourage employees to forego lockout in favor of production concerns. Although this evidence relates to incidents that occurred outside the limitations period, we consider these examples consistent with what occurred during that period, particularly because these efforts began before the LOTO standard's promulgation and continued thereafter, up until the hearing.

> it would delay production. . . . I don't think a LOTO program would delay production, however it[']s in the[ir] mind that it may – it[']s a corporate mentality; to take shortcuts and use whatever to get the production out. Production is king. Employees are always taking risks of one sort or another under pressure to get things done and shortcuts. Supervisors let this happen because they can always squeeze one more car out.

Another employee testified that this pressure from supervisors was "the only reason" he did not lock out.

Based on this evidence, GM failed to utilize energy control procedures in violation of § 1910.147(c)(4)(i). Accordingly, Item 1b is affirmed.

3. Item 1c—29 C.F.R. § 1910.147(c)(4)(ii) (specificity of energy control procedures)

Under this sub-item, the Secretary alleges that GM failed to "clearly and specifically" describe its energy control procedures and the means to enforce compliance. The record establishes that GM's lockout procedure is not only inadequate for its more complex equipment, but also lacks the specificity required by the standard.[8] The cited LOTO provision requires an employer to "clearly and specifically" outline the methods to be used in controlling hazardous energy, including "specific" statements of intent, procedural steps for shut down, procedural steps for locking out, and requirements for testing the effectiveness of the energy control measures used. 29 C.F.R. § 1910.147(c)(4)(ii). In the preamble to the LOTO standard final rule, OSHA rejected suggestions that it remove "specific" as a modifier, explaining its retention "to emphasize the need to have a detailed procedure, one which clearly and specifically outlines the steps to be followed." Lockout/Tagout I, 54 Fed. Reg. at 36,670. According to the preamble, "[o]vergeneralization can result in a document which has little or no utility to the employee who must follow the procedure." *Id.*

At the same time, the preamble provides that a single procedure "can apply to a group of similar machines, types of energy and tasks if [it] can address the hazards and the steps to be

[8] On review, GM appears to interpret the judge's decision as requiring the company to create machine-specific procedures. The judge, however, simply found some machines to be more complex than others, and determined that the energy control procedures for those machines must be specific enough to guide an authorized employee to effectively lock out. Because a need for machine-specific procedures was neither argued by the Secretary nor considered by the judge, we do not address GM's arguments concerning OSHA's pre-promulgation reliance on studies purportedly indicating that such procedures were not contemplated by the LOTO standard.

taken satisfactorily." *Id.* As GM acknowledges, the amount of detail required would depend on "the complexity of the equipment and the control measures to be utilized." *Id.*; *cf. Drexel Chem. Co.*, 17 BNA OSHC 1908, 1913, 1995-97 CCH OSHD ¶ 31,260, p. 43,876 (No. 94-1460, 1997) ("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."). 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. Emphasizing this point, the Secretary's expert witness, OSHA safety specialist Richard Sauger, testified:

> If you have a very simple machine [with] a single energy source and the energy source is immediately available . . . so it can be identified as being the energy-isolating device for a machine, then your procedure can be very simple. However, the more complex the machine the more detail you would necessarily need so that the employee could gain the knowledge to be able to do the job safely; i.e., lock out the machine.

The purpose of the prescribed lockout procedure is "to guide an employee through the lockout process." *Drexel Chem. Co.*, 17 BNA OSHC at 1913, 1995-97 CCH OSHD at p. 43,876. The Commission has rejected an employer's incomplete "generic[]" energy control procedure—apparently "derive[d] from Appendix A to § 1910.147," finding that such "general procedures are not acceptable." *Id*. at 1913, 1995-97 CCH OSHD at pp. 43,875-76. Observing that the LOTO standard's appendix leaves blank spaces for the employer to fill in, the Commission noted in *Drexel* that the company had failed to fill in any of this information. *Id.* As a result, the Commission concluded that Drexel's procedures "fall far short of the standard's requirements. They provide no information about Drexel's machines that would enable an employee to lock out a machine safely." *Id.*

Here, GM's three-page lockout procedure briefly states that its purpose is to secure machinery and equipment undergoing servicing. It describes the lockout sequence generically as shutting down "by the normal stopping procedure," followed by isolation of identified types of energy sources and dissipation of any stored energy, and provides for restoration of energy "[w]hen the job is complete" after checking that "no one is exposed" and the "equipment is all clear." The most detailed discussion in GM's procedure concerns effective lockout verification,

which directs an employee to first "assur[e that] no personnel are exposed," and then "operate push button or other normal operating controls to make certain the equipment will not operate."

We agree with the judge that GM's procedure "lacks a number of the specifics set out in the sample [Appendix A to the standard] and required by the standard." Although this procedure contains slightly more information than the one at issue in *Drexel*, it similarly fails to inform the employee of the specific procedural steps to shut down and lock out a machine. GM's procedure also specifies some types of energy isolating devices, but provides no additional information on GM's "machines that would enable an employee to lock out a machine safely." *Id.* at 1913, 1995-97 CCH OSHD at p. 43,876. Finally, like the energy control procedure at issue in *Drexel*, GM's procedure fails to fill in the blanks from the standard's appendix, such as the "Type of compliance enforcement to be taken" and the "Name(s)/Job Title(s) of affected employees and how to notify." 29 C.F.R. § 1910.147 app. A; 17 BNA OSHC at 1913, 1995-97 CCH OSHD at p. 43,876.

We also conclude that GM's procedure was inadequate with respect to the plant's more complex equipment. GM staff engineer Richard Parry testified that the "energy sources and their magnitudes are universal throughout the whole plant" and the energy-isolating devices on the plant's machines "are universally the same type of unit" and are "all readily and easily identifiable." Using the plant's written procedure, Parry asserted, an authorized employee could control the energy sources to every machine in the plant. The record shows, however, that the plant contained very complex machines, including the motor rail conveyor—the machine on which the accident occurred—which 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. Indeed, although GM engineer Parry may have been able to lock out the conveyor applying GM's procedure, the decedent—a journeyman millwright with ten years of experience—was so concerned about his unfamiliarity with the conveyor that he told his supervisor he feared "get[ing] [his] damned head caught in that thing." Based on this evidence, GM's bare-bones procedure was inadequate to effectively guide its servicing and maintenance employees through the process of fully deenergizing and locking out this complex equipment.

In these circumstances, GM's energy control procedure was both too general to satisfy the specificity requirement of § 1910.147(c)(4)(ii) and inadequate for employees required to service complex machinery such as the motor rail conveyor. Accordingly, Item 1c is affirmed.

B. WILLFUL CITATION 1, ITEM 2 – PERIODIC INSPECTION

Under this item, the Secretary alleges GM failed to conduct an annual periodic inspection of the energy control procedure within one year of the LOTO standard's effective date. In affirming the violation, the judge relied on the admission of plant safety and ergonomics manager Young that GM had failed to conduct the required inspection by the time OSHA arrived at the worksite. On review, GM claims that Young's testimony—that he "thought [GM's] existing program was compliant, with one exception . . . [t]he need to conduct a periodic audit"—does not amount to an admission of wrong-doing, and that GM was "unsure" of what the LOTO standard's inspection provision required, including when the first inspection had to be conducted. For the following reasons, this item is affirmed.

PRINCIPLES OF LAW

The LOTO standard mandates that an employer perform a "periodic inspection" of the prescribed energy control procedure "at least annually." 29 C.F.R. § 1910.147(c)(6)(i).[9] Given that the LOTO standard became effective on January 2, 1990, an employer subject to the standard's requirements was required to conduct an annual inspection of its energy control procedure within one year of that date. Lockout/Tagout II, 54 Fed. Reg. at 46,610; OSHA Instruction STD 1-7.3—*29 CFR 1910.147, the Control of Hazardous Energy (Lockout/Tagout)—Inspection Procedures and Interpretive Guidance* pt. D. (Sept. 11, 1990) ("OSHA Instruction STD 1-7.3").

[9] Section 1910.147(c)(6)(i) provides:

> (6) *Periodic inspection.* (i) The employer shall conduct a periodic inspection of the energy control procedure at least annually to ensure that the procedure and the requirements of this standard are being followed.
>
> (A) The periodic inspection shall be performed by an authorized employee other than the ones(s) utilizing the energy control procedure being inspected.
>
> (B) The periodic inspection shall be conducted to correct any deviations or inadequacies identified.
>
> (C) Where lockout is used for energy control, the periodic inspection shall include a review, between the inspector and each authorized employee, of that employee's responsibilities under the energy control procedure being inspected.
>
> (D) Where tagout is used for energy control, the periodic inspection shall include a review, between the inspector and each authorized and affected employee, of that employee's responsibilities under the energy control procedure being inspected, and the elements set forth in paragraph (c)(7)(ii) of this section.

ANALYSIS

As discussed above with respect to the program violation (Item 1a), Young confirmed that GM had failed to conduct the required inspection of its energy control procedure as of the April 4, 1991 accident—more than one year after the standard's effective date. As GM acknowledges, Young explained that "[w]e had not conducted an audit in the context of the provisions of the standard." Indeed, GM admitted before the judge that "[i]t is not disputed that annual inspections were required, but [that it] did not know when the first one was required to occur." According to Young, GM was "confus[ed]" in interpreting the standard and, at the time of the accident, was "discussing the audit," including when it would have to be completed.

However, based upon the standard, its preamble, and the LOTO compliance directive, GM was required not only to establish a compliant energy control procedure at the time of the January 2, 1990 effectuation of the standard, but to conduct its first annual inspection of that procedure within one year. *See Manganas Painting Co.*, 21 BNA OSHC 1964, 1990, 2007 CCH OSHD ¶ 32,908, p. 53,405 (No. 94-0588, 2007) (finding employer's compliance with newly-promulgated standard required "upon effectuation and pursuant to [any] applicable startup dates"). Therefore, GM's asserted confusion "would not be relevant to whether a violation is established" where, as here, the law setting forth the requirement is plain. *Froedtert Mem'l Lutheran Hosp., Inc.*, 20 BNA OSHC 1500, 1509, 1999 CCH OSHD ¶ 31,865, p. 47,029 (No. 97-1839, 2004) (holding an employer's misunderstanding of law irrelevant to whether a violation has been established where statute "plainly states" its applicability).[10]

In addition, GM's argument that the periodic inspection provision created confusion due to a lack of "objective criteria" is meritless. The standard expressly requires an employer to

[10] Although the evidence with respect to Item 2 is similar to that which we rely upon to support affirming the program violation under Item 1a, we do not find these two citation items to be duplicative. For Item 1a, abatement consists of *establishing* an energy control program that contains a periodic inspection element. 29 C.F.R. § 1910.147(c)(1). For Item 2, abatement consists of *implementing* the periodic inspection element of the program. In this case, GM neither established nor implemented a periodic inspection of its energy control procedures. *See W.G. Fairfield Co.*, 19 BNA OSHC at 1238 n.15, 2000 CCH OSHD at p. 48,867 n.15 (finding "the requirement to establish a program . . . not duplicative of the requirement to train employees in the elements and implementation of that program, even though the program requirement may derive from the training requirement"), *aff'd*, 285 F.3d at 504 (affirming both program and training violations, court noted that, "[s]tated simply, one citation was for not making the proper policies, and the other was for not instructing employees on those policies").

conduct periodic inspections "to correct any deviations or inadequacies" in the employer's energy control procedure and prescribes a review of lockout procedures with "each authorized employee." 29 C.F.R. § 1910.147(c)(6)(i)(B)-(C). Additionally, the preamble identifies the bases on which the adequacy of the procedure must be evaluated—i.e., "whether the steps in the energy control procedure are being followed; . . . whether the employees involved know their responsibilities under the procedure; and . . . whether the procedure is adequate to provide the necessary protection, and what changes, if any, are needed." Lockout/Tagout I, 54 Fed. Reg. at 36,673. *See Am. Sterilizer Co.*, 15 BNA OSHC 1476, 1478, 1991-93 CCH OSHD ¶ 29,575, pp. 40,015-16 (No. 86-1179, 1992) (noting preamble is "best and most authoritative statement of the Secretary's legislative intent" for standard susceptible to different interpretations). OSHA's LOTO compliance directive further specifies that the "[periodic] inspections shall at least provide for a demonstration of the procedures and may be implemented through random audits and planned visual observations." OSHA Instruction STD 1-7.3 pt. I.5.a. This directive explains that "[periodic] inspections are intended to ensure that the energy control procedures are being properly implemented and to provide an essential check on the continued utilization of the procedures . . . ." *Id.* Thus, the LOTO standard fully identifies its objectives and provides an employer with the opportunity to comply with this provision in any manner that corrects the deficiencies and inadequacies found either in an employee's knowledge or in the energy control procedures. 29 C.F.R. § 1910.147(c)(6)(i)(B).

In these circumstances, the Secretary has established that GM violated the periodic inspection provision. Accordingly, Citation 1, Item 2 is affirmed.

C. WILLFUL CITATION 1, ITEMS 3-7, 11, 14-16, 18, 19, 21-29, 44, 50 – INITIAL TRAINING

Under these items, the Secretary alleges on a per-employee basis that GM failed to provide required initial lockout training prescribed by § 1910.147(c)(7)(i) to twenty-two authorized and affected employees. The judge affirmed all of the citation items on review, finding that each employee received no lockout training, insufficient lockout training, or inadequate lockout training.[11] On review, GM contends the Secretary failed to establish it did

[11] We note that an employee's failure to perform lockout does not necessarily indicate that the employee was not initially trained in LOTO. *See N & N Contractors, Inc.*, 18 BNA OSHC 2121, 2127, 2000 CCH OSHD ¶ 32,101, p. 48,244 (No. 96-0606, 2000) (distinguishing between employee "*practices*" and training, Commission vacated alleged fall protection training violation

not provide adequate lockout training to these employees. It argues that an employee's failure to recall training does not show the training did not occur, and that lockout training contained in equipment-specific courses satisfied the general LOTO training requirement. For the following reasons, we affirm Items 3, 4, 7, 14, 16, and 44, and vacate Items 5, 6, 11, 15, 18, 19, 21-29, and 50.

PRINCIPLES OF LAW

The LOTO standard mandates that an employer "shall provide training to ensure that the purpose and function of the energy control program are understood by employees and that the knowledge and skills required for the safe application, usage, and removal of the energy controls are acquired by employees." 29 C.F.R. § 1910.147(c)(7)(i). The initial training provision also specifies the necessary lockout training for authorized, affected, and all other employees.[12] 29 C.F.R. § 1910.147(c)(7)(i)(A)-(C). Each authorized employee must receive training "in the recognition of applicable hazardous energy sources, the type and magnitude of the energy available in the workplace, and the methods and means necessary for energy isolation and control" and each affected employee must receive training "in the purpose and use of the energy control procedure." 29 C.F.R. § 1910.147(c)(7)(i)(A)-(B). To establish a violation, the Secretary must show by a preponderance of the evidence that: "(1) the standard applies, (2) the employer violated the terms of the standard, (3) its employees had access to the violative condition, and (4) the employer had actual or constructive knowledge of the violative condition."

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despite employee non-compliance with fall protection rules), *aff'd per curiam*, 255 F.3d 122 (4th Cir. 2001). Therefore, unlike the judge, we do not rely herein on any employee's failure to utilize LOTO as evidence of a failure to provide LOTO training.

[12] The LOTO standard defines the two types of employees as follows:

> *Affected employee.* An employee whose job requires him/her to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or tagout, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed.
>
> *Authorized employee.* A person who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment. An affected employee becomes an authorized employee when that employee's duties include performing servicing or maintenance covered under this section.

29 C.F.R. § 1910.147(b).

Fluor Daniel, 19 BNA OSHC 1529, 1530, 2001 CCH OSHD ¶ 32,443, p. 50,044 (No. 96-1729, 2001) (consolidated) (citations omitted), *aff'd*, 295 F.3d 1232 (11th Cir. 2002).

As a general matter, the substantive requirements of the LOTO standard apply "where the Secretary shows that unexpected energizing, start-up or release of stored energy could occur …." *Gen. Motors Corp., Delco Chassis Div.*, 17 BNA OSHC 1217, 1219, 1993-95 CCH OSHD ¶ 30,793, p. 42,809 (No. 91-2973, 1995) (consolidated), *aff'd*, 89 F.3d at 313; 29 C.F.R. § 1910.147(a)(1)(i). The Secretary establishes the "access" element of establishing a violation under this standard where the evidence shows it is reasonably predictable that an employee engaged in servicing or maintenance will be exposed to the hazard of unexpected energization. *Fabricated Metal Prod. Inc.*, 18 BNA OSHC 1072, 1074, 1995-97 CCH OSHD ¶ 31,463, pp. 44,506-07 (No. 93-1853, 1997) (holding exposure established where "reasonably predictable" employee will be in danger zone). However, with regard to training, it would be unreasonable to require that an employee be exposed to a hazard before requiring that he be trained to recognize and avoid that hazard. Accordingly, where an employee's job assignment includes equipment servicing or maintenance, and it is reasonably predictable that the employee will encounter the hazard of unexpected energization while performing such work, we conclude the requirements of the LOTO standard apply and training is required.

ANALYSIS

To determine applicability of the standard's initial training requirements in this case, we evaluate below the evidence of each citation item individually, examining whether the record establishes that each employee was assigned to perform servicing or maintenance during the limitations period on equipment at the GM plant which poses the hazard of unexpected energization.[13] Where the evidence establishes these elements, we conclude that the servicing and maintenance performed by these employees on this machinery makes it reasonably

[13] Where, as here, the evidence shows switches and buttons used to operate energized equipment undergoing servicing and maintenance could be accessed by any passerby to reactivate a shut down machine, the Secretary has established that the energization of such equipment would be unexpected. *Burkes Mech., Inc.*, 21 BNA OSHC at 2139 n.4. GM has failed to rebut this conclusion here, as it introduced no evidence showing that reactivation of the plant's equipment under these circumstances would not be immediate or would provide a warning that would make it expected. *Id.* (distinguishing *Gen. Motors Corp., Delco Chassis Div.*, 89 F.3d at 313).

predictable they would be exposed to the hazard of unexpected energization during the course of their duties, such that the applicability of the standard to these employees is established.

We also find that with respect to those citation items we affirm, the Secretary established GM "either knew of the [training violations] or could have known with the exercise of reasonable diligence." *Armstrong Steel Erectors, Inc.*, 17 BNA OSHC 1385, 1386, 1995-97 CCH OSHD ¶ 30,909, p. 43,040 (No. 92-262, 1995); *see also N & N Contractors, Inc.*, 18 BNA OSHC at 2123, 2000 CCH OSHD at p. 48,239 ("actual or constructive knowledge of a foreman or supervisor can be imputed to the employer"). In assessing reasonable diligence, the Commission has considered "several factors, including the employer's obligation to have adequate work rules and training programs, to adequately supervise employees, to anticipate hazards to which employees may be exposed, and to take measures to prevent the occurrence of violations." *Precision Concrete Constr.*, 19 BNA OSHC 1404, 1407, 2001 CCH OSHD ¶ 32,331, p. 49,552 (No. 99-0707, 2001).

GM safety supervisor Jerrie Wallace testified that, prior to the accident, GM periodically asked its employee-trainers about the "status o[f] the lock-out training" on an "informal" basis. She said the most recent training status check prior to May 1991 occurred "probably a few months" earlier. Wallace also testified that GM safety supervisors would "rely . . . totally [on the employee-trainers] to maintain our records and to let us know when there [are] training deficiencies." According to Wallace, it was her "understanding" from those inquiries that one hundred percent of GM employees had been trained in LOTO. Plant management, however, never requested documentation of training attendance at the 1985-86 joint UAW-GM lockout training course from the employee-trainers until after the accident. Moreover, Wallace acknowledged that the attendance roster she created after the accident to document those employees who lacked training may contain numerous errors. In fact, plant safety and ergonomics manager Young reviewed Wallace's roster and concluded that "much of it is inaccurate."

Based on this evidence, we conclude that GM failed to adequately assess its employee training needs. Specifically, the company relied on records kept by its employee-trainers that management never monitored and for which managers requested no documentation until after the accident. Although the practice of having employee-trainers maintain training records originated before the standard's promulgation, the record shows it continued until the time of the accident.

In these circumstances, GM's failure to confirm the training status of its employees by means other than "informal" and "periodic" conversations with the employee-trainers demonstrates a lack of diligence regarding its training obligation under the standard. Accordingly, we find GM had constructive knowledge of any failures to provide required LOTO training to the employees at issue. *Cf. Froedtert*, 20 BNA OSHC at 1508-09, 1999 CCH OSHD at pp. 47,028-29 (finding failure to effectively delegate training obligation where employer never confirmed that training was provided).

We turn now to the individual citation items alleged under the initial LOTO training provisions.

1. Authorized employees: Items 3-7, 11, 14-16, 18, 19, 21-23, 44, 50

Under these items, the Secretary alleges that GM failed to provide lockout training to sixteen authorized employees under 29 C.F.R. § 1910.147(c)(7)(i)(A). Based on our review of the record, which includes the testimony of all sixteen employees, we find the Secretary established that GM failed to provide initial lockout training to six of these sixteen authorized employees. Accordingly, as discussed in detail below, we affirm Items 3, 4, 7, 14, 16, and 44, and vacate Items 5, 6, 11, 15, 18, 19, 21-23, and 50.

a. Affirmed Items

Item 3 – Millwright Alton Tucker worked in his position since 1985 and, at the time of the accident, serviced and maintained "[a]ny mechanical machine" that might have electrical, pneumatic, or hydraulic energy sources. Tucker also performed servicing on the motor rail conveyor on a regular basis. He did not recall receiving "any type" of lockout training prior to the accident, or ever seeing the two joint UAW-GM lockout training manuals entered into evidence.[14] Tucker acknowledged having eight hours of robotics training in April 1990, sixteen

[14] Many authorized employees testified on direct examination they did not recall receiving any lockout training from GM before the accident. GM argues that an employee could have "received the required training and still not remember any such session," because two employees who testified they had not been trained later recanted. The joint UAW-GM lockout training course was eight-hours long and accompanied by a 111-page training manual. In our view, an employee's failure to remember such detailed, intensive training would establish, *prima facie*, that the employee did not attend that training course, which GM could then rebut with evidence of the employee's attendance. Any such rebuttal evidence is addressed where pertinent to an individual citation item.

hours of laser training in October 1990, and eight hours of forklift training in December 1990.[15] However, when asked specifically whether he was "ever trained by General Motors on how to determine if hazardous energy has been controlled prior to the time of Don Smith's accident[,]" Tucker replied: "No, ma'am. When you hire in at General Motors, you are supposed to have enough background in that field to know that yourself."

Based on this evidence showing Tucker's job assignment included servicing and maintenance on all types of equipment during the period covered by the citation, we find the Secretary established that any lockout training Tucker received during other safety training courses was insufficient under the standard. Accordingly, we affirm this citation item.

Item 4 – Millwright Steven Greenwood worked in the body shop where he serviced and maintained equipment in the motor rail area at the time of the accident. Greenwood completed his apprenticeship before being hired by GM as a journeyman millwright, and acknowledged he felt proficient in lockout at the time he was hired. Nonetheless, Greenwood could not recall receiving "any formal lockout training before the accident," but did recall "being issued a safety lock, and [attending] . . . safety meetings, but never . . . an eight-hour or a five-day lock-out training, or what [he] would consider formal training . . . ." He "guess[ed] they pretty much took for granted that you knew what a safety lock was for."

