Secretary of Labor,	*	
Complainant,	*	
	*	
v.	*	OSHRC Docket No. 98-0348 (E-Z)
	*	
Evergreen Technologies, Inc.,	*	
Respondent.	*	

Appearances:

Marsha Semon, Esquire
Office of the Solicitor
U. S. Department of Labor
Birmingham, Alabama
For Complainant

Gregg L. Smith, Esquire
Carr, Allison, Puch, Oliver and Sisson, PC
Birmingham, Alabama
For Respondent

Before: Administrative Law Judge Nancy J. Spies

DECISION AND ORDER

Evergreen Technologies, Inc., contests a citation issued to it by the Secretary on February 18, 1998. The Secretary issued the citation upon the recommendation of Occupational Safety and Health Administration (OSHA) compliance officer Dimitrius Critopoulos, who inspected Evergreen's facility on January 6, 1998. Critopoulos inspected the facility after his office received a complaint regarding a November 22, 1997, accident at the facility. On that day, Evergreen employee Janice Wilson sustained devastating injuries when her hair became entangled in one of the internal drive screws of an Instron machine in Evergreen's lab. The Secretary cited Evergreen for a serious violation of § 1910.212(a)(1) for failing to provide adequate machine guarding for the internal screw drive.

The Review Commission designated this case as an E-Z Trial case pursuant to Commission Rule 203(a). Evergreen admitted jurisdiction and coverage (Pre-hearing Order). Evergreen asserts the affirmative defense of unpreventable employee misconduct. A hearing was held in this matter on May 22, 1998. The parties have filed post-hearing briefs.

Background

Evergreen is a wholly-owned subsidiary of Atlantech International, Inc. (formerly known as Tensar Corp.). Evergreen was incorporated on December 13, 1995, and purchased selected assets of Polyfelt Americas, including the facility at issue, located in Evergreen, Alabama (Tr.

187). Janice Wilson had worked in the lab for Polyfelt for six to eight years, and had remained at the facility when Evergreen became the owner (Tr.35). She had been a lab technician for Evergreen almost two years at the time of her accident (Tr. 7).

Evergreen manufactures a geotech product used in landfills and for other filtration, separation, or drainage purposes. One of the products Evergreen manufactures is orange net barricade fencing of the kind that is often seen around construction sites (Tr. 8). Evergreen manufactures this material in the production area of its facility. Evergreen tests samples of each batch of the material for quality control in its lab. The lab contains several machines known as Instron machines used to conduct various tests to determine the strength of the material (Tr. 10-11). One Instron machine, larger than the others, is referred to as "the big Instron" (Exh. C-5, p.12).

The lab operates twenty-four hours a day. The lab technicians work twelve-hour rotating shifts, from 6:15 to 6:30 (a pre-shift safety meeting is held in the first fifteen minutes). The lab technicians work two days on and are then off two days. There are a total of four shifts. The Instron machines are manned by four different lab technicians during any given work week (Exh. C-5, p. 10; Tr. 9, 163).

Janice Wilson was operating the big Instron machine during her shift on November 22, 1997. The big Instron machine consists of two vertical supports that sit on a table-like structure with a 3-foot long crosshead running between them. Attached to the underside of the crosshead is a load cell transducer. Extending down from the load cell transducer and up from the table are a pair of clamps, in which the material is inserted. The clamps are each approximately 10-inches wide. The horizontal distance between the clamps and either support is approximately 12 inches. When the machine is running, the crosshead raises and lowers the top clamp, stretching the material. The two supports house internal drive screws, approximately 3 inches in diameter, which turn to propel the crosshead up and down. The screws are guarded with four black accordion plastic guards. There are two guards on each support, one below the crosshead and one above the crosshead. The guard below the crosshead on the left support is the guard at issue in this case (Exhs. C-1, C-2, C-3; Tr. 15-18, 27-32, 73-74, 179, 183-185).