Greenwood described the safety meetings he attended prior to the accident as lasting fifteen or twenty minutes and "probably" including some lockout information "at times[,]" but did not recall being shown how to lock out a specific piece of equipment. He also indicated his robotics training contained "[q]uite a bit of lock-out" and described it as "all types of basic robotic safety, including the proper way to lock one out . . . [but] pretty much [specific only to the robots]." Based on this evidence showing Greenwood's job assignment included servicing

[15] Like Tucker, some employees who did not recall having general lockout training testified that they received some form of lockout training as part of robotics, forklift, and/or laser training courses. The little record evidence concerning the content of any of this training, however, suggests that it principally pertained to the particular type of equipment—robotics, forklifts, or lasers—being addressed. Indeed, the judge explicitly found that the robotics training "addressed lockout only as to robots." Therefore, in the absence of any rebuttal evidence from GM as to the lockout instruction provided in these other training courses, we find an employee's participation in such training would not satisfy the requirements of the cited standard for those employees who worked on equipment other than robots, forklifts, or lasers.

and maintenance on all types of equipment during the period covered by the citation, we find the Secretary established that any lockout training Greenwood received during other safety training courses was insufficient under the standard. Accordingly, we affirm this citation item.

Item 7 – Journeyman toolmaker Robert B. Peliti worked in "the shop" at the time of the accident, where he re-made and repaired parts, and worked on "the floor"—including the motor rail area—at least two or three times a week repairing machines. Prior to the accident, Peliti did not receive any training on the joint UAW-GM lockout training manual, but did attend eight-hour courses in forklifts, lasers, and robotics in 1988 and 1990. Based on this evidence showing Peliti's job assignment included servicing and maintenance on all types of equipment during the period covered by the citation, we find the Secretary established that any lockout training Peliti received during equipment-specific training courses was insufficient under the standard. Accordingly, we affirm this citation item.

Item 14 – Equipment cleaner Anthony Jackson worked in the paint shop on the maintenance shift at the time of the accident. His work entailed changing the floor grates, spraying acid on machinery, and wiping down the equipment, including the paint sprayers. According to Jackson, he did not utilize lockout while doing this work prior to the accident, but is now required to do so. Jackson also recalled an incident involving equipment that should have been "turned off" but moved when he bumped up against it, and "probably could have broke[n] [his] jaw" had he not jumped back. Jackson testified unequivocally he had not received any lockout training "during [his] entire employment" at the plant prior to the accident. Despite counsel's assertion that GM records not introduced into evidence would establish Jackson's attendance at a November 17, 1982 lockout training session described as "not . . . the eight-hour GM/UAW course, but . . . some training," Jackson did not remember receiving such training.

We find this evidence sufficient to establish Jackson was an authorized employee whose job assignment included servicing and maintenance on energized equipment during the period covered by the citation, and that GM failed to provide him required initial lockout training. 29 C.F.R. § 1910.147(b) (servicing and/or maintenance includes cleaning of machines). Accordingly, we affirm this citation item.

Item 16 – Millwright Gregory Keith Beam worked in the paint department on the maintenance shift during the limitations period. According to Beam, his work took him to other areas of the plant "[q]uite often [—] [t]wo or three times a week." Beam specifically mentioned

working in the motor rail area or body shop before the accident, and he generally described performing work for which lockout would have been required. Beam did not remember receiving any pre-accident lockout training, but he did receive both forklift and robotics training. Based on this evidence showing Beam's job assignment included servicing and maintenance on all types of equipment during the period covered by the citation, we find the Secretary established that any lockout training Beam received during other safety training courses was insufficient under the standard. Accordingly, we affirm this citation item.

Item 44 – Equipment cleaner Eunice Kennedy worked in the paint department at the time of the accident. Her duties included lifting grates and mopping, as well as wrapping plastic around an automatic floor-to-ceiling paint sprayer that spins when energized. Kennedy testified unequivocally that prior to the accident she had neither been instructed in lockout nor been issued a safety lock. According to Kennedy, prior to the accident she was only told "if the red light is on, don't go in," and stated that if an employee was in the machine when it would spin, "it would cut you up." GM introduced rebuttal evidence consisting of a signed statement Kennedy made to OSHA which states she received lockout training in the winter of 1990 in a four-hour course. Kennedy admitted she signed the statement believing it to be "true and accurate at the time," but also testified that the date on her signed statement was incorrect and reiterated she "received [her] lock-out training after the accident."

We find that Kennedy was an authorized employee, as her job assignment included servicing and maintenance of energized equipment during the period covered by the citation. 29 C.F.R. § 1910.147(b) (servicing and/or maintenance includes cleaning of machines). We also find Kennedy's unwavering assertion that she did not receive lockout training before the accident, coupled with her characterization of her signed statement as mistaken about the training date, sufficient to overcome GM's rebuttal evidence. Accordingly, we conclude the Secretary established GM failed to provide Kennedy with required initial lockout training, and affirm this citation item.

b. Vacated Items

Item 5 – Maintenance employee David A. Beauregard worked in the millwright's shop six months prior to the accident and continued in this position another six months to a year thereafter. According to his unrebutted testimony, he did not recall ever receiving lockout training. Nonetheless, Beauregard also testified that around the time of the accident, he worked

in "fabrication-type situations" that did not require him to work on or have access to any machines, and noted in a signed statement to OSHA that "lock out really do[es] not come into play on my job." In these circumstances, we find the Secretary failed to establish that Beauregard was an authorized employee during the period covered by the citation for whom GM should have provided initial lockout training. Accordingly, we vacate this item.

Item 6 – Electrician Harold Harteke worked in the paint department at the time of the accident, where his job assignment included regular servicing and maintenance of conveyors, ovens, and control equipment. Harteke initially testified that "the first time [he] had *any* lock-out training at . . . the Oklahoma City plant" was "[a]fter the accident." (Emphasis added.) Harteke also admitted, however, that "the issue of lock-out and safety was brought up" during his 1985 orientation, and prior to the accident he attended robotic training that covered robot-specific lockout. Based on the inconsistencies in Harteke's own testimony, we find it insufficient to establish GM failed to provide him required initial lockout training, and vacate this item.

Item 11 – Toolmaker Wallace R. Ellis worked the maintenance shift in the body shop at the time of the accident where he was "responsible for the upkeep of the fixtures, repairs, or modifications," which included changing pins, replacing worn parts, and welding. Although Ellis is listed on GM's roster of employees who did not attend the joint UAW-GM lockout training, he remembered attending some classes on lockout before the accident, as well as a predecessor joint UAW-GM lockout training included in his 1983 apprenticeship program. Ellis "believed" the apprenticeship program lockout training included information "on how to use a lock to lock out - - to isolate energy sources," but he did not "believe" he had received the lockout training booklet or procedure either at that time or prior to the accident. While Ellis also stated he had not been taught how to use his safety lock in the safety meetings he had attended, he was not asked about safety lock instruction in his apprenticeship lockout training. In addition, Ellis denied having heard the term "authorized person" in connection with lockout or deenergization, but appears to have received post-accident lockout training where that term would likely have been used. In these circumstances, we find the evidence insufficient to establish GM failed to provide Ellis required initial lockout training, and vacate this item.

Item 15 – Electrician William Winslett worked from 1985 until the time of the hearing in the body shop where he performed service and maintenance on equipment "[e]very night." Although listed on GM's roster of employees who did not receive the joint UAW-GM lockout

training course, Winslett recalled receiving instructions on safety and use of a safety lock during his orientation upon arrival at the plant, and attended safety meetings at which lockout was discussed. In the absence of evidence showing deficiencies in the orientation lockout training, we find the record insufficient to establish GM failed to provide Winslett required initial lockout training, and vacate this item.

Item 18 – Toolmaker Lloyd Steven Lester worked in the "shop" at the time of the accident, but his testimony establishes that his work did not principally include servicing or maintenance of equipment that could unexpectedly energize and, for those occasions when he might have worked under those conditions, there is no evidence whether such work occurred during the limitations period. Moreover, although Lester is listed on GM's roster of employees who did not attend the joint UAW-GM lockout training, he received some lockout training during his apprenticeship program in 1983. In these circumstances, we find the evidence insufficient to establish GM failed to provide Lester required initial lockout training, and vacate this item.

Item 19 – Electrician Ronnie Ray Wickware worked the maintenance shift performing service on machines throughout the limitations period without the use of lockout. With respect to training, the only question Wickware was asked at the hearing focused on whether he had attended a course in which he was provided the UAW-GM training manual. Although he acknowledged attending such a course after the accident, we find no evidence in the record establishing the referenced manual was handed out to each employee at each lockout training session. In these circumstances, the record lacks evidence as to whether he attended a training course, without the manual being distributed, prior to the accident. Accordingly, the record is insufficient to establish GM failed to provide Wickware required initial lockout training, and we vacate this item.

Item 21 – Electrician Merle Kopf worked with a "special projects crew" in the engineering department in the six months preceding the accident, and the Secretary acknowledges that he performed no machine servicing in that position. There is nothing in the record to show when Kopf's assignment ended and what other tasks, if any, he was assigned during the limitations period. In these circumstances, we find the evidence insufficient to establish GM failed to provide Kopf required initial lockout training, and vacate this item.

Item 22 – Toolmaker Larry C. Stapleton worked in the machine shop during the maintenance shift at the time of the accident—an assignment that did not include servicing machines. Although Stapleton serviced machines on other assignments in the "year before the accident[,]" the record does not show whether he did so during the limitations period. Accordingly, we find the evidence insufficient to establish GM failed to provide Stapleton required initial lockout training, and vacate this item.

Item 23 – Millwright Jerald Vollmer worked in the body shop at the time of the accident where his job assignment included machine repair and servicing of the motor rail conveyor. Vollmer remembered receiving "some training" in lockout before the accident that included "dumping the air and locking out the energy sources and all this kind of stuff for our own self-protection[,]" but did not recall whether the lockout training manual was used as part of that training. Although Vollmer characterized the lockout training he received after the accident as his having "since . . . been properly trained[,]" the record contains no evidence of any particular deficiencies in the training GM provided to him prior to the accident. In these circumstances, we find the evidence insufficient to establish GM failed to provide Vollmer required initial lockout training, and vacate this item.

Item 50 – Toolmaker Bobby Gates worked on the maintenance shift and "frequently" worked overtime in the machine shop around the time of the accident. During that time, his primary responsibility was running machines and building parts. Although Gates testified that he did not receive full lockout training until after the accident, there is no evidence his job assignment included servicing and maintenance during the limitations period. In these circumstances, we find the evidence insufficient to establish GM failed to provide Gates required initial lockout training, and vacate this item.

2. Affected employees: Items 24-29

Under these items, the Secretary alleges that GM failed to provide "affected employee" training to six GM supervisors under section 29 C.F.R. § 1910.147(c)(7)(i)(B). None of the supervisors testified and, although the judge found the evidence regarding whether they had received lockout training "equivocal," he affirmed the items based on testimony that five of the supervisors tolerated employee failures to properly apply lockout. Based on our review of the

record, we find the Secretary did not establish that GM failed to provide these supervisors with the requisite lockout training, and vacate all six items.[16]

GM does not dispute that at least some of these six employees did not fully participate in the UAW-GM lockout training course, and we agree that the standard does not require such detailed training for affected employees. OSHA acknowledges that the training for affected employees is "less stringent" than for authorized employees "simply because affected employees do not perform servicing or maintenance operations." Lockout/Tagout I, 54 Fed. Reg. at 36,674. Indeed, the Secretary's expert witness, safety specialist Richard Sauger, testified that affected employees "simply have to be trained . . . that there is an energy-control program, and what their role is in [the] energy-control program." Sauger explained that an affected employee's "role in the program would be that if a machine or piece of equipment was being serviced . . . and they knew it . . . essentially it means, Just keep your hand off of it. Don't attempt to start it. Don't attempt to energize it."

According to Young, GM's plant safety and ergonomics manager, all six supervisory employees had been trained in safety and health matters, including deenergization and lockout, before the accident. Young specifically noted that maintenance supervisor Thomas Hendley (Item 24) had been trained in lockout, superintendent Chuck Lingeman (Item 26) had been through the joint UAW-GM lockout training course at another GM plant, general maintenance supervisor Eugene Beed (Item 28) had been trained in 1979, and plant engineer Turner Wilcox (Item 29) had been through four of the eight hours of the joint UAW-GM lockout training course. Based on this unrebutted testimony that all six supervisors received the lockout training required for affected employees, coupled with the Secretary's failure to address these items on review, we find the Secretary did not establish that GM failed to provide required lockout training to the six affected employees, and vacate these items.

[16] As noted above, we do not rely on a failure to use or enforce lockout as evidence of a failure to provide lockout training. *N & N Contractors*, 18 BNA OSHC at 2127-28, 2000 CCH OSHD at p. 48,244 (concluding that a "failure to enforce compliance with work rules on the job does not establish a failure to train or instruct").

D. WILLFUL CITATION 1, ITEMS 12, 20, 30-32, 34, 36-38, 40-43, 46-49, 51, 52 – RETRAINING

Under these items, the Secretary alleges on a per-employee basis that GM failed to provide required lockout retraining prescribed by § 1910.147(c)(7)(iii) to nineteen authorized employees. The judge affirmed all of these citation items, finding that each employee required, but did not receive, lockout retraining. For the following reasons, we affirm Items 12, 20, 32, 36-38, 40, 41, 46-49, and 51, and vacate Items 30, 31, 34, 42, 43, and 52.

PRINCIPLES OF LAW

The LOTO standard contains two retraining provisions with distinct triggers. Under the first provision, the requirement to retrain an employee is triggered by a change in the employee's job assignment, the hazards to which the employee is exposed, or the energy control procedures to be used. 29 C.F.R. § 1910.147(c)(7)(iii)(A). The preamble specifies that a change in job assignment only triggers retraining when the new assignment is one "for which they were not previously trained in lockout/tagout requirements." Lockout/Tagout I, 54 Fed. Reg. at 36,674, *amended by* Control of Hazardous Energy Sources (Lockout/Tagout): Final Rule; Corrections and Technical Amendments ("Lockout/Tagout III"), 55 Fed. Reg. 38,677, 38,682 (Sept. 20, 1990). The need to retrain may also be triggered by a new hazard to which an employee comes in contact. 29 C.F.R. § 1910.147(c)(7)(iii)(A). Under the second provision, the requirement to retrain an employee is triggered "whenever the employer has reason to believe[] that there are deviations from or inadequacies in the employee's knowledge or use of the energy control procedures." 29 C.F.R. § 1910.147(c)(7)(iii)(B). Thus, retraining is required when "an employee failed to operate within the guidelines of the control procedure." Lockout/Tagout I, 54 Fed. Reg. at 36,675.

ANALYSIS

1. Items 30-32, 34 (changed circumstances)

Under these items, the Secretary alleges that GM failed to provide retraining for four employees in violation of § 1910.147(c)(7)(iii)(A). The judge affirmed all four citation items based on his finding that each employee was "exposed to hazards contemplated by the standard after January 1990," worked on "unfamiliar equipment," and was not retrained. Contrary to GM's assertion, we do not read the judge's decision as imposing a requirement for machine-specific training. As the Secretary states on review, "[t]he gravamen of the . . . retraining

violations was not that the content was over-general but that the [re]training did not occur." For the following reasons, we affirm Item 32, and vacate Items 30, 31, and 34.

Item 30 – Millwright Patrick Liberty received lockout training in 1986 or 1987, but did not receive specific training on the equipment in the trim and chassis department when he was transferred there some time prior to the accident. There is no evidence, however, concerning Liberty's previous job assignments, and how the equipment in the trim and chassis department might have differed from that with which he had previously worked in terms of the use of lockout procedures. Although Liberty had been assigned to work on unfamiliar equipment out of his "usual area" in the year before the accident, there is no evidence this occurred during the limitations period or how that equipment differed from his usual assignments. In these circumstances, we find the evidence insufficient to establish retraining was required under the cited provision, and vacate this item.

Item 31 – Electrician Ronald Jordan performed service and maintenance in the body shop on the maintenance shift at the time of the accident, and in other areas of the plant, as needed. In the year before the accident, Jordan worked on unfamiliar equipment when temporarily assigned to fill in outside his regular work area, but prior to the accident he never performed service or maintenance on equipment where the energy control procedure had changed from the last time he had worked on it. Jordan also testified that he knew how to isolate energy sources, but noted, if he was new to an area, he might not know how to deenergize a machine and would find someone who did. Thus, the evidence shows that neither Jordan's job—which included filling in for absent employees in many areas of the plant—nor the hazards he faced, changed during the period covered by the citation. In these circumstances, we find the evidence insufficient to establish retraining was required under the cited provision, and vacate this item.

Item 32 – Millwright Donald Smith had apparently been assigned to work in the motor rail conveyor area for the first time only several days before his fatal accident in 1991. Millwright Steven Greenwood, Smith's predecessor in the motor rail area, testified that during his first six weeks working in that area he partnered with and depended upon another, more experienced millwright. Electrician Ronnie Wickware testified that "if you move into another area, you don't know where the electrical sources are to turn off, for air or whatever you are working on, to take it to a zero energy level." Nonetheless, according to plant safety and ergonomics manager Young, GM did not assign another millwright to show Smith around the

motor rail area, an area containing equipment the judge characterized as "not only complicated[,] but also hazardous for employees unfamiliar with it."

Apparently recognizing his own limitations, Smith sought help on the day of the accident, telling supervisor Jim Brown he "didn't want to get [his] damned head caught in" the motor rail conveyor. After Brown rebuffed his concerns, Smith enlisted electrician Patrick Parker's help to deenergize the conveyor, telling him he "didn't know a damn thing about this machine." Based on this evidence, we find GM knowingly reassigned Smith to service unfamiliar and complex equipment for which he lacked adequate relevant training. Accordingly, we conclude Smith's reassignment to the motor rail area necessitated retraining under the cited provision of the standard, and affirm this item.

Item 34 – Relief electrician Nicholas Mance, Jr. had maintenance responsibilities "all over the plant" at the time of the accident and worked on equipment with multiple power sources including machines in the motor rail area. When he was first hired at GM in 1978, Mance worked for a short time in the body shop where the motor rail equipment was located, then returned to that area sometime later. Although it appears his return to the body shop occurred in 1990, Mance testified that he worked on the motor rail conveyor in 1985. Although Mance was not shown how to lock out all of the energy sources on the newly-installed motor rail equipment in the body shop upon his return, the record is unclear as to whether he was newly assigned to unfamiliar and more complex equipment after the standard's January 2, 1990 effective date. In these circumstances, we find the evidence insufficient to establish retraining was required under the cited provision, and vacate this item.

2. Items 12, 20, 36-38, 40-43, 46-49, 51, 52 (inadequate employee knowledge or use of energy control procedures)[17]

Under these items, the Secretary alleges that GM failed to provide retraining for fifteen employees in violation of § 1910.147(c)(7)(iii)(B). The judge affirmed all of these items based on his finding that GM failed to provide retraining after supervisors had observed the employees servicing equipment without locking out. GM argues that these items should be vacated because they are based on activities that occurred prior to the standard's January 2, 1990 effective date

[17] For Items 12 and 20, the judge granted the Secretary's motions to amend alleged initial training violations to those that allege violations of the retraining provision.

and outside the section 9(c) limitations period. For the reasons that follow, we affirm Items 12, 20, 36-38, 40, 41, 46-49, and 51, and vacate Items 42, 43, and 52.

GM does not dispute the judge's finding that it failed to retrain each of the employees at issue in these items. In addition, given the circumstances for which retraining is required under the cited provision, we find a lack of retraining can properly be inferred from the record evidence establishing that GM managerial and supervisory personnel widely tolerated noncompliance with required lockout procedures, failed to enforce the use of lockout during servicing and maintenance, and even actively discouraged employees from employing required lockout protections during covered activities at the GM plant. With respect to the standard's applicability and statutory timeliness, we have evaluated the evidence of each item individually, examining whether the record establishes each employee performed servicing or maintenance after the effective date of the standard without using LOTO, and continued working in a position that included equipment servicing and maintenance during the limitations period in the absence of required retraining. For the items we affirm, we find that the evidence establishes these elements.

Where the record lacks evidence that GM had actual knowledge of a particular employee's failure to utilize LOTO triggering a need to retrain, we find that GM had constructive knowledge of its retraining obligation under the cited standard. As previously discussed, GM supervisors tolerated and even encouraged noncompliance with the plant's own lockout program, as well as with the requirements of the standard. Indeed, lockout was rarely used, and even when equipment was shut down for servicing, locks were often not applied. Based on this evidence, we find GM's widespread failure to enforce its employees' use of LOTO demonstrates a lack of diligence in detecting hazardous conditions and enforcing work rules. *See N & N Contractors, Inc.*, 255 F.3d at 127 (indicating reasonable diligence includes inspecting work area and anticipating hazards, adequate employee supervision, implementation of proper training program and work rules). Thus, for the citation items where noncompliance is established, we find GM had constructive knowledge of its employees' need for retraining based on their inadequate knowledge and/or use of energy control procedures. *Id.* (finding constructive knowledge of failure to use fall protection where employer knew of employees' tendency to ignore its use, and supervisor had previously observed employees' disregard of fall protection measures).

Item 12 – Millwright Kenneth Thompson worked from 1986 until after the accident in the body shop on the maintenance shift, where his job assignment included building equipment and performing servicing, which occurred approximately "once a week, maybe less." Thompson did "[n]ot normally" attach a lock to machinery that he worked on, and refused to use his safety lock because it could be opened with any one of the more than sixty "grand master key[s]," defeating the purpose of "private" protection. During his work rebuilding the entire lower section of the motor rail conveyor in the year before the accident, the power sources had been shut off, but Thompson "didn't lock . . . out any time during that week." According to Thompson, supervisors were in the area when he performed servicing without locking out, which he "assume[d]" they observed. Thompson added that in the year before the accident, he had never been told by a supervisor to lock out an energy source. Based on this evidence, we conclude GM failed to provide Thompson with required retraining under the cited provision of the standard and had constructive knowledge of his need for retraining. Accordingly, we affirm this item.

Item 20 – Toolmaker Eulan Ray Edwards worked in the body shop from the time of his initial hire in 1978 until the time of the accident, where he serviced "anything that moves or works." Edwards never locked out machines until after the accident, and his supervisors saw him "not using [his] lock when [he] should have locked out[.]" According to Edwards, he had only one lock that was "too much trouble to use . . . but after a man got killed, well, then, it was just, you know, gung ho." When asked whether supervisors enforced the lockout procedures taught in the training, he replied: "No. They had never been enforced until after the man was dead." Based on this evidence, we conclude GM failed to provide Edwards required retraining under the cited provision of the standard and had constructive knowledge of his need for retraining. Accordingly, we affirm this item.

Item 36 – Electrician Edward Baker worked for over nine years, until one month prior to the hearing, on the first shift in the body shop, which contains "hundreds of different kinds" of machines, including robots, welders, and conveyor systems. Although it was his "regular job as an electrician to work on equipment," Baker did not receive a safety lock until after the accident and, therefore, lacked the ability to lock out a machine. Prior to the accident, he did not lock out the machinery he worked on and "didn't see any enforcement of [lockout]." Between the time of his 1987 training and the 1991 accident, he was "sure" his supervisors saw him working on machines without locking out. Based on this evidence, we conclude GM failed to provide Baker

with required retraining under the cited provision of the standard and had constructive knowledge of his need for retraining. Accordingly, we affirm this item.

Item 37 – Electrician Patrick H. Parker worked in the motor rail area from about December 1990 until the time of the hearing, where he serviced and repaired the motor rail equipment. He described his initial lockout training as a "formality" and until the time of the accident, he did not lock out the energy sources on equipment he serviced, noting that some equipment can be locked out and some can not. He had only one safety lock, which "was not sufficient to . . . put [him] in a safe area whenever [he] was working on a machine." Parker also stated that employees "were more or less discouraged" from putting locks on machines before the accident, and that there "[n]ever was . . . really . . . any stress put on lock-out procedure." Based on this evidence, we conclude GM failed to provide Parker with required retraining under the cited provision of the standard and had constructive knowledge of his need for retraining. Accordingly, we affirm this item.

Item 38 – Millwright Michael Dan Warden worked in the maintenance department servicing equipment throughout the "whole plant" since about 1985, and performed this maintenance work on breakdowns until the time of the accident. On the whole, his testimony shows he attempted to properly utilize lockout when servicing equipment, and actively resisted and protested supervisors' instructions to perform service without properly shutting down and locking out. He even walked off jobs, refusing to work when breakdown repairs were performed without lockout. Prior to the accident, Warden did use his safety lock, but the practice in the plant was to leave lockout up to the individual employees—"They left that up to you. If you wanted to use [lockout], fine. If you didn't - -[shrug][.]" However, Warden also serviced new equipment in the year before the accident that involved multiple energy sources for which he "just shut off the main electrical components . . . ." He explained he had not been trained on how to shut off the air or when it should be shut off.

We find that Warden's testimony underscores GM's awareness of the widespread and pervasive practice in the plant to service equipment without utilizing proper lockout procedures, even after the standard came into effect. Although Warden mostly utilized lockout, he also serviced multiple-energy-source equipment without using lockout in the year prior to the accident, thus triggering a need to retrain under the cited provision of the standard. Based on this

evidence, we conclude GM failed to provide Warden required retraining and had constructive knowledge of his need for retraining. Accordingly, we affirm this item.

Item 40 – Electrician Samuel David McGahey, Jr., performed servicing and maintenance in the motor rail area up to the time of the accident, normally without locking out at all and never locking out the air. According to McGahey, in the year prior to the accident, supervisors saw him not locking out while servicing equipment and allowed the work to continue. Based on this evidence, we conclude GM failed to provide McGahey with required retraining under the cited provision of the standard and had actual knowledge, as well as constructive knowledge, of his need for retraining. Accordingly, we affirm this item.

Item 41 – Millwright Dennis A. Cook worked on the maintenance shift performing preventive maintenance on "all the machinery" in the body shop from 1985 until the time of the hearing. Cook placed the lock GM had provided to him "[o]n my tool box. I never locked out anything with that lock." He added that "[e]very supervisor I ever had saw me working on something that should have been [locked out] that wasn't . . . ." [18] Based on this evidence, we conclude GM failed to provide Cook required retraining under the cited provision of the standard and had actual knowledge, as well constructive knowledge, of his need for retraining. Accordingly, we affirm this item.

Item 42 – Millwright Maurice W. Lachance worked for the year prior to the accident in the paint department. During that time, Lachance "just work[ed] on the floor trucks" where he was not exposed to energized equipment. He "may have" performed overtime weekend maintenance work during that time period, but the equipment would have been shut down and locked out using his lock, as well as those of the other employees with whom he was working. Although Lachance could neither confirm nor deny that "for all the weekend work [he] performed . . . all the energy sources . . . were locked [out,]" we find the evidence insufficient to establish Lachance performed covered work without using lockout, and worked in a servicing

[18] Cook testified that he tagged out equipment rather than locked it out, which the LOTO standard permits where "an energy isolating device is not capable of being locked out" or the employer demonstrates that "the utilization of a tagout system will provide full employee protection," GM concedes, however, that lockout was feasible here and does not contend that tagout was equally protective. 29 C.F.R. § 1910.147(c)(2)(i) and (ii). Accordingly, Cook's failure to utilize lockout triggered a need to retrain.

and maintenance position during the period covered by the citation. Accordingly, we vacate this item.

Item 43 – Electrician Ron Berry worked at the plant since 1979, and was assigned to work in the maintenance shop from about December 1990 until the time of the hearing, prior to which he worked on a construction crew for about a year. Although before the accident Berry did not lock out certain machines because "it wasn't mandatory" and controlling the energy sources without locking out was "standard," he did not specify a time period for his conduct, and we are unable to discern from the record whether he serviced equipment without locking out on any particular occasion after the standard's effective date. Accordingly, we find the record fails to establish Berry required retraining under the cited provision of the standard, and vacate this item.

Item 46 – Electrician Jim Green worked on the "concern crew" for five years prior to the hearing, servicing "anything electrical" throughout the "whole plant." Green acknowledged he used his safety lock when servicing equipment, but would only lock out the part he was working on, and not "anything that was adjacent to it" because he had only one lock. He indicated that a failure to lock out energy sources other than just the "immediate source" could result in the energization of equipment parts that might hit and seriously injure an employee.

According to Green, the compactor he worked on prior to the accident had multiple energy sources and required more than one lock to lock out, and he worked on equipment without adequate locks "[p]robably once or twice a week sometimes." Although Green's supervisor knew that he had only one lock, supervisors were generally not present when he serviced machines. Based on this evidence, we conclude GM failed to provide Green required retraining under the cited provision of the standard and had constructive knowledge of his need for retraining. Accordingly, we affirm this item.

Item 47 – Toolmaker William L. Crain had worked in the body shop for about five years at the time of the hearing, where "most of the time [he] repair[ed] or work[ed] on the machinery." Crain stated he "[p]robably never" applied his lockout training prior to the accident, later adding that he did not recall ever locking out equipment during the year 1990, but "sometimes . . . may have" done so from the end of 1990 until the date of the accident. He stated unequivocally, however, that although he had his own lock, he did not use it prior to the accident. Based on this evidence, we conclude GM failed to provide Crain required retraining

under the cited provision of the standard and had constructive knowledge of his need for retraining. Accordingly, we affirm this item.

Item 48 – Millwright William Brink, a twelve-year veteran at the plant, worked on the maintenance shift in the body shop performing preventive maintenance until the time of the accident. Prior to the accident, Brink only turned off the equipment he was servicing by using the run/stop button, which he acknowledged does not amount to locking it out "[b]ecause somebody can turn it on." According to Brink, "[t]hat is just the way it was done" until the time of the accident. Based on this evidence, we conclude GM failed to provide Brink required retraining under the cited provision of the standard and had constructive knowledge of his need for retraining. Accordingly, we affirm this item.

Item 49 – Electrician Kenneth McGahey worked in the motor compartment performing service and maintenance on multiple-energy-source equipment for eight years prior to the hearing. McGahey never received a safety lock and before the accident, he "never locked anything out[.]" According to McGahey, GM supervisors were "sometimes" present when he serviced equipment without using lockout, and "[e]veryone [he] ever had" might have seen him work without applying locks. Based on this evidence, we conclude GM failed to provide McGahey required retraining under the cited provision of the standard and had constructive knowledge of his need for retraining. Accordingly, we affirm this item.

Item 51 – Maintenance electrician James A. Winters worked at GM since 1981 and had been assigned to the trim and chassis department since about December 1990. Up until the time of the accident, Winters did not lock out all energy sources on machines that he serviced, but controlled energy sources by just shutting off the power. According to Winters, supervisors were present at breakdown situations where he did not use lockout to isolate energy sources. Based on this evidence, we conclude GM failed to provide Winters required retraining under the cited provision of the standard and had constructive knowledge of his need for retraining. Accordingly, we affirm this item.

Item 52 – Electrician James David Roberts III began his employment at GM in 1984, but temporarily worked as a skilled-trades maintenance supervisor for the six months prior to the accident, during which time he apparently performed no service or maintenance work. Although Roberts had previously performed service and maintenance work without fully locking out multiple-energy-source equipment, any need for retraining did not continue during the period

covered by the citation. Moreover, GM provided additional training to Roberts upon his transfer back to hourly work after the accident. In these circumstances, we find the record does not establish GM failed to provide Roberts required retraining under the cited provision of the standard. Accordingly, we vacate this item.

E. WILLFUL CITATION 1, ITEMS 53-57 – MOTOR RAIL ACCIDENT

These five citation items pertain to the accident in which millwright Smith suffered fatal injuries while working on the motor rail conveyor. Under these items, the Secretary alleges GM failed to shut down the conveyor, isolate its energy sources, apply the required lockout devices, render safe any stored or residual energy, and verify that its deenergization had been accomplished. 29 C.F.R. § 1910.147(d).[19] It is undisputed Smith did not utilize LOTO procedures during the conveyor repair job. In vacating these items, the judge concluded the cited provisions of the standard were inapplicable, finding Smith and electrician Patrick Parker, who was assisting Smith at the time of the accident, "had not reached the point of shutting down the equipment; rather, Parker had activated the lift so that Smith could watch it operate." For the following reasons, we find the evidence establishes the applicability of the cited provisions of the standard, and affirm all five items.

PRINCIPLES OF LAW

The LOTO standard provides a set of "elements and actions" that energy control procedures must cover and mandates the sequence in which the application of energy control must be accomplished through these actions. 29 C.F.R. § 1910.147(d). Specifically, the standard requires, in the following sequence: 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).

These procedures apply "to the control of energy during servicing and/or maintenance of machines and equipment," but not to normal production operations. 29 C.F.R. § 1910.147(a)(2)(i) and (ii). 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.

[19] The citation alleged violations of 29 C.F.R. § 1910.147(d)(2), (d)(3), (d)(4)(i), (d)(5)(i), and (d)(6).

> 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). The standard does not apply to "certain servicing operations which . . . must take place without deenergization, such as operational testing of machines or equipment"—"[l]ocking out or tagging out cannot be performed during these operations, since both lockout and tagout require that equipment to be deenergized." Lockout/Tagout I, 54 Fed. Reg. at 36,647.

ANALYSIS

GM contends the requirements of the LOTO standard did not apply here because Smith was still "troubleshooting" the equipment to evaluate how to approach and complete the necessary repairs. Given the language and intent of the standard, however, troubleshooting is considered an element of servicing a machine, i.e., the employee inspects or observes the machine in an effort to discover how to fix it. 29 C.F.R. § 1910.147(b). In circumstances where troubleshooting consists of observing or inspecting equipment when it is stationary, the standard requires deenergization and application of lockout procedures. In circumstances where troubleshooting requires "operational testing"—observing equipment that is energized and in motion—the standard would not apply. Lockout/Tagout I, 54 Fed. Reg. at 36,647.

On the evening before the accident, Smith's supervisors assigned him the tasks of replacing worn bushings on the motor rail conveyor and correcting the alignment of the conveyor's brass guide block, but only if he determined the block was rubbing against the conveyor's lift table. It is undisputed Smith would have needed to observe the conveyor powered and in operation to troubleshoot both the worn bushings and the guide block alignment at some time prior to commencing the necessary repairs, which he did for about fifteen minutes during the two-hour overlap between the evening and night shifts. Although the parties, as well as the judge, focused on the instant of the accident to determine whether the standard applied, we find that determining whether lockout was necessary here extends beyond that particular moment, encompassing the entire time Smith was working with the conveyor. *Cf. Cleveland Consol., Inc.*, 13 BNA OSHC 1114, 1116 n.1, 1986-87 CCH OSHD ¶ 27,829, p. 36,427 n.1 (No. 84-696, 1987) ("the cause of an accident, and particularly whether a violation of a standard caused an accident, is not necessarily relevant to whether an employer violated a regulation").

Patrick Parker, the electrician who assisted Smith, provided the only eyewitness accounts of the events leading up to the accident. These accounts consist of statements to the responding police officer shortly after the accident, to OSHA personnel during interviews conducted within the first few days of the accident and several weeks later, as well as hearing testimony over a year later, by which time his recollection had faded. Parker's most detailed contemporaneous statement, given to an OSHA investigator four days after the accident, reads, in relevant part:

> [Smith] came to me and asked to turn the power off . . . I turned the control panel off at the console. Then he asked me to reset the electrica[l] panel so he could pull the carriers back. I reset the panel, [Smith] pulled a couple of carriers back and tied them to secure them. Next he walked to the south side of the slide conveyor and I turned the electrical panel off. [Smith] leaned into the slide conveyor on the south end, at that point the electrical [panel] was off but the air was on and I walked over to the spot welder to turn it off. [Smith] asked me what he should do next, I said that the machine should be turned back on so he could see how it operates. I reset the control panel at the WLD panel and as I was walking to the console he walked to the east side of the conveyor and leaned into the conveyor as I had my back turned to the console . . . That is when the conveyor activated and struck [Smith]. I hit the lift button to lower the lift.

This description of the full sequence of events leading up to the accident establishes that Smith approached Parker with the specific purpose of shutting down the machine so that he could perform his assigned task of replacing the worn bushing—a task that clearly constitutes "service and maintenance" within the meaning of the LOTO standard. With this objective, Parker twice turned off the power and Smith placed himself in the danger zone by leaning into the machine. *E.g.*, *S & G Packaging Co.*, 19 BNA OSHC 1503, 1506, 2001 CCH OSHD ¶ 32,401, p. 48,890 (No. 98-1107, 2001) (finding exposure established where employees were within one to two feet of hazard). Based on this evidence, we find that for some period of time prior to the accident, when the electrical power was turned off after Smith had secured the carriers and leaned into the machine, he was in the process of performing a servicing activity while the conveyor was stationary and for which deenergization and use of LOTO were possible but not used. *See Hamilton Fixture*, 16 BNA OSHC 1073, 1091, 1993 CCH OSHD ¶ 30,034, p. 41,187 (No. 88-1720, 1993) (finding brevity of condition does not negate presence of hazard), *aff'd*, 28 F.3d 1213 (6th Cir. 1994). In these circumstances, we conclude the LOTO standard applied.

With respect to knowledge, supervisory personnel assigned the motor rail conveyor repair job to Smith, but there is no evidence GM was actually aware that Smith and Parker did not use

lockout procedures while they worked with the conveyor. Nonetheless, management knew Smith had only recently been reassigned to the motor rail area, had not yet been provided with retraining, and was unfamiliar with the equipment. Indeed, Smith complained to supervisor Jim Brown before attempting to service the conveyor because he believed the servicing job was not meant for a millwright, stating he "didn't want to get [his] damned head caught in" the conveyor. Nonetheless, management did not assign someone more familiar with the conveyor to assist him. These circumstances, in conjunction with GM management's failure in enforcing compliance with its energy control program or with the LOTO standard throughout the plant, establish GM had constructive knowledge of its employees' failure to comply with the cited provisions during the conveyor repair work. *N & N Contractors, Inc*, 255 F.3d at 127. Accordingly, we conclude the failure to shut down the conveyor, isolate its energy sources, apply the required lockout devices, restrain all potentially hazardous stored or residual energy, and verify that its deenergization had been accomplished violated the cited provisions of the standard, and affirm Items 53-57.

VI. CHARACTERIZATION

The Secretary alleged all cited violations as both serious and willful, and the judge agreed, characterizing each of the citation items he affirmed as alleged. The judge emphasized that lockout at the GM plant was "unenforced and seldom used . . . despite the fact that the facility had . . . a lockout procedure and . . . training since its inception." He also found GM "was aware of the need to control hazardous energy in its facilities" and "well aware of the promulgation of the LOTO standard and its requirements," noting that "four GM facilities were cited in 1990 for violations of the standard."[20] The judge rejected GM's contention that it had an effective lockout program, and that grievances, complaints, and problems were addressed in good faith as part of what GM characterized as "a dynamic labor relations atmosphere." For the following reasons, we affirm as willful Items 1a, 1b, 2, 12, 20, 32, 36-38, 40, 41, 46-49, 51, and 53-57, and affirm as serious Items 1c, 3, 4, 7, 14, 16, and 44.

PRINCIPLES OF LAW

As the Commission has stated, "[t]he hallmark of a willful violation is the employer's state of mind at the time of the violation — an 'intentional, knowing, or voluntary disregard for

[20] These four prior citations—issued to other GM plants before the 1991 accident—include alleged violations of § 1910.147(c)(4)(i), (c)(4)(ii), and (c)(7)(i).

the requirements of the Act or . . . plain indifference to employee safety.'" *Kaspar Wire Works, Inc.*, 18 BNA OSHC 2178, 2181, 2000 CCH OSHD ¶ 32,134, p. 48,406 (No. 90-2775, 2000) (citation omitted), *aff'd*, 268 F.3d 1123 (D.C. Cir. 2001). This state of mind can be established by showing that "'the employer was actually aware, at the time of the violative act, that the act was unlawful, or that it possessed a state of mind such that if it were informed of the standard, it would not care.'" *AJP Constr. Inc. v. Sec'y of Labor*, 357 F.3d 70, 75 (D.C. Cir. 2004) (emphasis and citations omitted). In this regard, the Commission and courts distinguish "between mere negligence and willfulness, holding that the former is sufficient for affirming a non-willful violation, but that willfulness is characterized by an intentional, knowing failure to comply with a legal duty." *Manganas Painting Co.*, 21 BNA OSHC at 1991, 2007 CCH OSHD at p. 53,406 (citing *Am. Wrecking Corp. v. Sec'y of Labor*, 351 F.3d 1254, 1264 (D.C. Cir. 2003)) (reversing willful finding where employer "should have known" of hazardous condition, court stated that willfulness requires "an intentional or conscious disregard for the applicable safety standard or for employee safety").

ANALYSIS

We agree with the judge that GM was keenly aware of the LOTO standard and its requirements. In fact, GM established an energy control program well before the OSHA standard was promulgated, and was involved with the LOTO standard's subsequent development. GM staff engineer Richard Parry served on an automobile industry task force that worked with OSHA on the standard from the time it was proposed through its promulgation. Michael Taubitz, GM's Assistant Director of Occupational Safety and Health, was a member of a joint UAW-GM committee on health and safety that reviewed and analyzed the LOTO standard after its promulgation. Moreover, in anticipation of the standard's impending effective date, GM headquarters sent a memorandum to all plant managers and personnel directors in October 1989, advising them of the new OSHA standard and that it would "require review and/or revis[ion]" of GM's lockout procedures "to insure compliance."

In March 1990, just three months after the standard went into effect, GM headquarters sent another memorandum to its plant managers and personnel directors in which it identified specific items in the LOTO standard that "need[ed] to be addressed . . . to comply with the standard." The areas identified by the memorandum include developing an energy control program, creating a list of authorized employees, issuing standardized locks and tags, and

establishing training and retraining requirements, as well as a periodic inspection. By electronic message soon thereafter, the Oklahoma City plant's UAW representative, Gary Klingel, reminded plant supervisors of the new LOTO standard and the need to utilize lockout during service and maintenance; he also requested that the safety department be notified of any employees who still needed training. Klingel closed his message by cautioning that "[n]obody desires or wants a fatality at the OKC plant." Based on this evidence, we find GM was well-informed of the need for deenergization during servicing and maintenance activities, as well as the existence of the LOTO standard and many of its particular requirements.

A. ITEMS 1a, 1b, and 1c – ENERGY CONTROL PROGRAM AND PROCEDURES

Item 1a (energy control program) – Although it is undisputed that GM had an energy control program, it lacked the required periodic inspection element. Managerial personnel at the GM plant knew of the LOTO standard's inspection requirement, as well as the plant's non-compliance with it. Indeed, plant safety and ergonomics manager Young fully appreciated that the plant's "existing program was compliant, with one exception[]"—"[t]he need to conduct a periodic audit." As he explained, GM was "aware that the audit provisions of the lockout standard needed review, and we were reviewing it." GM's March 1990 memorandum to plant management concerning the new LOTO standard also highlighted the need to "establish a schedule and assign responsibility for an annual inspection of the energy control program."

We conclude this evidence establishes GM knowingly failed to include the requirement for an annual inspection in its energy control program. *See Kaspar Wire Works, Inc.*, 268 F.3d at 1127-29 (affirming violation as willful, court emphasized "actual malice is not required; it is sufficient that there be substantial evidence of voluntary and intentional disregard for or indifference to the law"); *see also TWA v. Thurston*, 469 U.S. 111, 126 n.19 (1985) (noting employer's action may be willful in absence of "evil motive or bad purpose"). Accordingly, we affirm this item as willful.

Item 1b (use of energy control procedures) – GM's failure to utilize required lockout procedures was pervasive. Despite GM's longstanding knowledge of the need to control hazardous energy during servicing and maintenance activities, its knowledge of the OSHA standard and its requirements, and its adoption of an energy control program, the company knowingly tolerated and sometimes encouraged the widespread and routine practice of

performing service and maintenance of energized equipment without the application of required lockout procedures—even after the standard's effective date. GM also failed to adequately equip some of its authorized employees with a safety lock until after the accident, depriving them of an essential tool of lockout protection. This evidence establishes a conscious disregard for the requirements of the Act. Accordingly, we affirm this item as willful.

Item 1c (specificity of energy control procedures) – GM's energy control procedure was inadequate to lock out the plant's more complex equipment and did not contain the specificity prescribed by the standard. Nonetheless, we see no evidence in this record to establish that GM appreciated its procedure was deficient. GM staff engineer Parry explained that the energy sources and magnitudes for the plant's equipment were "universal throughout the whole plant and that energy isolation devices were also similar throughout the plant." According to Parry, he had surveyed the machines and equipment at the plant and did not find a single machine or piece of equipment "where an employee could not effectively control the hazardous energy" following the plant's written lockout procedure. Moreover, it appears that at least some employees had sufficient experience with the motor rail conveyor to apply lockout procedures to that particular equipment.

In these circumstances, the record does not establish that GM knowingly failed to establish an adequate energy control procedure, or that it would not have done so had it known of the procedure's deficiencies. Accordingly, we find the record lacks support for a willful characterization of this item and affirm Item 1c as serious. *See* 29 U.S.C. § 666(k) (defining serious violation as one in which "there is a substantial probability that death or serious physical harm could result").

B. ITEM 2 – PERIODIC INSPECTION

GM managerial personnel knew of the LOTO standard's requirement for an annual periodic inspection of the energy control program and recognized that one had not been conducted by the time OSHA commenced its April 1991 inspection, over one year after the standard's specified January 2, 1990 effective date. Lockout/Tagout II, 54 Fed. Reg. at 46,610. Although safety and ergonomics manager Young claimed to believe the first periodic inspection was not required until one year after issuance of OSHA's September 1990 LOTO compliance directive, rather than one year after the standard's effective date, GM has provided no evidence to show that its misunderstanding was well-founded. On the contrary, the compliance directive

itself reiterates that "[a]ll requirements of [the standard] have an effective date of January 2, 1990." In these circumstances, we find GM's asserted belief as to the required compliance date to be neither plausible nor reasonable. *See Manganas Painting Co.*, 21 BNA OSHC at 1994, 2007 CCH OSHD at p. 53,409 (finding that evidence showed employer "could not have plausibly maintained a good faith belief that it was exempt from complying with the standard's requirements"). Accordingly, we affirm this item as willful.

C. ITEMS 3, 4, 7, 14, 16, 44 - INITIAL TRAINING

Well before the promulgation of the LOTO standard, GM established a lockout training program jointly with the UAW, and pursuant to this program, provided initial lockout training to most of its servicing and maintenance employees. GM also included some discussion of lockout in its robotics and laser training sessions, as well as in periodic safety talks. Although GM charged its employee-trainers with the responsibility of tracking attendance at the lockout training sessions and failed to adequately follow-up so as to ensure each authorized or affected employee received required training pursuant to the standard, the company believed the verbal assurances of the employee-trainers that all of its employees had indeed been given the required training.