The guards below the crosshead are each held in place by means of two screws at their tops which attach to the crosshead (Tr. 166). Occasionally the guards would tear at one of the

folds and slip down, exposing a portion of the drive screw beneath the crosshead (Exh. C-4, pp. 15, 20; Tr. 36, 165). In order to repair the guard, one of the maintenance crew would cut the guard at one of the folds, punch two holes in the top fold, and re-attach the guard with the two screws in the crosshead. This repair would take 5 to 10 minutes to complete (Exh. C-5, p. 16; Tr. 68, 165-166). For at least three weeks before the accident, the guard below the crosshead on the left support was detached from the crosshead, exposing a portion of the drive screw below the crosshead. Wilson and trainee Donna Kyser noticed that the guard had become detached. They did not notify maintenance of the need for repair (Exh. C-4, p.15, 20-21; Tr. 37, 68-69).

During a typical shift, Wilson would test four sets of samples of "rical" material and two sets of "traptear." Each set of rical contains twelve individual samples of the material. Each set of traptear contains twenty-four samples. Wilson would thus test ninety-six individual product samples during a typical twelve-hour shift (Tr. 12, 25-26, 33). Wilson would first set the gauge length by moving the top clamp down until it touched the bottom clamp. She would set her gauge limit and secure the sample in the clamps of the machine. Wilson would enter information regarding the test into a computer that was sitting on a table located at a right angle to the right of the Instron machine. When she was ready to begin the test, Wilson would hit the "Enter" key on the computer's keyboard. Wilson performed these tests while sitting in a rolling chair (Tr. 19-21). Lab technicians were free to get up and walk around while the tests were being conducted (Tr. 34).

Some lab technicians placed the product samples to be tested on the front of the Instron machine's table top. They could also place the samples on the side of the table top, between the bottom clamp and either support. It was not uncommon for samples to fall behind the Instron machine. The lab technicians would generally walk around the machine to pick up the samples when this happened (Exh. C-4, pp. 29-30, 39; Tr. 48).

On the day of the accident, Wilson had begun testing the first S-shaped sample. While removing samples from an apron pouch, Wilson dropped one of the samples behind the Instron machine. Normally Wilson would have retrieved the sample herself by walking around the Instron machine to pick it up, but another employee, Yenda Williams, came into the lab at that time to use the telephone. Wilson asked Williams if she would pick up the sample for her. Wilson stated that Williams "didn't seem to understand exactly what I was talking about or whatever, and that's

when I leaned between the [clamp] and the side of the machine to point more specifically where it had fallen to" (Tr. 44, 72).

Wilson had long hair, at least two feet long, which she wore pulled back in a ponytail (Tr. 44, 46). Approximately three weeks before Wilson's accident, Evergreen's safety director Greg Fussell had seen Wilson in the production area with her hair down in a ponytail. He had told Wilson that she needed to put her hair up. Wilson tucked her hair inside her shirt for the rest of that day. She resumed wearing her hair down in her habitual ponytail the next day (Exh. C-4, pp. 33-34, 47; Tr. 70, 213-214). On November 22, when she leaned over the table of the machine, Wilson's head went between the left support and the clamps and her ponytail became entangled in the drive screw on the left side. The machine was operating at the time, with the crosshead rising. Williams told Wilson that her hair was caught. Wilson told Williams to go get help. By the time Williams returned with help, Wilson's scalp and one ear had been torn from her head. One of her thumbs was amputated as she tried to free her hair from the drive screw (Tr. 45, 91).

Alleged Serious Violation of § 1910.212(a)(1)

The Secretary alleges that Evergreen committed a serious violation of § 1910.212(a)(1), a general standard, which provides:

> One or more methods of machine guarding shall be provided to protect the operator and other employees in the machine area from hazards such as those created by point of operation, ingoing nip points, rotating parts, flying chips and sparks. Examples of guarding methods are--barrier guards, two-hand tripping devices, electronic safety devices, etc.

The citation specifies that it is the internal screw on the Instron machine that required guarding: "Testing Laboratory: The accordion type guard on the Instron machine Model 4206 and Serial Number 502 had fallen off thus exposing the internal drive screw."

The Secretary has the burden of proving her case by a preponderance of the evidence.

> In order to establish a violation of an occupational safety or health standard, the Secretary has the burden of proving: (a) the applicability of the cited standard, (b) the employer's noncompliance with the standard's terms, (c) employee access to the violative conditions, and (d) the employer's actual or constructive knowledge of the violation (*i.e.*, the employer either knew or, with the exercise of reasonable diligence could have known, of the violative conditions).