In these circumstances, we conclude the evidence shows GM had constructive rather than actual knowledge of its failures to provide initial training to the employees who are the subject of these six citation items. Moreover, given GM's training efforts—both before and after promulgation of the LOTO standard—we see no basis on which to find GM would not have provided required initial training had it actually known of the deficiencies. Accordingly, based on applicable precedent, we affirm these six citation items as serious. *Manganas Painting Co.*, 21 BNA OSHC at 1998, 2007 CCH OSHD at p. 53,412 (rejecting willful characterization where employer had constructive knowledge and factual circumstances did not support willfulness).

D. ITEMS 12, 20, 32, 36-38, 40, 41, 46-49, 51 - RETRAINING

In addition to GM's general knowledge of the LOTO standard, the March 1990 memorandum from company headquarters to all plant managerial personnel specifically identified retraining as one "of the items that need to be addressed . . . to comply with the standard." The memorandum specifically identified the following four circumstances in which retraining "shall be provided for all authorized and affected employe[e]s[:]"

- a change in job assignments
- a change in layouts or processes
- a change in the energy control procedure
- a periodic inspection reveals there are deviations or inadequacies in the energy control procedure

GM's own health and safety trainer, Jesse Kincannon, recommended to the plant safety department that "they needed to do lock-out refresher training . . . to be in compliance with the [new] standard." Kincannon explained that he read the LOTO standard to require "some kind of annual training . . . specific on the equipment" and "[w]hen you move someone around from one area of the plant to another area of the plant, if they are not familiar with that equipment[,] they need specific training."

Nonetheless, the record contains no evidence that GM ever provided retraining upon an employee's change in job assignment or when it observed employees servicing equipment without properly utilizing lockout. Indeed, GM's plant supervisors and management failed to enforce compliance with GM's energy control program or with the OSHA LOTO standard. In fact, as we have discussed above, GM supervisory personnel tolerated and even encouraged widespread noncompliance with the lockout requirements of the standard, sometimes in pursuit of timely meeting production goals. Thus, GM's failure to provide retraining in response to Smith's reassignment or any other individual employee's failure to use lockout procedures was consistent with its overall disregard for the utilization of fully compliant lockout protection.

In these circumstances, we conclude that GM's failure to provide required retraining shows a conscious disregard for the requirements of the standard. *See AJP Constr. Inc.*, 357 F.3d at 75 (holding violation willful where employer was "aware of the unsafe conditions and yet chose not to correct them"). Moreover, this failure reflects an attitude from which we infer, in circumstances where GM might have lacked knowledge of a particular employee's need

for retraining, the company would not have provided the retraining even if it had known. *Id.* at 74 (stating that willfulness may be found in absence of actual knowledge where evidence showed that employer "*possessed a state of mind such that if it were informed of the standard, it would not care*") (citation omitted). Accordingly, we affirm all of the retraining violations as willful.

E. ITEMS 53-57 – MOTOR RAIL ACCIDENT

There is no evidence GM supervisory personnel had actual knowledge that its employees were performing the repair work on the motor rail conveyor on April 4, 1991 without applying LOTO. Nonetheless, GM's overall disregard for the utilization of a fully compliant energy control program establishes it had constructive knowledge of these violations. These circumstances, combined with GM management's failure to retrain millwright Smith, and its awareness of and failure to address Smith's concern about his competence to service the conveyor, demonstrate an attitude of plain indifference from which we infer that, had GM known of its employees' noncompliance with the standard's requirements, it would not have cared. *Id.* at 74 (stating that willfulness may be found in absence of actual knowledge where evidence showed that employer "*possessed a state of mind such that if it were informed of the standard, it would not care*") (citation omitted); *see also Caterpillar Inc.*, 17 BNA OSHC 1731, 1733. 1995-97 CCH OSHD ¶ 31,134, p. 43,483 (No. 93-373, 1996) (finding willful violation where employer assigned repair job presenting known hazard to "non-management employee whose prior safety concerns it had rebuffed"), *aff'd*, 122 F.3d 437 (7th Cir. 1997).

We also reject GM's contention that willfulness here is obviated because it acted in good faith in its attempts to comply with the LOTO standard's requirements. *See Arcadian Corp.*, 20 BNA OSHC 2001, 2018-19, 2005 CCH OSHD ¶ 32,756, pp. 52,083-84 (No. 93-0628, 2004) (finding no evidence of good faith); *Atl. Battery Co.*, 16 BNA OSHC 2131, 2160-61, 1991-93 CCH OSHD ¶ 30,636, p. 42,476 (No. 90-1747, 1994) (finding good faith belief not reasonable if employer knew or should have known its policies are incorrect). There is no dispute that the standard permits power-on "operational testing of machines or equipment" as an exception to the applicability of LOTO to servicing and maintenance. Lockout/Tagout I, 54 Fed. Reg. at 36,644, 36,647. However, there is no evidence in the record to show that GM could have believed its employees' activities conformed to the LOTO standard's requirements at the time the conveyor repair work was performed. Indeed, no supervisory personnel were present when

Smith and Parker worked on the conveyor, and GM's standard practice was to perform servicing and maintenance without utilizing lockout. Accordingly, we affirm these items as willful.

VII. PER-EMPLOYEE CITATION

The Secretary cited, and the judge affirmed, all of the initial training and retraining violations on a per-employee basis with individual penalties assessed for each item. For the following reasons, we conclude that both the initial LOTO training provision, § 1910.147(c)(7)(i), and the retraining provision, § 1910.147(c)(7)(iii)(B), under which we affirm six and twelve citation items, respectively, are susceptible to per-employee citation. Accordingly, we separately affirm each of these items, and assess individual penalties.

PRINCIPLES OF LAW

Under Commission precedent, "per-instance violations and penalties are appropriate when the cited regulation or standard clearly prohibits individual acts rather than a single course of action." *Eric K. Ho*, 20 BNA OSHC 1361, 1370, 2002-04 CCH OSHD ¶ 32,692, p. 51,583 (No. 98-1645, 2003) (consolidated cases) ("*Ho*"), *aff'd sub nom. Chao v. OSHRC*, 401 F.3d 355 (5th Cir. 2005); *see also J.A. Jones Constr. Co.*, 15 BNA OSHC 2201, 2213, 1993 CCH OSHD ¶ 29,964, p. 41,032 (No. 87-2059, 1993); *Caterpillar Inc.*, 15 BNA OSHC 2153, 2172, 1993 CCH OSHD ¶ 29,962, p. 41,005 (No. 87-0922, 1993); *Sanders Lead Co.*, 17 BNA OSHC 1197, 1203, 1993-95 CCH OSHD ¶ 30,740, p. 42,692 (No. 87-260, 1995). "The key . . . [is] the language of the statute or the specific standard or regulation cited." *Ho*, 20 BNA OSHC at 1371 & n.9, 2002-04 CCH OSHD at p. 51,581 & n.9; *see also Manganas Painting Co.*, 21 BNA OSHC at 1995, 2007 CCH OSHD at pp. 53,409-10.

The Commission has specifically considered the question of per-employee citation authority under a training standard in only two previous cases. Addressing a construction training standard where the wording specifically obliged "[t]he employer . . . to instruct *each employee* in the recognition and avoidance of unsafe conditions," the Commission concluded that the provision "clearly may be read to permit the Secretary to cite separate violations based on the failures to train individual employees." *Andrew Catapano Enters. Inc.*, 17 BNA OSHC 1776, 1780, 1995-97 CCH OSHD ¶ 31,180, p. 43,607 (No. 90-0050, 1996) (consolidated) (emphasis added). The Commission, however, affirmed a single citation in *Catapano*, as the number of citations was impermissibly based on the number of inspection days the same group

of untrained employees worked, rather than on the number of employees the employer failed to train. *Id.*

More recently, the Commission concluded the training provision under the general industry asbestos standard cited in *Ho* was not susceptible to per-employee citation. 20 BNA OSHC at 1373-75, 2002-04 CCH OSHD at pp. 51,583-86. The Commission interpreted the standard's language, which specified a "training program for all employees," to require one program for all employees in the covered categories. *Id.* at 1374, 2002-04 CCH OSHD at p. 51,584. As the eleven citation items at issue in *Ho* pertained to a single group of employees engaged in Class I asbestos operations who were collectively exposed to identical hazards, the Commission affirmed a single training violation. *Id.* at 1373-77, 1374 n.14, 2002-04 CCH OSHD at pp. 51,583-86, 51,583 n.14. Although the Commission majority in *Ho* also characterized the training standard interpretation in *Catapano* as "irrelevant" *dictum*, its decision was silent as to whether the language of the provision at issue in *Catapano* was distinguishable from the provision at issue in *Ho*. *Id.* at 1375 n.18, 2002-04 CCH OSHD at p. 51,584 n.18; *id.* at 1382, 1386 n.12, 2002-04 CCH OSHD at pp. 51,591, 51,594 n.12 (Rogers, Comm'r, concurring and dissenting) (acknowledging nature of Commission's per-employee interpretation of training standard in *Catapano*, but noting that relevant precedent, with which *Catapano* is in accord, "certainly provided notice that a training standard could be so interpreted").

ANALYSIS

As with the training standard addressed in *Catapano*, and in contrast to the training standard addressed in *Ho*, the specific language of the initial training provision cited here identifies the subject of the training obligation as "[e]ach authorized employee." 29 C.F.R. § 1910.147(c)(7)(i) ("Each authorized employee shall receive training in the recognition of applicable hazardous energy sources, the type and magnitude of the energy available in the workplace, and the methods and means necessary for energy isolation and control.") The plain language of the standard, therefore, imposes a specific duty on the employer to train each individual employee. Thus, regardless whether an employer chooses to provide required training to employees individually or collectively, the duty runs to each employee and, under the wording of the standard, any failure to train would be a separate abrogation of the employer's duty to each untrained employee.

In addition, the LOTO standard requires employer certification of lockout training, which must "contain each employee's name and dates of training." 29 C.F.R. § 1910.147(c)(7)(iv). The preamble to the LOTO standard further emphasizes the individualized nature of the training requirement, noting as follows:

> The details will necessarily vary from workplace to workplace, and even from employee to employee within a single workplace, depending upon the complexity of the equipment and the procedure, the employee's job duties and their responsibilities under the energy control program, and other factors.

Lockout/Tagout I, 54 Fed. Reg. at 36,673. Indeed, the evidence here shows GM's plant contained many different types of machinery with different levels of complexity and different types of energy, exposing employees to a variety of hazards involving unexpected energization that differed from one employee to another. Finally, underscoring the individualized nature of the initial training requirement is the threshold principle that "the core concept of lockout/tagout is *personal* protection . . . ." *Exelon Generating Corp.*, 21 BNA OSHC 1087, 1090, 2005 CCH OSHD ¶ 32,841, p. 52,807 (No. 00-1198, 2005). Under these circumstances, we find that the LOTO standard's initial training provision prohibits "individual acts." Accordingly, we conclude the LOTO standard's initial training provision may be cited on a per-employee basis, and individually affirm the six citation items discussed above. *See Manganas Painting Co.*, 21 BNA OSHC at 1995, 2007 CCH OSHD at pp. 53,409-10 (noting that where standard permits per-employee citation, Commission may affirm separate violations despite non-willful characterization).

Similarly, we find the cited retraining provision is also susceptible to per-employee citation, as it expressly identifies the need for individualized retraining based upon the employer's awareness that a specific employee is performing lockout deficiently under the standard. 29 C.F.R. § 1910.147(c)(7)(iii)(B); *see Sanders Lead Co.*, 17 BNA OSHC at 1203, 1993-95 CCH OSHD at p. 42,692 (instance-by-instance penalties appropriate where "standard prohibits individual acts"). This provision specifically targets "deviations from or inadequacies in the employee's knowledge or use of the energy control procedures," an occurrence that would trigger an employer's obligation to retrain only that particular employee. 29 C.F.R. § 1910.147(c)(7)(iii)(B). As the standard explains, this retraining "shall reestablish employee proficiency and introduce new or revised control methods and procedures, as necessary." 29 C.F.R. § 1910.147(c)(7)(iii)(C).

In these circumstances, as with the initial training provision, the standard imposes a specific duty on the employer to retrain each individual employee who demonstrates deficiencies in his knowledge or use of energy control procedures. Moreover, the required retraining must specifically address each employees' particular deficiencies. Accordingly, we conclude this retraining provision may be cited on a per-employee basis, and individually affirm the twelve citation items discussed above. *E.g.*, *Manganas Painting Co.*, 21 BNA OSHC at 1995, 2007 CCH OSHD at p. 53,410 (upholding per-employee citation, as medical removal protection standard implicates protection of individual employees).

VIII. PENALTIES

The Secretary proposed penalties of between $35,000 and $70,000 for each of the citation items. For those items he affirmed, the judge assessed the proposed amounts with the exception of a few items for which he reduced the penalty. As the judge explained, "[t]he Commission is the final arbiter of penalties, and, when so doing, is to consider the employer's size, history and good faith, as well as the gravity of the violations; the gravity of the violations is generally the most significant element." *Hern Iron Works, Inc.*, 16 BNA OSHC 1619, 1624, 1993-95 CCH OSHD ¶ 30,363, p. 41,884 (No. 88-1962, 1994); *see also* Section 17(j) of the Act, 29 U.S.C. § 666(j).

With respect to size, it is undisputed that with 5,000 employees at the Oklahoma City plant alone, GM is a very large employer. As noted earlier, the company also has a history of four prior LOTO citations at other plants. Although GM's initiative in addressing the hazards of unexpected energization by developing a program and training its employees even before the LOTO standard's promulgation would normally warrant some good faith credit, its failure in implementing and enforcing that program after the standard came into effect undermines those earlier commendable efforts. Where GM's supervisory and managerial personnel knew of widespread noncompliance with the requirements of the LOTO standard by servicing and maintenance employees, and tolerated as well as encouraged such hazardous work practices, we see no basis on which to accord GM any good faith penalty credit. We also agree with the judge's conclusion that "the gravity of the violations in this case was high." As evidenced by the fatality that prompted OSHA's inspection here, even momentary exposure to equipment that has not been fully deenergized and locked out poses a significant risk of serious harm or death.

As the highest gravity citation items are those related to the accident, we assess higher penalties for those items. In particular, we assess the maximum penalty for GM's failure to retrain millwright Smith because it not only knowingly reassigned him to work on unfamiliar and complex equipment without providing any retraining, but ignored his legitimate concerns for his own safety in attempting the motor rail conveyor repair. For those items we affirm as serious instead of willful—Items 1c, 3, 4, 7, 14, 16, and 44—we have assessed penalty amounts that reflect the change in characterization. Accordingly, we assess the following penalty amounts for the items we affirm: Item 1a-c - $25,000 (grouped); Item 2 - $35,000; Items 3, 4, 7, 14, 16, and 44 - $2,000 each; Item 32 - $70,000; Items 12, 20, 36-38, 40, 41, 46-49, and 51 - $25,000 each; and Items 53-57 - $50,000 each.

ORDER

We affirm Willful Citation 1, Items 1a-b, 2, 12, 20, 32, 36-38, 40, 41, 46-49, 51, and 53-57 as willful, and Items 1c, 3, 4, 7, 14, 16, and 44 as serious. We assess a total penalty of $692,000, as follows: Item 1a-c - $25,000 (grouped); Item 2 – $35,000; Items 3, 4, 7, 14, 16, and 44 - $2,000 each; Item 32 - $70,000; Items 12, 20, 36-38, 40, 41, 46-49, and 51 - $25,000 each; and Items 53-57 - $50,000 each.

/s/_____
Horace A. Thompson III
Chairman

/s/_____
Thomasina V. Rogers
Commissioner

Dated: December 4, 2007

SECRETARY OF LABOR, Complainant, v. GENERAL MOTORS CORPORATION, CPCG OKLAHOMA CITY PLANT, Respondent.	:	OSHRC DOCKET NOS. 91-2834-E & 91-2950
INTERNATIONAL UNION, UNITED AUTOMOBILE, AEROSPACE & AGRICULTURAL IMPLEMENT WORKERS OF AMERICA - UAW AND LOCAL 1999, Authorized Employee Representative.	:	

APPEARANCES:

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Before: Administrative Law Judge Stanley M. Schwartz[1]

DECISION AND ORDER

This is a proceeding brought before the Occupational Safety and Health Review Commission (``the Commission") pursuant to section 10 of the Occupational Safety and Health Act of 1970, 29 U.S.C. § 651 *et seq.* (``the Act").

[1]Although this case was heard by Administrative Law Judge E. Carter Botkin, it has been reassigned to the undersigned for decision due to the death of Judge Botkin. The parties were notified of the reassignment, and over thirty days have elapsed without comment from any of the parties.

The Occupational Safety and Health Administration (``OSHA") inspected a General Motors (``GM") plant located in Oklahoma City, Oklahoma, after a fatal accident at that facility on April 4, 1991. The inspection, which was concluded on September 18, 1991, resulted in the issuance of a willful/egregious citation with fifty-seven items alleging violations of various provisions of 29 C.F.R. § 1910.147, the lockout/tagout (``LOTO") standard, and proposing penalties totaling $2,780,000.00.[2] GM contested the citation, and a nine-day hearing was held December 10-22, 1992.

During the course of the proceedings, the Secretary withdrew items 8-10, 13, 17, 33, 35 and 45, and amended items 12, 20, 44 and 50.[3] As amended, the remaining items allege as follows:

> Items 1(a)-(c) - 1910.147(c)(1), (c)(4)(i) and (c)(4)(ii) - That there was no LOTO program in compliance with the standard at the facility.
>
> Item 2 - 1910.147(c)(6)(i) - That there was no annual inspection of LOTO procedures as required.
>
> Items 3-7, 11, 14-16, 18-19, 21-29, 44, 50 - 1910.147(c)(7)(i) - That employees (including six supervisors) received inadequate or no initial LOTO training.
>
> Items 30-32, 34 - 1910.147(c)(7)(iii)(A) - That retraining was not provided when a change in assignment or machinery presented a new hazard.
>
> Items 12, 20, 36-43, 46-49; 51-52[4] - 1910.147(c)(7)(iii)(B) - That retraining was not provided when there was reason to believe there were inadequacies in or deviations from LOTO procedures.
>
> Items 53-57 - 1910.147(d)(2), (d)(3), (d)(4)(i), (d)(5)(i) and (d)(6) - That the equipment which caused the fatality, a lift on a gravity conveyor in the motor rail area, was not shut down and locked out as required.

Background

The LOTO standard, effective January 2, 1990, was promulgated to address the control of hazardous energy during the servicing and maintenance of machinery. Specifically, the 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." *See* 1910.147(a)(1). Although the standard does not apply to normal production operations covered by Subpart O, which requires the guarding of operating equipment presenting a

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[2]The Secretary's ``egregious" policy was applied to the items involving the standard's training provisions.

[3]As originally issued, items 12 and 20 alleged violations of 1910.147(c)(7)(i), and items 44 and 50 alleged violations of 1910.147(c)(7)(iii)(B); items 8-10, 13 and 17 alleged violations of 1910.147(c)(7)(i), items 33 and 35 alleged violations of 1910.147(c)(7)(iii)(A), and item 45 alleged a violation of 1910.147(c)(7)(iii)(B).

[4]Although the Secretary asserts that item 52 was amended to allege a violation of 1910.147(c)(7)(i), there is nothing in the record to indicate such an amendment.

hazard, it is intended to work together with Subpart O and comes into play when guarding is removed or bypassed for servicing or maintenance and exposure to a hazard exists. *See* 1910.147(a)(2)(ii); 54 Fed. Reg. 36,646-47, 36,661-62 (1989).[5] Accordingly, hazards addressed by the standard include the servicing of equipment while it is operating or only partially shut down, as well as the accidental or unexpected activation of machinery during maintenance, where exposure to a hazard exists. 54 Fed. Reg. 36,646 (1989).

The standard requires the establishment of a program consisting of energy control procedures, employee training and periodic inspections to ensure that equipment presenting a hazard is rendered inoperative prior to servicing or maintenance; training is to include the employer's program, the energy control procedures relevant to employee duties, and the requirements of the standard itself. *See* 1910.147(c)(1), (c)6 and (c)(7); 54 Fed. Reg. 36,673 (1989). The cornerstone of the standard is its requirement that equipment be not only de-energized but also that actual locks be affixed to energy isolating devices so that the equipment cannot be re-energized until servicing or maintenance is completed.[6] *See* 1910.147(c)-(d); 54 Fed. Reg. 36,644, 36,654-55 (1989). While the standard recognizes that there are some servicing operations which must be performed while the equipment is turned on, alternative safeguards must be provided in such cases.[7] 54 Fed. Reg. 36,646-47, 36,661-62 (1989). The standard also recognizes that there are instances when equipment must be energized for testing or troubleshooting; however, at such times tools and materials must be removed and employees safely positioned. *See* 1910.147(e)-(f); 54 Fed. Reg. 36,647-48, 36,660-62 (1989).

The subject facility, which began operation in 1979 and has been unionized from the outset, is an auto assembly plant employing about 5,000 workers. The plant has hundreds of machines contained in various departments, including the body shop and the trim, chassis, paint and final process departments; virtually all of the equipment is powered by electricity, and most of it also utilizes one or more additional types of energy, such as gravity, hydraulics or pneumatics. The plant has three eight-hour shifts, the first two being devoted to production and the third to maintenance except for the first two hours which overlap the second. Maintenance is performed by ``skilled trades," employees who have completed apprenticeships and are journeyman electricians,

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[5]Amendments to the standard appear at 55 Fed. Reg. 38,677 *et seq*. (1990).

[6]When tags are used on equipment capable of being locked out, the employer must demonstrate that the tags comply with the standard and that use of the tags, together with additional safeguards, provides equivalent protection. *See* 1910.147(c)(2)-(3) and (c)(5).

[7]This exception, set out in a note following 1910.147(a)(2)(ii), exempts minor servicing activities during normal production that are routine, repetitive and integral to use of the equipment for production, as long as alternative measures providing effective protection, *i.e.*, the provisions of Subpart O, are used.

millwrights, pipefitters or toolmakers.[8] The 450-500 skilled trades at the plant are supervised by the maintenance department.

While some skilled trades are assigned to a particular area, others work throughout the plant, such as relief workers and those on ``crash trucks,'' mobile units which respond to machinery breakdowns during production. Skilled trades also have overtime opportunities, when they can be assigned anywhere, and one skilled tradesman can displace another from his shift and area of assignment if he has more seniority.

Donald Smith, the employee who was fatally injured, had been a millwright at the plant for ten years; he had been in the chassis area, but two or three days before the accident was reassigned to the third shift in the body shop pursuant to applying for a shift preference. Smith began his shift on April 3 at 10:00 p.m., and Thomas Hendley, a maintenance supervisor, gave him the assignment of changing some bushings on the load end lift on gravity conveyor number 4 in the motor rail area.[9] Smith proceeded to the conveyor about 10:30 p.m. and asked Donald Miller, the operator who was loading parts into the equipment, if he knew where the bushings needing replacement were; Miller had seen maintenance employees observing the conveyor earlier as there were problems with it, and indicated where he thought they were. Smith watched parts cycle through the conveyor for about fifteen minutes and then left.

Around 11:00 p.m., Smith spoke with James Brown, a tooling supervisor, and asked to be shown the bushing block. They went to the conveyor, where Brown pointed it out; Brown also told Smith the repair parts were in the maintenance supervisor's office. Smith returned to the conveyor with some tools about midnight, the end of Miller's shift; Miller was running his last part at that time and left shortly thereafter. Around 12:30 a.m., Smith told Patrick Parker, the third shift electrician assigned to the equipment, that he was to replace some bushings and showed him the area he needed to work on. The accident occurred a few minutes later, when Parker was at the lift control with his back to the conveyor and Smith was on the opposite side of the equipment leaning into it; the lift

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[8]Hereinafter, the use of one of these four terms will signify an individual who is a journeyman skilled tradesman, unless otherwise indicated.

[9]The motor rail area, sometimes called the motor compartment area, is a multi-stage automatic process which welds car parts together. The area measures about 90 by 45 feet and has a left and right side with identical equipment powered by air, electricity, gravity and hydraulics; specifically, each side has two gravity conveyors with load and unload lifts at either end, three other conveyors, various automatic welding stages and a hydraulic robot area. The equipment has carriers, clamps, hoists, shuttles and turntables, about 165 weld guns and 300 limit switches, and over 150 disconnects on various control panels. (Tr. 932; 1027-28; 1093; 1097-98; 1286; 1402-03; 1448-58; 1463-68; 1474-78; G-4; G-6; G-62).

activated, rose up and struck him in the head, and although he was taken to a hospital he was dead on arrival.

Applicability of the Standard

As a preliminary matter, GM contends that the Secretary has not shown the applicability of the standard in this case. Specifically, GM asserts that the standard applies only when equipment presents a risk of injury due to unexpected energization and that it does not apply when machinery is otherwise energized, such as when it is running already or turned on intentionally. This assertion is rejected in light of my findings in regard to the scope and purpose of the standard, *supra*. It is also rejected for the following reasons.

It is clear that the actual lockout provisions set out at 1910.147(d) are applicable only when equipment is shut down for service or maintenance. However, the other provisions of the standard apply to all facilities having equipment presenting the types of hazards contemplated by the standard; these include the lockout program and training requirements cited in this case, as well as the prohibitions against starting up equipment without assuring that employees and materials are safely positioned. *See* 1910.147(e)-(f). The record in this case, as set out *infra*, amply demonstrates the applicability of the standard to the subject plant.

In a related argument, GM appears to contend that the Secretary, in order to demonstrate violations of the training provisions, must show that each employee was exposed to a specific risk of injury due to the unexpected energization of a particular piece of equipment. I disagree. The standard requires that all authorized employees, those who perform service or maintenance as defined at 1910.147(b), be trained pursuant to the standard. Moreover, the record establishes that all such employees in this case performed work that exposed them to the types of hazards contemplated by the standard, a fact which GM as much as concedes in light of the fact that the plant has had a lockout program and training since its inception. Finally, notwithstanding the foregoing, I note that many of the employees did, in fact, describe specific instances in which they were exposed to a risk of injury pursuant to their job duties. GM's contentions are accordingly rejected.[10]

29 C.F.R. §§ 1910.147(c)(1), (c)(4)(i) and (c)(4)(ii)

The cited standards provide as follows:

1910.147(c)(1) - The employer shall establish a program consisting of energy control procedures, employee training and periodic inspections to ensure that before any

[10]In rejecting GM's contentions, I have noted the administrative law judge decisions it cites in support of its position. However, judges' opinions are not binding Commission precedent. Moreover, the cited opinions present facts different from those in this case, and none addresses the training provisions constituting the majority of the items in this case.

> employee performs any servicing or maintenance on a machine or equipment where the unexpected energizing, start up or release of stored energy could occur and cause injury, the machine or equipment shall be isolated from the energy source, and rendered inoperative.
>
> 1910.147(c)(4)(i) - Procedures shall be developed, documented and utilized for the control of potentially hazardous energy when employees are engaged in the activities covered by this section.
>
> 1910.147(c)(4)(ii) - The procedures shall clearly and specifically outline the scope, purpose, authorization, rules, and techniques to be utilized for the control of hazardous energy, and the means to enforce compliance including, but not limited to, the following:
>
> (A) A specific statement of the intended use of the procedure;
>
> (B) Specific procedural steps for shutting down, isolating, blocking and securing machines or equipment to control hazardous energy;
>
> (C) Specific procedural steps for the placement, removal and transfer of lockout devices or tagout devices and the responsibility for them; and
>
> (D) Specific requirements for testing a machine or equipment to determine and verify the effectiveness of lockout devices, tagout devices, and other energy control measures.

GM contends the facility has had a LOTO program and written procedure since its inception, that employees were trained in and used the procedure, and that the procedure complied with the standard. The Secretary contends the procedure was not specific enough to protect against the hazards presented by the many different types of equipment in the plant. The Secretary further contends that although some lockout training had been provided not all employees had received it, and that in any case lockout was virtually unused and never enforced at the facility.

The record shows the facility has had the same written lockout procedure since 1979; the procedure is set out in G-15, a nine-page pamphlet, and G-60, an essentially identical three-page version of G-15. (Tr. 182-86; 238-43; 420-23). G-15 provides as follows:

> PURPOSE: This procedure establishes a lockout/tagout practice for securing machinery and equipment during periods of repair, servicing, and/or alteration which could cause injury to personnel. All affected employees shall comply with this procedure.
>
> RESPONSIBILITY: All personnel involved in an operation which requires a lockout/tagout are responsible to see that this procedure is followed.
>
> IMPLEMENTATION: Management shall instruct all affected employees in the purpose, use and safety significance of the lockout/tagout procedure.
>
> SEQUENCE OF LOCKOUT PROCEDURE:
>
> 1. When necessary, shut equipment down by the normal stopping procedure, (depress stop button, open toggle switch, valve, etc.).
>
> 2. Open disconnect switch, operate valve, or other energy isolating device so that the energy source(s), (electrical, mechanical, hydraulic, etc.), are disconnected or isolated from the equipment. Stored energy, such as that in capacitors, hydraulic, or air, gas, steam, water pressure, etc., must also be dissipated.
>
> 3. Lock/tagout the energy source(s) with assigned individual device(s). In situations involving more than one person, all affected employees are required to place their assigned individual lock or tag on the energy isolating device. (After assuring no

personnel are exposed, as a check on having disconnected the energy sources, operate push button or other normal operating controls to make certain the equipment will not operate. CAUTION: Return operating controls to neutral, or off position after test).

4. Where lockout/tagout is not feasible in the case of required, repetitive adjustments or production operations, these shall be accomplished under the protection of one designated individual.

5. The equipment is now locked out, or secured.

6. If work on a piece of equipment has not been completed by the end of the shift, the supervisor in charge shall tagout the equipment to allow the removal of all locks. The oncoming shift attaches their lock(s) at which time the tag shall be removed by the oncoming supervisor.

RESTORING EQUIPMENT TO SERVICE:

1. When the job is complete and equipment is ready for testing or normal service, check the equipment area to see that no one is exposed.

2. When equipment is all clear, all locks shall be removed and the disconnect or the energy isolating devices may be operated to restore energy to equipment.

3. In the case of required repetitive adjustments or production operations, the designated individual will return the equipment to service when it is clear.

DEVICE SPECIFICATIONS:

The lockout/tagout devices used for compliance with this procedure shall be as follows:

1. Locks - Shall be ``Best" manufactured, color-coded or otherwise identified for lockout use only. All new purchases shall be ``Best Safety First Padlocks", Model-IBZ, individually keyed with no duplicating pattern.

2. Tags - Standard GMAD tags shall be used in all GMAD facilities.

3. Scissors - Locally purchased scissors shall be maintained and readily available for issue.

ISSUANCE OF SAFETY LOCK:

1. It shall be the responsibility of the local Plant Security Department to maintain an adequate supply of safety locks.

2. Plant Security Department shall maintain a master list with the name of the employee and the number of the lock.

3. One key shall be issued to the individual to whom the lock is assigned and one other key will be maintained by Plant Security. No other keys shall be made.

TRAINING:

1. Affected employees shall be trained in all aspects of the purpose and use of the GMAD lockout/tagout procedure.

2. The standard GMAD lockout/tagout training program shall be utilized.

DEFINITIONS

LOCKOUT/TAGOUT - The placement of a lock/tag on the energy isolating device in accordance with an established procedure, indicating that the energy isolating device shall not be operated until removal of the lock/tag in accordance with an established procedure.

LOCKOUT DEVICE - Is a device that requires the use of lock and key to hold an energy isolating device in the safe position for the purpose of protecting personnel.

TAGOUT DEVICE - A prominent, securely attached warning device which for the purpose of personnel protection forbids the operation of an energy isolating device and identifies the applier or authority who has control of the procedure.

DESIGNATED INDIVIDUAL - An individual to whom the authority and responsibility to perform a specific assignment has been given by the employer.

> ENERGY SOURCE - Any electrical, mechanical, hydraulic, pneumatic, chemical, nuclear, thermal or other energy source that could cause injury to personnel.
> ENERGY ISOLATING DEVICE - A physical device which prevents the transmission or release of energy. For example, but not limited to the following: a manually operated electrical circuit breaker, a disconnect switch, manually operated switch, a slide gate, a slip blind, line valve, blocks or similar devices with visible indication of the position of the device.
> AFFECTED EMPLOYEE - A person whose job includes those activities such as erecting, installing, constructing, repairing, adjusting, inspecting, operating or maintaining the equipment/process.
> SLASH(/) - For the purpose of this standard refers to and/or such as lockout/tagout equipment/process.
> SHALL - Denotes a mandatory requirement.

From 1979 until 1983, lockout training at the plant consisted of reviewing G-60, viewing a slide presentation addressing lockout and other safety matters, and employee receipt of G-15. From 1983 to 1985, employees in apprenticeships received lockout training through those programs, and in 1985 safety training including lockout was conducted for skilled trades hired at that time. Also in 1985, the UAW-GM National Joint Health and Safety Committee published G-16A, a 111-page lockout training manual, and employees from GM plants around the country went to a center in New Jersey to become trainers in their respective facilities. The UAW-GM lockout training utilizing G-16A was conducted at the subject plant from 1986 until 1989, and the approximately eight-hour training included classroom lockout of some plant equipment.[11] In 1989 and 1990 GM and the UAW began discussing revising G-16A in view of the pending OSHA standard, and in June 1991 G-16C, a draft document identical to G-16A except for its cover and introductory pages, was published; however, no agreement on a revised version of the manual had been reached by the date of the hearing in this matter. Accordingly, at the time of the accident, the plant's written lockout program consisted of G-15, G-60 and G-16A. (Tr. 178-86; 198-209; 238-44; 324; 355-58; 420-23; 509-10; 1668-72; 1676-84; 1826-29; 1845-46; 1850-52; 1923-24).

GM points to the foregoing as evidence of its compliance with the standard. However, it is clear from the thirty-three skilled trades and two equipment cleaners whose testimony is set out below, in the portion of this decision addressing the training provisions, that eleven did not remember any of the training noted in the preceding paragraph and fifteen had not had the UAW-GM training, that six were not given a safety lock until after the accident, and that those who were had only one, which was insufficient to properly lock out most equipment.[12] It is also clear that lockout was unenforced, seldom used and left up to the employees, that supervisors regularly observed

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[11]Most of this training occurred in 1986 and 1987. (Tr. 242-44).

[12]Based on my findings *infra*, all of these employees except one were authorized employees exposed to hazards contemplated by the standard after January 1990.

maintenance work without the use of locks and sometimes helped with such work, that there was pressure to get machinery running again after a breakdown, and that supervisors had on occasion even told employees to not de-energize equipment. Finally, it is clear that employees often worked on unfamiliar equipment, and that while they could ask another skilled tradesman for help they were not required to do so and the plant made no effort to provide instruction in such circumstances.

In defense of the foregoing, GM presented the testimony of Richard Parry, a GM staff engineer who has been with the company since 1955; he reviews OSHA standards and participates in their promulgation, consults with GM plants in regard to skilled trades operations and provides technical support for GM's safety and legal staff. Parry investigated the accident, and, after looking at all the equipment in the plant, concluded employees were appropriately controlling energy when performing servicing and maintenance prior to the accident, some through the use of locks and some without. In this regard, Parry testified the energy-controlling devices on plant equipment are universal and easily recognizable, that the various types of devices are all de-energized in the same manner, *i.e.*, electrical sources are turned off with disconnect switches, pneumatic sources are neutralized by means of air dump valves, etc., and that the skilled trades, as journeymen who have been through apprenticeships and have had years of experience, know how to safely de-energize machinery and need no additional instruction when servicing or maintaining unfamiliar equipment. Parry further testified that the standard requires lockout only when equipment presents a hazard, and that machinery that can be safely controlled by de-energization and/or other means such as blocking or chaining is not required to be locked out. Finally, Parry testified there was no equipment at the plant which could not be safely de-energized by using the procedure set out in G-15, and that the standard did not require a separate procedure for each piece of equipment. (Tr. 1940-46; 1953-66; 1969-73; 2040-41; 2084-85; 2090-96; 2115-18; 2129-37; 2144-48; 2168-72).

Standing alone, Parry's testimony might be persuasive; however, in light of the record as a whole it is unconvincing. I note first my finding, set out in the discussion addressing items 53 through 57, *infra*, that the fatality in this case was directly related to Smith's lack of familiarity with the motor rail equipment, notwithstanding the fact he had worked as a journeyman millwright at the facility for ten years. I note also that while various skilled trades indicated they knew how to safely de-energize equipment before the accident, others indicated they did not feel safe working on unfamiliar machinery without being trained in it, particularly the motor rail equipment, which the employees described as complicated. Even more significant are the accidents and exposures to hazards described by employees that have occurred at the facility. Besides showing the need for training in and utilization of proper de-energization and lockout, these events are precisely the types of hazards contemplated by the standard, *i.e.*, employees working on or around energized machinery,

conveyors being turned back on before servicing is completed, equipment moving or activating unexpectedly with a worker in it, etc.

In regard to G-15, Parry's opinion was that all of the plant equipment could be safely de-energized by using the same procedure and that the standard did not require a separate procedure for each piece of equipment. However, Richard Sauger, a safety specialist with OSHA's Office of Safety Standards Programs and the project officer in the development of the LOTO standard, testified that a procedure so general that it does not provide the needed information does not comply with the standard, and that while a simple procedure can suffice for a simple machine with a single energy source, the more complex the machinery is the more detailed and specific the procedure must be. (Tr. 66-72; 79-81). Sauger's testimony is supported by the exception to 1910.147(c)(4)(i), which states as follows:

> NOTE: *Exception*: The employer need not document the required procedure for a particular machine or equipment, when all of the following elements exist: (1) The machine or equipment has no potential for stored or residual energy or reaccumulation of stored energy after shut down which could endanger employees; (2) the machine or equipment has a single energy source which can be readily identified and isolated; (3) the isolation and locking out of that energy source will completely deenergize and deactivate the machine or equipment; (4) the machine or equipment is isolated from that energy source and locked out during servicing or maintenance; (5) a single lockout device will achieve a locked-out condition; (5) the lockout device is under the exclusive control of the authorized employee performing the servicing or maintenance; (7) the servicing or maintenance does not create hazards for other employees; and (8) the employer, in utilizing this exception, has had no accidents involving the unexpected activation or reenergization of the machine or equipment during servicing or maintenance.

In light of the foregoing, it is found that G-15, besides being deficient in other respects, is inadequate for complex equipment as it does not detail the specific steps needed to safely de-energize and lock out particular equipment.[13] G-15 is especially inappropriate for the motor rail equipment, which, as shown by the testimony of the skilled trades and Smith's accident, is not only complicated but also hazardous for employees unfamiliar with it; in this regard, I note that electrician Samuel McGahey, after years of experience with the equipment, was injured in 1987 or 1988 by the same lift responsible for the fatality. *See* item 40, *infra*. In any case, even assuming *arguendo* that G-15 did comply with the standard, it is clear its lockout provisions were rarely utilized and that the

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[13]GM contends G-15 is similar to the sample procedure set out in Appendix A to the standard. However, it is clear that G-15 lacks a number of the specifics set out in the sample and required by the standard. Moreover, the introductory portion of the sample refers to the procedure as ``minimal'' and ``simple'' and states that ``[f]or more complex systems, more comprehensive procedures may need to be developed, documented and utilized.''

decision of whether to turn off and lock out equipment was left up to the employees, which, as Sauger testified, is impermissible under the standard. (Tr. 92).

Based on the record, it is concluded that the plant was in violation of the subject standards. In so concluding, I have noted the UAW-GM training and the fact that G-16A, without deciding whether it complies with the standard, appears to be a thorough discussion of the principles applicable to the lockout of hazardous energy. However, the plant failed to ensure all employees exposed to hazardous energy received the UAW-GM training and provided neither specific procedures for nor training in complex equipment. Further, the plant despite the UAW-GM training and the later promulgation of the standard did not implement or enforce lockout before the accident and in effect discouraged it by providing insufficient locks and pressuring employees to get equipment running. Items 1(a)-(c) are accordingly affirmed. The classification of all of the violations in this case and the penalties assessed are discussed at the end of the decision.

29 C.F.R. § 1910.147(c)(6)(i)

The subject standard provides as follows:

> (i) The employer shall conduct a periodic inspection of the energy control procedure at least annually to ensure that the procedure and the requirements of this standard are being followed.
>
> (A) The periodic inspection shall be performed by an authorized employee other than the one(s) utilizing the energy control procedure being inspected.
>
> (B) The periodic inspection shall be conducted to correct any deviations or inadequacies identified.
>
> (C) Where lockout is used for energy control, the periodic inspection shall include a review, between the inspector and each authorized employee, of that employee's responsibilities under the energy control procedure being inspected.
>
> (D) Where tagout is used for energy control, the period inspection shall include a review, between the inspector and each authorized and affected employee, of that employee's responsibilities under the energy control procedure being inspected, and the elements set forth in paragraph (c)(7)(ii) of this section.

In addition to the foregoing, 1910.147(c)(6)(ii) provides as follows:

> (ii) The employer shall certify that the periodic inspections have been performed. The certification shall identify the machine or equipment on which the energy control procedure was being utilized, the date of the inspection, the employees included in the inspection, and the person performing the inspection.

GM suggests the facility was in compliance with the subject standard based on a member of the UAW-GM health and safety team checking machinery for ``lockout schematics'' in 1987, resulting in additional schematics being posted on equipment, and on plant safety representatives checking on employee training and conducting walkarounds. (Tr. 328-37; 425-28; 524-27; 1835-44; 1854-55; 1919). It is clear these actions do not meet the requirements above, and employees testified there were no written lockout instructions on equipment before the accident and that no one ever

checked on or inspected the use of lockout.[14] (Tr. 686; 698-700; 759-61; 791-92; 883-84; 1018; 1038-39; 1058-59; 1599). Further, based on my findings *infra*, a number of employees who should have been were not trained in lockout before the accident, and lockout was in any case unenforced and rarely utilized until after Smith's fatality. Finally, William Young, the plant's manager of safety and ergonomics, admitted there had been no audit in compliance with the standard at the time of the accident. (Tr. 223-24; 235-36).

GM nonetheless contends the facility was not in violation of 1910.147(c)(6) because it was unclear when the audit was required. Young testified that the plant's management was discussing the audit at the time of the accident and that there was confusion about whether it was required in 1990, the effective year of the standard, or a year later. Young further testified that OSHA's compliance directive on the standard was not published until September 1990, and that ``there was a feeling that the audit did not have to be done until one year after the issuance of the CPL...." (Tr. 236; 1836-37). However, as the Secretary points out, the directive itself states at item D on page 1 that ``[a]ll requirements of 29 CFR 1910.147 have an effective date of January 2, 1990." *See* R-2. This date was also published ten months earlier in the Federal Register. *See* 54 Fed. Reg. 46,610 (November 6, 1989). Based on the foregoing, the facility was required to perform an annual inspection in January 1991. Since it did not it was in violation of the standard, and this item is affirmed.

29 C.F.R. §§ 1910.147(c)(7)(i), (c)(7)(iii)(A) and (c)(7)(iii)(B)

The subject standards provide as follows:

> 1910.147(c)(7)(i) - The employer shall provide training to ensure that the purpose and function of the energy control program are understood by employees and that the knowledge and skills required for the safe application, usage, and removal of the energy controls are acquired by employees. The training shall include the following:
>
> (A) Each authorized employee shall receive training in the recognition of applicable hazardous energy sources, the type and magnitude of the energy available in the workplace, and the methods and means necessary for energy isolation and control.[15]
>
> (B) Each affected employee shall be instructed in the purpose and use of the energy control procedure.[16]

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[14]The schematics GM refers to were apparently equipment diagrams, not lockout instructions, a conclusion supported by the fact that GM presented no evidence of any written lockout instructions for specific equipment that existed before the accident. (Tr. 759-61).

[15]An authorized employee is one who locks out or tags out machines or equipment in order to perform servicing or maintenance. *See* 1910.147(b).

[16]An affected employee is one whose job requires him to operate or use machinery or equipment on which servicing or maintenance is being performed under lockout or tagout, or whose job requires

> (C) All other employees whose work operations are or may be in an area where energy control procedures may be utilized, shall be instructed about the procedure, and about the prohibition relating to attempts to restart or reenergize machines or equipment which are locked out or tagged out.
>
> 1910.147(c)(7)(iii)(A) - Retraining shall be provided for all authorized and affected employees whenever there is a change in their job assignments, a change in machines, equipment or processes that present a new hazard, or when there is a change in the energy control procedures.
>
> 1910.147(c)(7)(iii)(B) - Additional retraining shall also be conducted whenever a periodic inspection under paragraph (c)(6) of this section reveals, or whenever the employer has reason to believe, that there are deviations from or inadequacies in the employee's knowledge or use of the energy control procedures.

The employee testimony pertaining to the items alleging violations of the foregoing training provisions is set out below. Based on that testimony, it is concluded that with one exception the non-supervisory individuals who are the subject of these items were authorized employees exposed to hazards contemplated by the standard after January 1990 and that they were not trained as required. It is further concluded the six supervisory individuals were affected employees, and that they were likewise not trained as required. My findings as to each individual are set out at the corresponding item. First, however, GM makes a number of general assertions as to why it did not violate the training requirements.

GM asserts it was not in violation of the subject standards because its skilled trades were trained as required. It notes the LOTO training set out *supra*, plant safety meetings and the robotics training which occurred in the late eighties. However, it is clear that a number of the skilled trades who testified did not receive the LOTO training given at the plant.[17] Further, while some testified that some safety meetings or handouts addressed lockout, others did not recall anything on that topic. (Tr. 666-67; 879-80; 1018; 1191-92; 1211; 1301; 1549; 1579; 1640; 1656-57). Finally, while about two-thirds of the skilled trades who testified had the robotics training described in items 4, 6, 47 and 50, *infra*, that training addressed lockout only as to robots. (Tr. 640-41; 658; 691-95; 702-03; 731; 757; 793-96; 801-03; 858; 948; 1016; 1058; 1192; 1260-62; 1316; 1345; 1358; 1372-73; 1384-85; 1421; 1567; 1576). Regardless, in view of the overwhelming evidence that lockout was unenforced

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him to work in an area in which such servicing or maintenance is being performed. An affected employee becomes an authorized employee when his duties include servicing or maintenance covered by the standard. *See* 1910.147(b).

[17]It is also clear the two equipment cleaners who testified did not receive this training. Although William Young and Jerrie Wallace, the plant's safety supervisor, testified to the effect that all of the cited employees had had lockout training, their testimony was not convincing in light of the employee testimony to the contrary.

and in general unused until after Smith's death, it is apparent that any training received was inadequate and that employees were not trained within the meaning of the standard.

GM next asserts it was in compliance with the cited standards because its skilled trades understood its LOTO program and had the skills necessary to safely de-energize equipment without need of further training, based on their journeyman status. This assertion is rejected in light of the accidents and exposures to hazards described by the employees which have occurred over the years at the facility. GM attempted to rebut some of the incidents described by employees with the testimony of Richard Parry and William Young. Although their testimony has been considered, it is found unpersuasive in light of the record as a whole and the contrary testimony of the employees and is accordingly rejected.

GM argues that any exposures to hazards occurring before the effective date of the standard cannot be used to show violations. The record in this case is clear that employees have been exposed to the same types of hazards from the plant's inception due to the circumstances and nature of their work and the equipment used at the facility, and that all of the incidents described by employees, whether occurring before or after January 1990, were representative of the conditions at the plant.[18] Regardless, based on my findings *infra*, all but one of the non-supervisory employees were exposed to hazardous energy after January 1990, and item 39, the item relating to that individual, has been vacated.

GM also argues it cannot be held in violation of the standards as OSHA inspected the plant in 1989 and in March 1990 and did not cite it. William Young indicated these inspections were based on employee complaints about specific conditions and that OSHA was concerned about lockout on both occasions. (Tr. 1895-96; 1926-27). The inspection of two instances of employee complaints is not the equivalent of the inspection in this case. Moreover, it is well settled that OSHA's failure to issue a citation pursuant to an inspection does not grant an employer immunity from future enforcement of applicable standards. *See Seibel Modern Mfg. & Welding Corp.*, 15 BNA OSHC 1218, 1223-24, 1991 CCH OSHD ¶ 29,442, p. 39,679-81 (No. 88-821, 1991). GM may not, therefore, rely upon OSHA's failure to cite the plant pursuant to the previous inspections.

Finally, GM asserts that electrical work covered by Subpart S, 29 C.F.R. § 1910.333, is specifically excluded from coverage by 1910.147(a)(1)(ii)(C), and that the Secretary failed to demonstrate that its electricians performed work to which the LOTO standard applies. It is the burden of the party claiming the benefit of an exception to prove the applicability of the exception. *See, e.g., Westvaco Corp.*, 16 BNA OSHC 1374, 1377, 1993 CCH OSHD ¶ 30,201, p. 41,566 (No.

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[18]In this regard, I note William Young's testimony that the equipment in the plant, with the exception of lasers and some of the robotics, is 1950's technology. (Tr 1844-45).

90-1341, 1993). The record clearly shows that most of the plant's equipment uses electricity as well as one or more additional kinds of energy, and that electricians were exposed to hazardous energy other than electricity in the course of their normal job duties. *See* items 6, 15, 19, 21, 31, 34, 36-37, 39-40, 43, 46, 49, 51-52, *infra.* Consequently, GM has not established that its electricians were exempt from coverage.

Item 3 - Alton Tucker

Alton Tucker has been a millwright at the plant since 1985. He was on a crash truck in April 1991 and worked on multiple-energy equipment throughout the plant, including that which caused Smith's death. He had no lockout training before the accident, and while he was issued a safety lock when hired he never used it until after Smith's death. Supervisors routinely saw him working on equipment in breakdowns and never told him to use his lock; however, he secured equipment by shutting off electricity, dumping air and blocking machine parts as necessary. Shortly before the accident Tucker lost a quarter inch of his left index finger when he was changing a balancer on a spot-weld gun and another employee reached over to help him and accidentally pulled the trigger, causing the cylinder on the gun's clamp to pinch his finger; the gun is powered by electricity and air, and at that time there was no way to lock it out or shut it off. (Tr. 1804-18).

Based on the foregoing, Tucker was an authorized employee exposed to hazards contemplated by the standard after January 1990 and he was not trained as required. A violation of 1910.147(c)(7)(i) is established, and this item is affirmed.

Item 4 - Steven Greenwood

Steven Greenwood, a millwright at the plant for eight years, has worked in the motor rail, underbody press and laydown side frame areas of the body shop about four years.[19] The equipment uses electricity, air, gravity and hydraulics, is specialized and more complex than that in other areas, such as the chassis area, and generally requires neutralization of the electricity and air, and sometimes gravity, to repair it.[20] He was basically familiar with the machinery when assigned to it due to his prior job on a breakdown truck, but depended on Dennis Cook, a millwright who had been in the area for several years, for quite a while to learn the motor rail equipment. (Tr. 1090-1101; 1113-17).

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[19]Greenwood, the individual Smith replaced, returned to the third shift after the accident. (Tr. 1092-93; 1168).

[20]Electricity is controlled from electronic control panels, air with T-lock dump valves, and gravity by chaining or blocking the part capable of falling. (Tr. 1095; 1115).

Greenwood received a lock when hired, but recalled no lockout training before the accident other than some safety meetings which addressed it and some robotics instruction which dealt with lockout as to robots. He de-energized and blocked equipment as necessary before working on it and sometimes used a warning tag, but rarely used his lock before the accident because that was not the normal practice, getting the machinery running again during production was of the utmost importance, and he had only one lock; the area where Smith was killed requires one lock on the electric panel and one on the load end air dump valve, and to fully lock out the conveyor requires another lock on the unload end air dump valve and one more in the robot area.[21] Greenwood noted that the usual practice, when out of sight of the electrical panel of equipment, was to have the local electrician stand by it to make sure it was not turned back on while someone was in the machinery. (Tr. 1095-1100; 1105-16; 1119-22; 1152; 1181-84; 1191-96).

Greenwood had been a journeyman millwright since 1978, and believed he knew how to safely de-energize equipment based on his apprenticeship and experience. However, on one occasion in early 1989 he and another worker assigned to a breakdown truck were adjusting a balancer in the gate unload area when one of them hit a limit switch, making a car side frame move towards them. The equipment was in automatic rather than manual, and while they saw the frame and got out of the way it weighed about 1,500 pounds and could have struck and injured them; a supervisor named Ken Baurichter was present at the time, and supervisors Tom Hendley and Tom Armstrong had seen him working in the body shop without locking out. (Tr. 1100-06; 1122-23; 1181-87; 1190-94).

It is clear from the foregoing Greenwood was an authorized employee exposed to hazards contemplated by the standard after January 1990, especially in light of his work on the motor rail and other body shop equipment, and that he was not trained as required. A violation of 1910.147(c)(7)(i) has been demonstrated, and this item is affirmed.

Item 5 - David Beauregard

David Beauregard has been a millwright at the facility since 1985; he is currently on a crash truck and works in the motor rail area from time to time, but at the time of the accident he worked in the millwright's shop fabricating parts. Beauregard has worked overtime on weekends about twice a month since he was hired; such work can be anywhere in the plant and includes welding on floor and overhead conveyors. Beauregard did not receive a lock or any lockout training prior to the accident. (Tr. 661-67).

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[21]Since the accident, Greenwood locks out the motor rail equipment with locks kept in boxes in that area; he then puts the keys to the locks in the box and places his own lock on the box. (Tr. 1153).

Based on his weekend work on equipment such as conveyors, the hazardous nature of which is established by various employees *infra*, Beauregard was an authorized employee exposed to hazards contemplated by the standard after January 1990 without the requisite training. A violation of 1910.147(c)(7)(i) has been shown, and this item is affirmed.

Item 6 - Harold Harteke

Harold Harteke has been an electrician at the plant for eight years, except for a two-year period from 1987 until mid-1989 when he was at another GM facility; he has been in the paint area for two years, and before then was in the motor rail area. Harteke was given a lock and some lockout instruction when hired, and some lockout training on robots sometime before April 1991, but never used a lock on equipment until after the accident as it was never enforced; he turned off machinery before getting into it, and when in a new area, such as the motor rail area, he would have skilled trades familiar with the equipment show him the emergency stops and disconnects. Harteke did not ask supervisors for this information because most of them did not know. (Tr. 925-51).

On two occasions in 1989 Harteke got into the motor rail equipment to replace weld gun caps after pushing the emergency stop, a common practice before the accident. The first time he could have been crushed by the overhead shuttle in that area if one of the employees present had restarted the equipment while he was in it, and the second time he could have been cut in two; on that occasion he moved a part while in the equipment, triggering a limit switch that sent a scissor lift towards him to pick up the part, but he escaped injury as he was far enough to one side. In 1990 an overhead conveyor in the paint area Harteke was preparing to work on started up when someone turned it on after the wrong panel had been locked out; had his hand been in the conveyor he could have lost it. (Tr. 930-40).

It is clear from his testimony that Harteke was an authorized employee exposed to hazards contemplated by the standard after January 2, 1990, that he was not trained as required, and that a violation of 1910.147(c)(7)(i) is established. This item is affirmed.

Item 7 - Robert Peliti

Robert Peliti was a toolmaker in the machine shop from 1984 until about June 1992, when he was assigned to a crash truck; part of his shop work involved repairing machinery out on the floor several times a week. Peliti never locked out equipment and was not given a lock or any lockout training until after the accident, and when working on unfamiliar equipment he usually asked the electrician in the area to help him de-energize it by turning off the electricity and dumping the air; he had gotten into equipment which could have crushed him had it not been de-energized, blocked or tied back as necessary, such as the laydown side frame and the equipment where Smith was killed.

Peliti had worked in breakdown situations with up to fifteen supervisors present and had never been told to use a lock; in such situations there was a lot of pressure to get the equipment running. (Tr. 1348-1362).

Based on the foregoing, Peliti was an authorized employee exposed to hazards contemplated by the standard after January 1990 without having received the requisite training. A violation of 1910.147(c)(7)(i) is demonstrated, and this item is affirmed.

Item 11 - Wallace Ellis

Wallace Ellis began his toolmaker apprenticeship in 1983; after becoming a toolmaker he serviced multiple-energy equipment in the chassis and final process areas as well as the wheel house in the body shop, where he worked the year before Smith's fatality. Ellis received lockout training in 1983 and a lock upon becoming a toolmaker, but he neither used the lock nor was shown how to lock out equipment he worked on before the accident. He learned how to work on equipment by trial and error, and conveyors he had worked on had moved; he had not been hurt as they had not moved very far and he had gotten out of the way, but if they had continued parts could have run into him or pushed him over. Ellis had also worked on unfamiliar equipment in breakdowns, and supervisors had seen him working without locking out. (Tr. 1198-1212).

It is concluded from the record that Ellis was an authorized employee exposed to hazards contemplated by the standard after January 1990, and that he was not trained as required.[22] A violation of 1910.147(c)(7)(i) is established, and this item is affirmed.

Item 12 - Kenneth Thompson

Kenneth Thompson, a millwright at the facility for fourteen years, is currently in a crew that works all over the plant. In the year before the accident he was assigned to the shop and worked on equipment out on the floor, including the conveyor where Smith was killed; he had not worked on the conveyor previously, Thomas Hendley saw him working on it, and no one showed him how to shut it down or lock it out until after the fatality. Thompson had a safety lock and attended lockout training in 1986, but he did not use his lock and lockout was never enforced until after Smith's death; he made machinery as safe as he could by shutting it down, and when working on unfamiliar equipment he would ask a skilled tradesman in that area to show him how to de-energize it. Thompson locks out now because workers are reminded to do so and it is enforced. (Tr. 1540-49; 1552; 1555-56; 1563-68).

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[22]The hazards of the wheel house area are demonstrated by the testimony of Jerry Kincannon, a union committeeman at the plant since 1987. (Tr. 574-78; G-46).

Based on the record, Thompson was an authorized employee exposed to hazards contemplated by the standard after January 1990; moreover, based on Hendley's observing him without locking out, he was not retrained as required. A violation of 1910.147(c)(7)(iii)(B) has been shown, and this item is affirmed.

Item 14 - Anthony Jackson

Anthony Jackson has been an equipment cleaner in the paint area since 1983. His job involves changing the floor grates and cleaning the equipment in paint booths, including paint sprayers located overhead and on the sides of the booths; the side sprayers, called turbo bells, spin as they spray paint on the cars and can cause lacerations if contacted while they are operating. Jackson received no lockout training or safety lock before the accident and did nothing to ensure the bells would not operate while he was in the booth; the equipment was turned off by others, and although he worked on third shift, when no cars were being painted, there were times when employees outside the booth would be purging the bells in the same area where he and other cleaners were working. Jackson had lockout training after the accident, and now locks out the equipment before performing his work. (Tr. 952-92).

Jackson's opinion in regard to the hazard of the turbo bells is supported by the testimony of Patrick Liberty, Michael Warden and Eunice Kennedy, at items 30, 38 and 44, *infra*. It is also supported by G-48, a complaint filed by an employee in 1989, and by Gary Klingel, William Young's union counterpart at the plant; he testified employees had received lacerations requiring stitches as a result of contacting the bells. (Tr. 417; 2177-79). Although Richard Parry testified the bells were not hazardous due to their small size, as shown in G-64 and R-29B, and the noise they made when operating which would warn anyone around them, he admitted they rotated at a speed of 20,000 rpm and that they would probably cut or burn someone contacting them while they were running. (Tr. 2023-30). It is concluded that Jackson was an authorized employee exposed to hazards contemplated by the standard after January 1990, that he was not trained as required, and that a violation of 1910.147(c)(7)(i) is established. This item is affirmed.

Item 15 - William Winslett

William Winslett, an electrician, has been assigned to the laydown side frame area of the body shop since he was hired in 1985; the equipment consists of twenty robots which weld auto side frames, and requires up to fifteen locks to lock out all of its energy sources. He recalled no lockout training before the accident, and except for some weekend work he normally did not use the lock he was assigned until after Smith's death; he was also never shown how to de-energize machinery he worked on, and used common sense to make equipment safe and protect himself. Winslett had

worked in breakdown situations, at times worked with supervisors present, and was never told to use a lock before the accident. (Tr. 1627-34; 1638-46).

Based on his assignment to the laydown side frame equipment, the hazardous nature of which is established by employees such as Robert Peliti at item 7, *supra*, and Jim Green at item 46, *infra*, Winslett was an authorized employee exposed to hazards contemplated by the standard after January 1990 without the requisite training. A violation of 1910.147(c)(7)(i) has been demonstrated, and this item is affirmed.

Item 16 - Gregory Beam

Gregory Beam has been a millwright in the paint area since 1984, but he also works in other areas, such as the body shop, two to three times a week. He recalled no lockout training before the accident and learned how to de-energize equipment on his own or by watching or asking co-workers, and while he probably occasionally used the lock he was issued this was not standard procedure; he never locked out during breakdown situations, when supervisors were usually present and there was pressure to get the equipment running, and sometimes supervisors even assisted with the work. Beam had worked on the subject conveyor prior to Smith's death without anyone having familiarized him with it. (Tr. 648-59).

Based on the foregoing, Beam was an authorized employee exposed to hazards contemplated by the standard after January 1990 without the required training. A violation of 1910.147(c)(7)(i) has been shown, and this item is affirmed.

Item 18 - Lloyd Lester

Lloyd Lester is currently a toolmaker in the machine shop; however, from 1983 until the time of the accident he worked on multiple-energy equipment in various areas, including the underbody press in the body shop.[23] Lester received a lock and some lockout training at the start of his apprenticeship, and sometimes used his lock on equipment he was unfamiliar with; supervisors generally worked with him in new areas, he relied upon them at such times, and while it was his decision whether to lock out they would occasionally suggest he do so if he asked about it. The underbody press, a large press with weld guns that is powered by electricity, hydraulics and pneumatics, was turned off by the electricians in the area when he worked on it; he was not sure what they did or if they used locks, but the press itself was secured with a rod and the weld guns were isolated if they were worked on. (Tr. 1226-40).

[23]Lester was an apprentice from 1983 until September 1990, at which time he became a journeyman toolmaker. (Tr. 1227; 1236).

It is clear from the foregoing that Lester did not always lock out the equipment he worked on, and that his use of locks was at times on the advice of supervisors who, pursuant to the testimony of employees such as Harteke, Nance and Himes at items 6, 34 and 39, were generally not competent in this regard. Moreover, Lester relied on others to de-energize the underbody press and did not know what they did or if they locked it out. Lester was therefore an authorized employee exposed to hazards contemplated by the standard after January 1990 who was not trained as required. A violation of 1910.147(c)(7)(i) is established. This item is affirmed.

Item 19 - Ronnie Wickware

Ronnie Wickware was hired as an electrician seven years ago. In the year before the accident he worked in the underbody press area; he also did some overtime and fill-in work, when he could be assigned anywhere. Wickware was not trained in lockout and never used a lock on equipment before the accident, and although he was provided a lock for this purpose upon hire it was stolen from his toolbox when he was laid off and he was not issued another such lock when he returned to work in May 1989. He learned how to de-energize unfamiliar equipment from others, and always de-energized power sources before getting into machinery; however, if someone had re-energized the equipment he would have been in danger. Supervisors and managers had observed him working in breakdown situations, when there is a lot of pressure to get the equipment running, and had not told him to use a lock; on one such occasion, Jack Evans, the plant manager, was present. (Tr. 1601-27).

Based on his testimony, Wickware was an authorized employee who was exposed to hazards contemplated by the standard after January 1990 without the requisite training. A violation of 1910.147(c)(7)(i) has been demonstrated, and this item is affirmed.

Item 20 - Eulan Edwards

Eulan Edwards, a toolmaker in the body shop since the plant's inception, works on all the equipment in that area; he received a safety lock when hired and went to the UAW-GM lockout training, but he never used his lock before the accident and supervisors saw him working without locking out when he should have. On one occasion in the late 1980's, Edwards hit the emergency stop on an automatic welder, a practice he commonly used to work on machinery. When he reached in to do his job he hit a limit switch, making the weld gun swing around; the gun could have lacerated his arm or welded his hand. Edwards found out the stop was wired incorrectly, and that he should have turned the equipment off at its main control panel; he reported the wiring to an electrician and it was corrected. On another occasion three to four months before the hearing, Edwards reported to one of the robots in his area that was having a problem. When he asked the

electrician to turn the power off so he could lock it out before getting into the equipment, the electrician told him the new procedure was for him to stand by with an electronic control box with an emergency kill button he would push if anything happened. Edwards disagreed, based on the training he had had since the accident; he then talked to his boss, Bob Dennis, who concurred with the electrician. (Tr. 797-823).

It is concluded from the foregoing Edwards was an authorized employee exposed to hazards contemplated by the standard after January 1990. It is also concluded supervisors observed him working without locking out, and that he was not retrained as required. A violation of 1910.147(c)(7)(iii)(B) is established, and this item is affirmed.

Item 21 - Merle Kopf

Merle Kopf, who has been at the facility since 1979, completed his electrician apprenticeship in early 1990. At the time of the accident, he was finishing up a special six-month project in which he was assigned no maintenance work; however, he performed such work from about March to October 1990, when he was assigned to the body shop. Kopf was given some lockout training and a lock during his apprenticeship, but he did not use the lock on equipment, lockout was not enforced in the body shop, and he had been in breakdown situations where foremen and superintendents had seen him working without locking out. Kopf learned how to de-energize the subject conveyor from the electrician in the area and working on it himself; the equipment had never moved when he was in it, but if someone had turned it on when he was in the robot area he could have been killed. (Tr. 1048-63).

It is clear from the record that Kopf was an authorized employee exposed to hazards contemplated by the standard after January 1990, that he did not receive the requisite training, and that a violation of 1910.147(c)(7)(i) has been shown. This item is affirmed.

Item 22 - Larry Stapleton

Larry Stapleton has been a toolmaker at the facility since 1987. He worked in the machine shop at the time of the accident, and serviced and maintained multiple-energy equipment in other parts of the plant, such as door welders and piercers and fixture-installing devices, when displaced by workers with more seniority. He usually did not de-energize equipment before working on it as he did not perform major maintenance, and could have been injured had a piece of equipment moved unexpectedly. He received no lockout training and never used the safety lock he was assigned until after Smith's death, and supervisors such as Jim Brown and Phil Gunderson had observed him working without locking out and never told him to do so. (Tr. 1363-74).

Based on his testimony, Stapleton was an authorized employee exposed to hazards contemplated by the standard after January 1990 without having received the required training. A violation of 1910.147(c)(7)(i) is established, and this item is affirmed.

Item 23 - Jerald Vollmer

Jerald Vollmer has been a millwright at the plant for twelve years and assigned to the body shop for the last six; he also works overtime, when he can be anywhere in the facility, and when working on unfamiliar equipment he uses his intelligence or gets a local electrician to ensure it is safe before getting into it. Vollmer indicated he had had the UAW-GM training and that he used the one lock he had before the accident to secure the most important energy source; he could have been injured on multiple-source equipment had it become energized when he was working on it, and when he replaced the bushings in the area where Smith was killed he locked out the electrical panel, dumped the air and secured the lift table with a bar because he recognized the potential danger of it coming up. Vollmer had been in breakdown situations when supervisors saw him working without locking out all the energy sources; since the accident, he locks out all energy sources. (Tr. 1524-38).

It is clear from the foregoing that Vollmer was an authorized employee exposed to hazards contemplated by the standard after January 1990. It is also clear he did not receive the training required by the standard, and that a violation of 1910.147(c)(7)(i) has been shown. This item is accordingly affirmed.

Items 24-29 - Salaried Supervisors

Items 24 through 29 allege that salaried supervisors Thomas Hendley, James Brown, Chuck Lingeman, Franz Schmidt, Eugene Beed and Turner Wilcox were affected employees within the meaning of the standard and that they received inadequate or no LOTO training. It is undisputed these individuals were salaried supervisors at the time of the accident.[24] GM does dispute, however, that they were affected employees, and contends they were adequately trained in any case. All six of these individuals elected not to testify at the hearing, and while Hendley, Brown, Beed and Wilcox were deposed before the hearing they invoked the Fifth Amendment and refused to answer any questions about their job duties or the plant's LOTO program. *See* G-57. Accordingly, whether these individuals were affected employees inadequately trained in LOTO must be determined from other evidence in the record.

[24]Specifically, Brown was a tooling supervisor, Hendley, Beed and Schmidt were maintenance supervisors and Lingeman was a maintenance superintendent; Wilcox was the plant engineer over engineering and maintenance. (Tr. 255-58; 455; 591; 1250; 1583-84; G-18; G-57).

As noted above, an affected employee is, in pertinent part, one whose job requires him to work in an area in which servicing or maintenance performed under lockout or tagout is taking place. *See* 1910.147(b). William Young testified management was responsible for enforcing the use of lockout. (Tr. 254-56). Most of the skilled trades who testified stated that supervisors had seen them working in breakdown or other situations in which, based on their testimony and my own conclusions, lockout was required; in particular, Beed, Brown, Hendley, Schmidt and Wilcox were specifically identified. (Tr. 589-91; 1006-08; 1101-02; 1249-50; 1370; 1548; 1583-84). The skilled trades also testified supervisors sometimes assisted during breakdowns and that it was not unusual, depending on how long equipment was down, for numerous management personnel ranging from supervisors to the plant manager to be there. (Tr. 589-92; 649-51; 867; 870; 898-99; 1054; 1108; 1352-53; 1370-71; 1395-97; 1548; 1607-09; 1808). In light of this evidence, the six supervisors named in items 24 through 29 were affected employees who, pursuant to 1910.147(c)(7)(i)(B), were required to be instructed in the purpose and use of the plant's energy control procedure.

The evidence in regard to the lockout training these individuals had had was equivocal. (Tr. 237-39; 249-54; 326-50; 455-57; 1841; 1921-23; G-18). However, regardless of the training they received, it is clear they were not trained as required in view of the unrebutted employee testimony that lockout was virtually unused and never enforced at the plant until after the accident and that management observed work performed without lockout on a regular basis. This conclusion is supported by the fact that five of these individuals were specifically named as having observed breakdowns and other situations in which lockout was not used. Violations of 1910.147(c)(7)(i) have been established in regard to all six of the cited supervisors, and items 24 through 29 are affirmed.

Item 30 - Patrick Liberty

Patrick Liberty has been a millwright at the plant since 1979; he worked on a crash truck in the trim and chassis areas at the time of the accident but also responded to breakdowns anywhere in the facility. He worked on equipment with which he was unfamiliar almost daily, and before the accident had done the same job Smith was assigned; to do so he disconnected the electrical panel and dumped the air but did not lock out either energy source. He went to the UAW-GM lockout training and had a lock but rarely used it before Smith's death, and supervisors saw him working in breakdown situations without locking out. Liberty described the lockout training as general and the locations of the power sources he dealt with as all different; he made equipment safe before working on it, but could have been injured had it become energized. (Tr. 1241-63).

About two months before the accident, Liberty had reached into a tire silo when it was running to pull out a broken belt; he had been within a foot of the silo's rollers and chains, which

could have injured him had he contacted them, and Franz Schmidt was present at the time. He had worked on a turbo bell three to four months before the hearing, and while the electricity was properly shut off by the production foreman he himself shut off the wrong air valve because he was unfamiliar with the equipment and the foreman misinformed him. (Tr. 1248-50; 1255-57).

It is clear from the record that Liberty was an authorized employee who was exposed to hazards contemplated by the standard after January 1990. It is also clear that he worked on unfamiliar equipment on a regular basis, that supervisors saw him working without locking out, and that he was not retrained as required. A violation of 1910.147(c)(7)(iii)(A) has been shown, and this item is affirmed.

Item 31 - Ronald Jordan

Ronald Jordan has been an electrician at the plant for eight years; for the past two he has worked out of the maintenance shop, where he relieves other electricians as needed anywhere in the facility. He attended lockout training in 1986 and had a lock but rarely used it before the accident due to pressure to get equipment running, particularly in breakdowns; supervisors such as Gene Beed, Tom Armstrong and Larry Mead had seen him working on equipment without using his lock, and he would have needed more than one to control energy sources in any case. Jordan was not trained in unfamiliar machinery before the accident, and his prior experience as a construction electrician did not prepare him for the equipment at GM; some of it was as big as a room, and while he could locate and isolate the electrical sources he could not necessarily do so with air and hydraulic sources without the help of someone who knew the equipment. (Tr. 993-96; 1003-1021; 1030; 1037; 1040-41).

Jordan was assigned to the motor rail area, where he worked for several years, after he had been at the plant for two or three months; he worked with another employee for two weeks but did not really learn the equipment or how to lock it out, and had he been more aware of union procedures at that time he would have had reason to file a complaint. To work on the conveyor where Smith was killed he would generally shut off the electricity with the emergency stop and, if necessary, dump the air; sometimes he turned off the electricity and another worker turned off the air, and if he had been where Smith was and the equipment had been re-energized he could have been killed. Jordan recounted an incident on one of the motor rail conveyors in which he had forgotten to shut it off, and when he moved a part to do his job the equipment activated and a clamp almost got his arm. (Tr. 996-1003; 1019-20; 1026-29).

Based on his relief work, it is concluded that Jordan was an authorized employee who worked on unfamiliar equipment which exposed him to hazards contemplated by the standard after January 1990. It is further concluded that supervisors observed him working without locking out during this

time, and that he was not retrained as required. A violation of 1910.147(c)(7)(iii)(A) is established, and this item is affirmed.

Item 32 - Donald Smith

The record shows that Donald Smith had been a journeyman millwright at the plant for ten years and had had the UAW-GM lockout training in 1986; however, Smith had only been in the motor rail area for two or three days before the accident and had not worked there previously. (Tr. 176; 248; 322-23; 1116-17; 1323-24; G-17). Further, based on the testimony of employees such as Steven Greenwood, Ronald Jordan, Patrick Parker and James Roberts, at items 4, 31, 37 and 52, the equipment in the chassis area, Smith's previous area of assignment, is less complex than that in the body shop and the motor rail equipment in particular is complicated.

In addition to the foregoing, Gregory Beam testified he heard Smith complaining that evening to other millwrights about having to do a job he knew nothing about; Smith was worried about the job, and asked the other millwrights for their advice. (Tr. 652-53). Kenneth Thompson testified that Smith asked him if he had worked on the conveyor and wanted to know where it was, and Ronnie Wickware testified Smith asked him where the repair parts for the conveyor were and noted that ``[i]t was like he was lost." (Tr. 1549-51; 1616). Smith also complained to Patrick Parker about having to work on equipment with which he was unfamiliar. (Tr. 1481).

In light of the above, it is clear that Smith was unfamiliar with the motor rail equipment, a conclusion supported by Parker's account of the accident set out in the discussion regarding items 53 through 57. Moreover, management was aware of this fact, based on the written statements two plant supervisors made right after the accident. Thomas Hendley, Smith's supervisor, noted in his statement that Smith had asked him where the replacement parts were. More significantly, James Brown, a tooling supervisor, noted in his statement that upon Smith's request he went with him to the conveyor to point out the bushing block, after which Smith stated: ``I thought that was it but wasn't sure. I didn't want to get my damned head caught in that thing." *See* G-50-51.

On the basis of the record, it is apparent that Smith was an authorized employee exposed to hazards contemplated by the standard after January 1990 and that he was not retrained as required, particularly in view of the evidence that supervisors were aware he was not familiar with the motor rail equipment and was concerned about changing the bushings. GM's contentions in regard to this item are rejected, a violation of 1910.147(c)(7)(iii)(A) is established, and this item is affirmed.

Item 34 - Nicholas Mance

Nicholas Mance, an electrician at the plant for fourteen years, has worked all over the facility for the past two years as a relief electrician; prior to the accident he worked on the underbody press

and the motor rail and laydown side frame equipment. No one showed him how to lock out such equipment, and while he had had the UAW-GM training and sometimes used his lock on the electrical panel the general practice was to put equipment in manual and have someone stand by the disconnect switch; supervisors had seen him working without locking out, and only one, Jim O'Rorke, had enforced making sure equipment was safe. Supervisors sometimes assisted with maintenance, and shortly after the accident he had seen Gene Beed working in the same area under a live hydraulic robot with a wiring problem while another person held an electronic control with an emergency kill button. Supervisors were not as knowledgeable in equipment as the skilled trades, and when an employee was given a maintenance task in a new area the local electrician would shut down the equipment; the current procedure is to get locks from a lock box and lock out equipment, and then lock up the keys to the locks in the box. (Tr. 1388-1413; 1424).

In 1985, after having been in the motor rail area for three or four weeks, Mance was servicing some welding caps on the equipment when he accidentally hit a limit switch, causing a shuttle to move toward him. He had put the conveyor in manual, not knowing the shuttle was controlled by a different panel, and while he got out of the way he could have been crushed or seriously injured; Mance reported the condition to management, but it was over three years before a three-position solenoid valve was installed to correct the problem. (Tr. 1402-06; 1418; 1426).

Based on the foregoing, it is found that Mance was an authorized employee whose work on unfamiliar equipment exposed him to hazards contemplated by the standard after January 1990, that supervisors observed him working without having locked out during this time, and that he was not retrained as required by the standard. A violation of 1910.147(c)(7)(iii)(A) has been shown, and this item is affirmed.

Item 36 - Edward Baker

Edward Baker has been an electrician in the body shop for nine years; he now repairs any equipment in that area, but before the accident was assigned to the motor rail area. He was not given and never used a safety lock until after the fatality, and while he had lockout training in 1987 it was never enforced and he was sure supervisors had seen him working without locking out, including during breakdowns; since the accident, he secures energy sources with locks taken from the lock box in the area, puts the keys to the locks in the box, and affixes his lock to the box.[25] Baker learned the subject conveyor by working on it, and once before the accident it came on unexpectedly, although he was not in it; another worker put a drill on a cart, tripping a limit switch and causing the lift table to activate and the drill to be sent along the conveyor. (Tr. 630-46).

[25]Each person working on the equipment also affixes his lock to the box. (Tr. 637).

On the basis of his testimony, it is concluded that Baker was an authorized employee exposed to hazards contemplated by the standard after January 1990. It is also concluded that supervisors had seen him working without locking out, that he was not retrained as required, and that a violation of 1910.147(c)(7)(iii)(B) has been demonstrated. This item is accordingly affirmed.

Item 37 - Patrick Parker

Patrick Parker, an electrician at the facility for fourteen years, has been assigned to the motor rail area for two years; his main responsibility is to take care of weld guns and their sequence panels but he also helps millwrights who work on the equipment shut it down. Parker was not trained in the motor rail equipment, and learned it by watching others and making mistakes. He said it was the only area he had been where he could turn on the machinery and not know what was happening on the other side, that the equipment was interlocked and very complicated, and that it was unpredictable at times; limit switches were sometimes wired around or overridden, causing the machinery to operate unexpectedly, and some equipment occasionally had a delayed reaction due to its age, such as the weld guns in the first stage automatic welders. The plant had had a lockout program for thirteen years and he had a lock and received lockout training in 1986; however, prior to the accident lockout was not used or enforced, he himself did not lock out equipment, and two supervisors, Mr. Stettnisch and Terry Martin, had even discouraged him from using the emergency stop to repair weld guns during production. (Tr. 1448-71; 1498; 1503-04; 1513-18).

In light of the foregoing, it is found that Parker was an authorized employee who was exposed to hazards contemplated by the standard without locking out after January 1990. It is also found that supervisors had observed him working in such conditions, and that he was not retrained as required. A violation of 1910.147(c)(7)(iii)(B) is established, and this item is affirmed.

Item 38 - Michael Warden

Michael Warden has been a millwright at the facility for fourteen years; he was on a crash truck in 1985 and 1986, and since then has worked out of the shop all over the plant. He worked on unfamiliar equipment within a year of the accident without being shown how to de-energize it and lock it out, such as turbo bells and electrical robots; he used his lock on the main electrical component of machinery but it was up to him to do so, and he had walked away from breakdowns when lockout was not used and had also filed grievances in this regard. Warden had lockout training in 1986, but it was never enforced before Smith's death; he now locks out all energy sources. (Tr. 1574-80; 1594-96).

In 1985, Warden and a co-worker were told to lift 700-pound cars off of a moving conveyor chain with wooden poles. The job was unsafe because they were having to walk along the line while using the poles and because they could have stepped or slipped on the chain, and when Warden began turning off the line with the run/stop button his foreman, Carl Seutter, ordered him not to; when Warden persisted Seutter tried to lay him off, and although this did not occur he was taken off the crash truck. In 1987, Warden fell off a 30-foot-high conveyor when his supervisor, Franz Schmidt, told the electrician to start the line back up; Schmidt was unaware Warden was on the conveyor, and Warden was not hurt as he landed on a screen guard 9 to 10 feet below. In the year preceding the accident, he and five others were told to carry sharp-edged underbelly pans weighing 150 to 200 pounds from one carrier to another while the line was moving. Warden asked Jim LaRonde, a supervisor, to turn the line off for safety reasons, and LaRonde refused; however, the line was turned off shortly thereafter by Terry Martin, the area superintendent. (Tr. 1580-99).

Based on the above, it is found Warden was an authorized employee exposed to hazards contemplated by the standard after January 1990, that supervisors saw him working without locking out all of the necessary energy sources, and that he was not retrained as required. A violation of 1910.147(c)(7)(iii)(B) has been shown. This item is affirmed.

Item 39 - Gary Himes

Gary Himes, an electrician at the plant for fourteen years, was a union committeeman from 1980 to 1983 and from 1989 to 1992; in the periods he was a committeeman, he performed no electrician duties. He had lockout training in 1986, but until the accident it was not enforced and he had no training on specific machinery he worked on; management at that time felt journeymen knew equipment well enough to learn it on their own. Himes was somewhat lax in using his lock before the fatality but did turn off energy sources; in some cases he would push an emergency stop and have someone else stand by it while he did his work. His present job involves mostly routine repairs and he would be uncomfortable working on unfamiliar equipment without the help of someone who knew it; before the accident this was generally another skilled tradesman as the supervisors were not competent in lockout even though charged with its enforcement. (Tr. 886-87; 891-93; 902-09; 913-21).

Several times, Himes had had weld guns fire at him when he was repairing them on a line, and while they had not gotten his fingers or hand they had welded his pliers; the guns are controlled by an air solenoid that gets an electrical signal, they can activate and fire when they have shorts, and the only way to lock them out is from an upstairs weld panel. Himes had seen numerous breakdowns over the years when supervisors were present, equipment was not locked out, and employees were under a lot of pressure to get it running; in his opinion, the plant was fortunate that Smith had been

the only fatality. Himes knew of a similar injury in 1981; a millwright named Chuck Criddle was unjamming equipment in the paint area when a lift or carrier caught his head, and while he was not killed he received a crushing injury. (Tr. 898-902; 906-08).

Although Himes is an electrician, he performed no such work from 1989 to 1992 and was therefore not an authorized employee exposed to hazards contemplated by the standard during this period. No violation of 1910.147(c)(7)(iii)(B) has been shown, and this item is vacated.

Item 40 - Samuel McGahey

Samuel McGahey has been an electrician at the facility for thirteen years; he was assigned to the motor rail area until 1992, and worked overtime approximately once a month in the year before the accident. He received a lock and some lockout instruction when hired, as well as some additional training in the eighties, but was not trained in how to lock out unfamiliar machinery, usually did not use his lock, and regularly did maintenance during breakdowns with supervisors present; he normally had the power sources to equipment on to determine what was wrong, but turned them off to work on it. McGahey was injured by the lift that killed Smith four to five years earlier because he got too close while observing a malfunctioning limit switch with the power on; the carrier arm moved, and a nut on the arm hit him in front of his ear.[26] He considered the hydraulic robots in the motor rail area very dangerous due to their ability, when energized, to ``jump'' and strike someone if their wiring was broken. (Tr. 1284-1319).

Based on the foregoing, McGahey was an authorized employee who was exposed to hazards contemplated by the standard after January 1990, supervisors saw him working without locking out on a regular basis, and he was not retrained as required. A violation of 1910.147(c)(7)(iii)(B) is established, and this item is affirmed.

Item 41 - Dennis Cook

Dennis Cook, a millwright at the facility since 1979, has performed preventive maintenance on the equipment in the body shop, including the motor rail area, since about 1985. He received a lock when hired and lockout training in 1986, but lockout was not enforced and he himself did not lock out equipment until after the accident; instead, he blocked or turned off equipment and tagged it, and all his supervisors had seen him working without locking out.[27] Cook learned how to work on equipment through trial and error, and while he was not injured he recalled two instances of

[26]The arm, depicted on the right-hand side of R-8A, is now chained during maintenance because of McGahey's accident. (Tr. 1307).

[27]Cook testified it would take five locks to lock out the subject conveyor. (Tr. 759).

machinery moving while he was working on it. One was a conveyor he was repairing that moved 12 to 18 inches when a mobile truck hit a body truck further down the line; the main chain was not locked in but the take-up pressure was off, and the line should not have moved. The other incident occurred when he and William Brink were working on an overhead drive; they had stopped the drive with its run/stop button, but the conveyor started up when someone reset it down on the floor. (Tr. 746-61; 764-71; 776).

It is clear from his testimony that Cook was an authorized employee whose job duties exposed him to hazards contemplated by the standard after January 1990. It is also clear that supervisors had seen him working without locking out, and that he was not retrained as required. A violation of 1910.147(c)(7)(iii)(B) has been shown, and this item is affirmed.

Item 42 - Maurice Lachance

Maurice Lachance, a millwright at the plant for fourteen years, performed weekend overtime work in the year before the accident; he used his lock for such work, and while other workers would normally also put their locks on multiple-source equipment he was not sure this was always done. Lachance recalled having some lockout training before the accident. He also recalled three instances of lines starting when he was working on them; the first was in 1980 or 1981, and the other two were between 1984 and 1988, when he was assigned to a crash truck. In the first he had his head in a drive chain on a line he had stopped by pushing its run/stop button; someone started the line up from its central panel, but luckily he was not injured. In the second instance he was on an overhead conveyor which was turned off but not locked out when a foreman named Russ Young radioed his supervisor to start it; he was jolted off and would have fallen 15 feet had he not grabbed an angle iron, and he filed a grievance as a result. In the third instance another overhead conveyor started when he was on it; however, he had put a wrecking bar across the chain to protect himself, resulting in the drive pins shearing. (Tr. 1263-82).

Based on his overtime work, it is found that Lachance was an authorized employee exposed to hazards contemplated by the standard after January 1990 and that he was not retrained as required. Although Lachance used his own lock on multiple-source equipment, he was unsure if the other employees he worked with in such situations always used theirs. Moreover, while there was no evidence that any supervisors observed his weekend work, the record clearly shows supervisors were well aware that employees were not locking out equipment for servicing and maintenance. A violation of 1910.147(c)(7)(iii)(B) has been demonstrated, and this item is affirmed.

Item 43 - Ron Berry

Ron Berry, an electrician at the plant since 1979, has worked out of the maintenance shop for two years and has done overtime work about once a month, when he can be anywhere. He received lockout literature when hired and training in 1987, and while he sometimes locked out before the fatality it was not mandatory and some equipment could not be locked out, such as the A-press, a machine he worked on for a five-year period; the press runs on air, electricity and water, is fifteen stations long and operates by pressing and welding car parts. When Berry got into the press he would throw a latch that kept it from descending; however, this did not de-energize it, he had seen it go down on the locks with the latch engaged, and if the press had started up with him in it he could have been crushed. Berry had also seen the shuttle on the press drop unexpectedly, and supervisors had seen him working on the press. (Tr. 712-16; 721-23; 726-30; 734-36; 742-43).

In 1985 or 1986, Terry Martin, a foreman, told Berry to not de-energize 480-volt circuitry into which he was to ``stab" or install a 30-to-60-amp electrical plug. Berry filed a grievance, after which OSHA visited the plant and it was determined that plugs of less than 100 amps could be installed without de-energizing the circuitry; however, Berry himself does not install plugs of any amperage into energized circuitry, particularly when the circuitry is damaged or the plug is not making good connection, due to the hazard of arcing and injuries such as electrical shock or burns.[28] (Tr. 716-19; 724-26; 733-34; 737-41).

In light of his overtime work, it is concluded that Berry was an authorized employee exposed to hazards contemplated by the standard after January 1990 and that he was not retrained as required. Although there was no evidence supervisors had observed his weekend work, the record demonstrates supervisors were well aware employees were not locking out equipment before working on it. A violation of 1910.147(c)(7)(iii)(B) has been shown. This item is affirmed.

Item 44 - Eunice Kennedy

Eunice Kennedy has been an equipment cleaner in a paint booth for three years; she lifts grates, mops and wraps plastic around turbo bells, automatic equipment that spins and paints cars. She did not receive a safety lock or lockout training until after the accident, and John Dwyer and Harold Heard, her supervisors, gave her no instructions about how to control the energy on the bells other than to not go in the booth when the red light was on; if she had been in the booth and the bells started spinning they could have lacerated her. (Tr. 1213-24).

[28]Berry noted the stabbing piece on the plug he was to install in the subject incident was wadding up and not making good contact, which could have caused an arc and a violent explosion. (Tr. 740).

In light of her job duties and my findings in regard to Anthony Jackson at item 14, *supra*, Kennedy was an authorized employee who was exposed to hazards contemplated by the standard after January 1990 without having received the requisite training. A violation of 1910.147(c)(7)(i) is established, and this item is accordingly affirmed.

Item 46 - Jim Green

Jim Green, an electrician at the plant for fourteen years, has worked all over the facility for the past five. He had lockout training in 1986 and used his lock before the accident; however, he worked on machinery needing more than one lock and had been in breakdown situations on conveyors with supervisors present when insufficient locks were used.[29] In such cases an adjacent conveyor could have pushed a carrier over to the one being worked on, making it move and creating a pinch point that could have caused serious injury such as a broken arm. He had also worked on the laydown side frame equipment, and while he had not gotten into the robot area he had seen others do so without locking out all the energy sources, which could have caused serious injury; if only the electricity were turned off, for example, a shuttle which operates by air could have shot up and struck someone in the chest or face had the air not been dumped. Green had seen supervisors trying to assist in breakdowns, and the ones he had asked, such as McCurdy Williams, a previous maintenance supervisor, had not been able to answer questions about machinery. Prior to 1982, a foreman named Ron Smith told him to start a conveyor with a millwright on top of it; Smith saw the millwright on the conveyor, which was 12 to 14 feet high, and Green refused to start it. (Tr. 863-81).

It is clear from his testimony that Green was an authorized employee who was exposed to hazards contemplated by the standard after January 1990, that supervisors had observed him working when insufficient locks were used, and that he was not retrained as required. A violation of 1910.147(c)(7)(iii)(B) has been shown. This item is affirmed.

Item 47 - William Crain

William Crain, a toolmaker at the plant for fourteen years, has been in the body shop for about five years; he repairs and works on equipment in the underbody press and motor rail areas. He received a lock and lockout instruction when hired, and lockout training in 1986; however, he did not lock out equipment until after the accident, most of that he works on requires three locks, and supervisors had probably seen him working without locking out. Crain acquired his knowledge of equipment mostly through observation and received no training in specific equipment except for a

[29]Green now puts locks on all energy sources before working on equipment and then puts his own lock on the lock box in that area. (Tr. 874-75).

week-long robotics course in 1988; the course included safety and a video addressing lockout, but before the accident the robots were simply turned off to work on them. (Tr. 778-96).

In light of his duties in the body shop, it is found that Crain was an authorized employee exposed to hazards contemplated by the standard after January 1990. It is also found supervisors had seen him working without locking out, and that he was not retrained as required. A violation of 1910.147(c)(7)(iii)(B) is established, and this item is affirmed.

Item 48 - William Brink

William Brink, a millwright at the plant for twelve years, has been assigned to the body shop since before the fatality; he also performs overtime work, when he can be anywhere in the facility. Brink had lockout training in 1986 but never locked out equipment to work on it until after the accident; he would shut it off with the run/stop button, and if no one was available to help him in an unfamiliar area he would use an additional measure to neutralize the equipment such as putting a bar through a chain. Brink had worked in breakdown situations without locking out when supervisors were present, including an incident in 1980 or 1981 when he and others were working on top of a jammed overhead conveyor in the body shop and someone turned it on. (Tr. 677-98).

Based on his job duties, it is concluded that Brink was an authorized employee who was exposed to hazards contemplated by the standard after January 1990. It is further concluded that supervisors had observed him working without locking out, and that he was not retrained as required. A violation of 1910.147(c)(7)(iii)(B) has been demonstrated. This item is affirmed.

Item 49 - Kenneth McGahey

Kenneth McGahey has been an electrician in the motor rail area for eight years; he did not receive a lock or lockout training when hired, and while he attended the UAW-GM lockout training in 1986 he did not pay much attention to it as it was never used or enforced on the floor. He himself never used a lock before the accident, and he was never shown how to de-energize the equipment he worked on; when he worked in the area where Smith was killed he shut off the air but no one showed him how. McGahey had worked in breakdowns in which supervisors had watched and even assisted when locks were not used; he had also been in the welding area of some equipment when another worker had turned it back on; nothing happened as there were no parts present to activate it. McGahey knew how to work safely in his area, but did not feel that way about other areas. (Tr. 1374-87).

In light of his duties on the motor rail equipment, it is found that McGahey was an authorized employee exposed to hazards contemplated by the standard after January 1990. It is also found, based on supervisors having seen him working in breakdowns without locking out, that he was not

retrained as required by the standard. A violation of 1910.147(c)(7)(iii)(B) is established, and this item is affirmed.

Item 50 - Bobby Gates

Bobby Gates, a toolmaker at the plant since 1984, is currently in the machine shop; prior to the accident he worked on multiple-source equipment when working overtime. Gates was often unfamiliar with such equipment but never worked alone and was generally with someone who knew the machinery much better than he did. The first time he worked on the laydown side frame was on a weekend, and the power to the equipment was turned off; however, because he was concerned about someone turning it back on the toolmaker with him got into the equipment and removed the air cylinder needing repair. Gates never saw the employees he worked with lock out equipment, although it was de-energized; he received a lock when hired but did not use it or have lockout training until after the accident, other than some 1988 robotics training during which participants were told to lock out robots before working on them. (Tr. 831-61).

Based on his overtime duties, it is concluded that Gates was an authorized employee who was exposed to hazards contemplated by the standard after January 1990 without having received the requisite training. A violation of 1910.147(c)(7)(i) has been shown, and this item is affirmed.

Item 51 - James Winters

James Winters has been an electrician at the plant since 1981 and for two years has been in the trim and chassis areas. He works on vehicle testing and automatic tow end equipment, both of which have multiple energy sources; previously, he worked throughout the plant. Winters received a safety lock but no instructions about it when hired, and while he attended the 1986 UAW-GM lockout training he did not use it before the accident; instead, he de-energized equipment by turning off its power sources, although he might have sometimes used his lock when he was out of sight of the control panel. He now locks out the equipment he works on before getting into it. (Tr. 1650-53; 1656; 1662-63).

Winters had worked on unfamiliar equipment, and when he did not know how to control the energy sources he would get help from someone who did. He had been in breakdown situations in which supervisors had seen him working without locking out, and on two separate occasions about five years ago he had been told by a foreman that he could not turn off the electrical circuitry into which he was installing a plug.[30] On another occasion about six years ago he was working on a limit switch on a door welder he had not de-energized when he accidently bumped another switch, causing

[30]On the first occasion, John Novak was the foreman; the second occasion was the same incident described by Ron Berry, above, which took place a few months later. (Tr. 1658-61).

the weld guns to shift; although he was not injured, his fingers or hand could have been mashed. (Tr. 1654-65).

It is concluded from his testimony that Winters was an authorized employee exposed to hazards contemplated by the standard after January 1990, and that, based on supervisors having observed him in breakdowns, he was not retrained as required. A violation of 1910.147(c)(7)(iii)(B) is established. This item is affirmed.

Item 52 - James Roberts

James Roberts has been an electrician at the plant since l984, and has worked on unfamiliar equipment with multiple energy sources in every department; he worked as a per diem maintenance supervisor for six months prior to Smith's death, and before that was in the paint department on a breakdown crew. Roberts was given a lock and some lockout training when hired and also attended lockout training in 1987. He sometimes used his lock before the accident, but normally just de-energized equipment; supervisors saw him working without locks and never said anything to him, and as a supervisor he himself never enforced the use of locks. Roberts made equipment safe before working on it, but could have been injured had it become energized. He was assigned to the motor rail area shortly after the accident and filed a grievance because he was not familiar with it; he was then trained in the equipment, which he described as complicated. (Tr. 1327-37; 1341-47).

Roberts recalled two situations he had seen in which equipment had been shut off with a run/stop button and someone had pushed the button with workers still in the equipment. The first was in 1987 or 1988, when a jammed tire silo in the chassis area was restarted while workers were still in it; no one was hurt, but Roberts said someone could have been and that it was ``close." The second was in 1989, another time when he was working as a per diem supervisor; millwrights had a forklift in a line to reposition the job when the line was started back up, but no one was hurt because the line did not move very far. (Tr. 1337-41).

In light of his breakdown duties, it is clear that Roberts was an authorized employee who was exposed to hazards contemplated by the standard after January 1990. It is also clear that supervisors had observed him working without locking out, and that he was not retrained as required by the standard. A violation of 1910.147(c)(7)(iii)(B) has been demonstrated, and this item is accordingly affirmed.

29 C.F.R. §§ 1910.147(d)(2)-(3), (d)(4)(i), (d)(5)(i) and (d)(6)

The subject standards provide as follows:

1910.147(d)(2) - The machine or equipment shall be turned off or shut down using the procedures established for the machine or equipment. An orderly shutdown must

> be utilized to avoid any additional or increased hazard(s) to employees as a result of the equipment stoppage.
>
> 1910.147(d)(3) - All energy isolating devices that are needed to control the energy to the machine or equipment shall be physically located and operated in such a manner as to isolate the machine or equipment from the energy source(s).
>
> 1910.147(d)(4)(i) - Lockout or tagout devices shall be affixed to each energy isolating device by authorized employees.
>
> 1910.147(d)(5)(i) - Following the application of lockout or tagout devices to energy isolating devices, all potentially hazardous stored or residual energy shall be relieved, disconnected, restrained, and otherwise rendered safe.
>
> 1910.147(d)(6) - Prior to starting work on machines or equipment that have been locked out or tagged out, the authorized employee shall verify that isolation and deenergization of the machine or equipment have been accomplished.

The Secretary contends the standards were violated because the conveyor was not shut down and locked out as required, causing the lift to cycle unexpectedly while Smith was leaning into it pursuant to his assignment to change the bushings. GM contends there was no violation of the standards because Smith had also been assigned to observe and troubleshoot a guide block to determine why it was wearing unevenly. GM further contends that Parker deliberately activated the equipment so Smith could watch it operate, and that the accident occurred because Smith got too close to the lift.

Patrick Parker, the only witness to the accident, testified he could not recall many details due to the passage of time and the traumatic nature of the event. (Tr. 1471-80; 1488-90; 1501; 1504; 1508-11; 1518). However, Parker also gave various statements, including one to the police about two hours after the accident and statements to OSHA representatives on April 5 and 9, 1991; Parker was also deposed on October 28, 1992. (Tr. 1482-90; R-10; R-27).

Taken together, Parker's statements and testimony indicate Smith told him he needed his assistance so he could replace some bushings on the lift. Parker initially turned off the electricity to the conveyor, at panel E-14 on G-6, but then reset the panel so Smith could move and chain out of the way a couple of carriers; the air to the equipment was left on. Parker then told Smith he should watch the equipment operate, apparently so Smith could check for the bushings needing replacement; with the electrical panel set on manual, Parker went to the lift control, shown as C-6 on G-6. The control is situated such that Parker's back was to the conveyor, and Smith was on the opposite side leaning into it, as indicated by the ``X'' on G-6; the lift then rose up and struck Smith. (Tr. 1472-81; 1493-94; 1500-11; R-10; R-27).

Although some portions of Parker's testimony and statements indicate the lift activated unexpectedly, other portions indicate that he himself activated the lift. (Tr. 1479; R-10; R-27). That the latter occurred is supported by Parker's own testimony and that of Steven Greenwood, both of

whom indicated that the lift must be manually cycled up and down when the equipment is in manual. (Tr. 1140; 1186-87; 1507). Based on the record, it is concluded Parker activated the lift believing that Smith was out of the way, and that the accident was due to Smith's lack of familiarity with the equipment and Parker's inability to see Smith because of the position of the lift control. This conclusion is bolstered by Parker's testimony that Smith had earlier gotten into the conveyor while it was still fully energized and he had told him to get out, and by Greenwood's testimony that he would not be in the equipment if he was watching it cycle.[31] (Tr. 1187-88; 1473-75; 1478-80).

Turning to the subject standards, it is clear these provisions apply only when equipment is being shut down in order to lock it out for service or maintenance. Based on the foregoing, Parker and Smith had not reached the point of shutting down the equipment; rather, Parker had activated the lift so that Smith could watch it operate. For these reasons, it is found the cited standards did not apply at the time of the accident. In so finding, I am well aware of the tragic consequences of Smith's lack of familiarity with the equipment and of the likelihood, based on the record, that neither Parker nor Smith would have utilized lockout for the job. I am also well aware there was no written lockout procedure for the equipment before the accident.[32] However, numerous violations of the training and other provisions of the standard have been found in this case. Moreover, there are other provisions which appear to more closely correspond to the circumstances of the accident. *See* 1910.147(e)-(f), which require employees to be safely positioned before equipment is started. Regardless, it is the Secretary's burden to show the applicability of cited standards. As he has not done so in regard to items 53 through 57, these items are vacated.

Characterization of the Violations

Violations have been found in regard to 43 items of willful citation number 1, specifically, items 1-7, 11-12, 14-16, 18-32, 34, 36-38, 40-44 and 46-52. To demonstrate the violations were willful, the Secretary must show that GM had knowledge of the standard's requirements and either violated them intentionally or showed plain indifference to employee safety. *See, e.g., Carabetta Enterprises, Inc.,* 15 BNA OSHC 1429, 1432-33, 1991 CCH OSHD ¶ 29,543, p. 39,893 (No. 89-2007, 1991), and cases cited therein.

The record establishes that GM Corporation was aware of the need to control hazardous energy in its facilities well before the effective date of the standard, particularly in light of G-16A,

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[31]These conclusions make it unnecessary to address GM's contention that Smith was also assigned to troubleshoot a guide block.

[32]G-16B, the plant's written procedure for the subject conveyor, was developed after the accident. (Tr. 319-22).

the UAW-GM lockout training manual published in 1985, and the training provided at its facilities pursuant to G-16A. The record also establishes that GM was well aware of the promulgation of the LOTO standard and its requirements, based on G-12-14, inter-company memos to plant managers dating from September 1989 to March 1990; G-12 and G-13 summarize the major provisions of the standard, and all three documents advise that each facility should review its procedures to ensure compliance. Notwithstanding these memos, four GM facilities were cited in 1990 for violations of the standard. *See* G-58A-D.[33] Two of the citations were issued after October 1, 1990, the effective date of the 1990 national agreement between GM and the UAW, which states, *inter alia*, that ``[t]here shall be an effective lockout program in each plant." *See* G-59B, p. 332.

Turning to the subject plant, William Young acknowledged he and other management officials had received and discussed G-12-14, but that the LOTO program had not been revised as it was felt that other than the annual inspection the plant was in compliance with the standard. (Tr. 226-42; 1833-37; 1887-89). The record does not support this conclusion.

It is clear from the evidence set out in this decision that lockout was unenforced and seldom used at the Oklahoma City plant before the accident, despite the fact that the facility had had a lockout procedure and lockout training since its inception. It is also clear there had been numerous accidents and exposures to hazards resulting from the failure to properly shut down and lock out equipment for servicing and maintenance, and that this situation remained unchanged after the UAW-GM lockout training and the later promulgation of the standard. Finally, it is clear that management was aware employees were not locking out, based on the employee testimony that management officials had seen them working in breakdowns and other situations where lockout was required.

Besides the employee testimony, G-21, G-23-36 and G-38-49 are numerous inter-plant memos, grievances and complaints to and from management officials relating to lockout issues and problems dating from 1980 through 1990.[34] GM suggests that these documents show good-faith efforts to address problems in its otherwise effective program. This contention is rejected in light of the employee testimony to the contrary, which demonstrates that the types of problems mentioned

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[33]According to GM's counsel, three of the facilities did not contest the citations and the other settled. (Tr. 1745-58).

[34]G-28, for example, a 1988 joint memo of William Young and Gary Klingel, notes a situation in which an unauthorized employee had removed a lock from defective equipment and operated it; the memo also states that ``[m]any fatalities have occurred in [GM] as a result of operating defective equipment and failure to follow lockout procedures." (Tr. 287-88). G-33, a 1990 memo from Gary Klingel to Turner Wilcox and William Young, specifically notes the LOTO standard and the need for compliance with and enforcement of the standard and plant procedures.

in the documents, such as equipment not being locked out and activating unexpectedly and the need for training on unfamiliar machinery, were ongoing up to the time of the accident. It is also rejected in view of the evidence that management in effect discouraged lockout by providing only one lock to employees, putting pressure on workers in breakdowns, and, in some instances, actually instructing employees to not de-energize equipment or to turn it back on before service or maintenance was completed. *See, e.g.*, items 37, 38 and 46.

In addition to the foregoing, the 1990 local agreement between the Oklahoma City plant and the UAW states that ``[t]he guidelines established by the Corporation and International Union, UAW shall be followed on the lock-out procedure." *See* G-59A, p. 145. These guidelines, set out in G-16A, require a written lockout procedure and training for appropriate personnel, prohibit the use of tags and require all multiple-source equipment, and single-source equipment presenting special hazards, to have its own specific lockout procedure; such procedures are to be posted on or near the equipment and must include identification of all energy sources, a listing of all devices needed for lockout, layout drawings of the equipment, the sequence and method for locking out energy sources, and labeling of lockout equipment and its location(s). *See* G-16A, p. 7.[35] It is apparent from the evidence that the Oklahoma City facility not did meet these guidelines.

The record indicates that after the accident, the plant provided one hour of lockout ``retraining," and, at a later date, eight hours of training for employees who had not had the UAW-GM course; the plant also began enforcing lockout and posting written lockout instructions on equipment. (Tr. 509; 605-06; 653-54; 686; 859-60; 883-84; 903-04; 940-41; 957; 1038-39; 1272-73; 1292-93; 1359; 1532; 1567-68; 1645-46). William Young testified that the more stringent enforcement of lockout was due to a new awareness of safety and health after the accident, and that he was not aware lockout was not previously enforced. (Tr. 1924-25). However, Gary Klingel described a breakdown situation in the chassis area in 1989 or 1990 in which employees were working on top of a conveyor; he was present, as were Young, Wilcox and various other management employees, and the conveyor was neither locked out nor had a bar in the chain to keep it from moving. (Tr. 2175-76).

The record also indicates that the plant continued to have significant lockout problems after the accident. *See* items 20, 30, 34 and 52, *supra*, in which employees described incidents after April 1991, and G-22 and G-37, which indicate problems with G-16B, the lockout procedure developed for the conveyor after Smith's death. In addition, Jerry Kincannon, a union committeeman who has handled complaints at the plant since 1987, testified about two events six to eight months after the

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[35]G-16A states, on page 7, that ``[a]s a minimum, the basic requirements in this text should be included in your local written procedure."

accident in which employees were working on overhead conveyors and could have been injured. One occurred when a millwright locked out a conveyor, even though a foreman, Ken Baurichter, told him there was no need; there was no written lockout procedure on the equipment, the conveyor moved about a foot after the employee got back up on it as he had locked out the wrong panel, and he could have fallen 12 to 14 feet or lost a finger or hand. The second instance occurred when Thomas Hendley told two employees to not lock out the conveyor they were preparing to work on as he was standing by the button; the conveyor was in a bind and could have moved when freed, which could have caused a 10-foot fall or the loss of a finger.[36] (Tr. 557; 599-605).

Based on the record, GM was in willful violation of all of the items set out above, and all of the violations are characterized as serious/willful. This classification is justified for the items relating to the skilled trades in view of the potential for serious injury due to the service and maintenance work performed by these employees. This classification is also justified for the items relating to the salaried supervisors, in light of their supervisory duties and their failure to enforce lockout, and to the items relating to the equipment cleaners; the hazardous nature of the turbo bells to which these individuals were exposed is demonstrated by the evidence set out at item 14, *supra*, and Gary Klingel's testimony about the serious nature of the injuries which had occurred from contacting the bells was not rebutted by GM. All of the items noted above are accordingly affirmed as serious/willful violations. The penalties for these items are discussed below.

Penalty Assessment

As noted at the beginning of this decision, the proposed penalties relating to the training provisions are based on the Secretary's ``egregious'' policy, which involves proposing a separate penalty for each instance of a willful violation of a standard. GM does not dispute the Secretary's authority to issue egregious citations; however, GM does dispute that the facts of this case justify the application of the policy.

H. Berrien Zettler, the deputy director of OSHA's Directorate of Compliance Programs, discussed the factors involved in issuing egregious citations. He testified the violations must be willful, that the standard must be written in terms of a requirement relating to each employee, and that other factors include the company's size and history, whether a fatality occurred and whether the violations were so widespread as to demonstrate flagrant disregard of the cited standard. Zettler noted that all of these factors were met in this case. He also noted GM had previously been cited on an instance-by-instance basis for recordkeeping and ergonomics violations, and, in settling the

[36]Kincannon described three other events, one in the early 1980's, one in 1988 and one in June 1992, that could have caused injuries, and noted that there have been more complaints after the accident due to greater employee awareness. (Tr. 594; 605-06; 622-26).

citations, had agreed to abate the conditions in all of its facilities, including the Oklahoma City plant. (Tr. 1728-30; 1743-54; 1784).

Based on the foregoing discussion and the rest of the record, it is found that the use of the egregious policy was proper in this case. I note first my conclusions that the violations were willful and that Smith's fatality was directly related to his lack of familiarity with the conveyor. I note also GM's size, that it has a history of violating the LOTO standard and has previously been cited pursuant to the egregious policy, and that the attitude at the subject plant in regard to lockout was such as to constitute a flagrant disregard of the standard. Finally, I note the decision in *Caterpillar, Inc.*, 15 BNA OSHC 2153, 1993 CCH OSHD ¶ 29,962 (No. 87-0922, 1993), in which the Commission upheld the instance-by-instance citation of 167 failures to record injuries and illnesses based on its finding that 1904.2(a) could ``reasonably be read to involve as many violations as there were failures to record, particularly when the injuries took place over a period of time and involved different employees and different types of injury and treatment." *Id.* at 2173 and p. 41,006. Applying this analysis to this case, it was appropriate to cite the training violations on an instance-by-instance basis.

The Secretary has proposed the following penalties: $50,000.00 for the grouped violations of 1910.147(c)(1), (c)(4)(i) and (c)(4)(ii); $35,000.00 for the violation of 1910.147(c)(6)(i); $50,000.00 for each violation of 1910.147(c)(7)(i); $70,000.00 for each violation of 1910.147(c)(7)(iii)(A); and $35,000.00 for each violation of 1910.147(c)(7)(iii)(B).

The Commission is the final arbiter of penalties, and, when so doing, is to consider the employer's size, history and good faith, as well as the gravity of the violations; the gravity of the violations is generally the most significant element. *See, e.g., Hern Iron Works, Inc.*, No. 88-1962, February 18, 1994. GM's size, history and good faith have already been addressed *supra*, and it is clear, based on the potential for serious injuries in general and Smith's death in particular, that the gravity of the violations in this case was high. It is concluded, therefore, that the proposed penalties for the violations of 1910.147(c)(1), 1910.147(c)(4)(i), 1910.147(c)(4)(ii) and 1910.147(c)(6)(i) are appropriate. It is also concluded that with the exceptions noted below the proposed penalties for the training violations are appropriate.

In regard to the 1910.147(c)(7)(i) violations, a penalty of $50,000.00 is proper for each of the affirmed items relating to non-supervisory skilled tradesmen in light of the duties performed by those individuals and the fact that none of them except Jerald Vollmer had received the UAW-GM training; as to the item relating to Vollmer, who indicated he had had the training, a penalty of $35,000.00 is proper. A penalty of $50,000.00 is also proper for the items relating to the salaried supervisors; while the training these persons had was unclear, it is evident they were inadequately trained in view of their supervisory duties and their failure to enforce lockout. In regard to

equipment cleaners Anthony Jackson and Eunice Kennedy, a penalty of $35,000.00 is proper for each of these items, since, based on the record, the only hazardous equipment to which they were exposed were the turbo bells.

In regard to the 1910.147(c)(7)(iii)(A) violations, it is apparent from the record that all four of these employees were required to work on unfamiliar equipment within the relevant period and that they were not trained on such equipment; Patrick Liberty, Ronald Jordan and Nicholas Mance worked on equipment all over the plant, Donald Smith was assigned to work on the subject conveyor, and the proposed penalty of $70,000.00 for each of these items is appropriate. In regard to the 1910.147(c)(7)(iii)(B) violations, the record establishes that supervisors had reason to know these employees were working on equipment without locking out and that the employees were not retrained as required; the proposed penalty of $35,000.00 for each of these items is appropriate.

Based on the foregoing, the following penalties are assessed: $50,000.00 for item 1, the grouped violations of 1910.147(c)(1), (c)(4)(i) and (c)(4)(ii); $35,000.00 for item 2, the violation of 1910.147(c)(6)(i); $50,000.00 each for items 3-7, 11, 15-16, 18-19, 21-22, 24-29 and 50, the 1910.147(c)(7)(i) violations relating to skilled trades and salaried supervisors; $35,000.00 each for items 14, 23 and 44, the 1910.147(c)(7)(i) violations relating to Anthony Jackson, Jerald Vollmer and Eunice Kennedy; $70,000.00 each for items 30-32 and 34, the 1910.147(c)(7)(iii)(A) violations; and $35,000.00 each for items 12, 20, 36-38, 40-43, 46-49 and 51-52, the violations of 1910.147(c)(7)(i).

Conclusions of Law

1. Respondent, General Motors Corporation, CPCG Oklahoma City Plant, is engaged in a business affecting commerce and has employees within the meaning of section 3(5) of the Act. The Commission has jurisdiction of the parties and of the subject matter of this proceeding.

2. Respondent was in serious/willful violation of 29 C.F.R. §§ 1910.147(c)(1), 1910.147(c)(4)(i), 1910.147(c)(4)(ii), 1910.147(c)(6)(i), 1910.147(c)(7)(i), 1910.147(c)(7)(iii)(A) and 1910.147(c)(7)(iii)(B).

3. Respondent was not in violation of 29 C.F.R. §§ 1910.147(d)(2), 1910.147(d)(3), 1910.147(d)(4)(i), 1910.147(d)(5)(i) and 1910.147(d)(6).

Order

On the basis of the foregoing Findings of Fact and Conclusions of Law, it is ORDERED that:

1. Items 1 and 2 of willful citation number 1 are AFFIRMED, and penalties of $50,000.00 and $35,000.00, respectively, are assessed for these items.

2. Items 3-7, 11, 15-16, 18-19, 21-22, 24-29 and 50 of willful citation number 1 are AFFIRMED, and a penalty of $50,000.00 for each of these items is assessed.

3. Items 14, 23 and 44 of willful citation number 1 are AFFIRMED, and a penalty of $35,000.00 for each of these items is assessed.

4. Items 30-32 and 34 of willful citation number 1 are AFFIRMED, and a penalty of $70,000.00 for each of these items is assessed.

5. Items 12, 20, 36-38, 40-43, 46-49 and 51-52 of willful citation number 1 are AFFIRMED, and a penalty of $35,000.00 for each of these items is assessed.

6. Items 8-10, 13, 17, 33, 35, 39, 45 and 53-57 willful citation number 1 are VACATED.

/s/
Stanley M. Schwartz
Administrative Law Judge

Date: April 19, 1994