Atlantic Battery Co., 16 BNA OSHC 2131, 2138 (No. 90-1747, 1994).

Evergreen concedes that § 1910.212(a)(1), which is found in Subpart O (Machinery and Machine Guarding), applies to its Instron machine. Evergreen does not dispute that, with the guard detached and the internal screw exposed, the Instron machine was in noncompliance with § 1910.212(a)(1). Evergreen argues, however, that it had neither actual nor constructive knowledge of the guard's detachment, and that there was no foreseeable employee access to the exposed internal screw. Evergreen also asserts that any violation of the standard was the result of unpreventable employee misconduct on the part of Wilson.

Employer knowledge

The Secretary asserts that Evergreen had actual knowledge that the bottom guard on the left support had become detached from the crosshead. The Secretary contends that one of Evergreen's supervisors, Margaret Bradford, knew of the detached guard and that, as a supervisor, her knowledge is imputed to Evergreen. Bradford is Evergreen's quality assurance (QA) lab coordinator.

Whether Bradford held a supervisory position is an issue in dispute. In her deposition testimony, Bradford stated that, as QA lab coordinator, her job was to review the results of tests run by the lab technicians. Bradford also scheduled shift assignments and training. She denied that she was a supervisor and stated that she had no power to hire or fire employees. She had originally trained Wilson when she began work at Polyfelt, before she became lab coordinator (Exh. C-5, pp. 7-8, 11-12, 34).

Evergreen president David Price stated that Bradford was not a supervisor (Tr. 196), but acknowledged that Evergreen had experienced problems with employees not knowing who their supervisors were: "In the QA area, there was some confusion on that issue despite numerous comments on that point and demonstrations. Specifically, Margaret's responsibility . . . was work scheduling and prioritization" (Tr. 197).

Donna Kyser, who worked for Evergreen for a period of three months, from November 1997 to January 1998, shared this confusion. In her deposition, Kyser stated that her shift supervisor was Keith Burleson, but her immediate supervisor was Margaret Bradford (Exh. C-4, p. 10). Kyser's confusion may be attributed to the fact that she was a trainee who worked for only three months at Evergreen, and may not have sorted out the duties of the various personnel.

It is curious, however, that Wilson, who worked with Bradford for at least eight years, and whom Bradford described as "an excellent employee" (Exh. C-5, p. 21), mistook Bradford for her supervisor.

Bradford's status as a supervisor is significant because the Secretary contends that Wilson apprised her of the problem with the guard. Wilson testified that she first noticed that the guard had separated from the crosshead three or four months before her November 22 accident (Tr. 37). Wilson did not notify anyone of this condition. Wilson stated, "Approximately three weeks before my accident, one of the mechanics, Scott Runge, came in for coffee and he pointed it out to me. . . He said that someone was going to get hurt before they let him fix it" (Tr. 38). Wilson testified that shortly after Runge made this comment, she was smoking outside with Bradford during a break and mentioned Runge's comment to her. Bradford told Wilson that she would raise the issue at a safety meeting the next morning (Tr. 41-42). Wilson also stated that a few weeks prior to the accident Bradford brought a group of trainees around the big Instron machine while Wilson was operating it. Wilson said that one of the trainees questioned Bradford about the detached guard (Tr. 42-43).

Runge flatly denies ever commenting to Wilson that the guard was detached or that someone was going to get hurt before he was allowed to fix it: "That wouldn't be anything I would say" (Tr. 167). Runge testified that he had repaired the guard on other occasions, although not recently before the accident, and that if he had seen the Instron machine with its guard down, he would have repaired it immediately (Tr. 164-165, 167-168).

Bradford denied that Wilson ever related Runge's alleged comment to her (Exh. C-5, p.27). She did not recall an instance when she brought a group of trainees around the big Instron machine and one of them had questioned her regarding the detached guard (Exh. C-5, p. 28). Bradford testified that she had seen the guard detached only a couple of times in eleven years, and she had not noticed that it was detached immediately prior to Wilson's accident. Had she been aware that the guard needed repair, Bradford stated, "I would have picked up the walkie-talkie and called whatever maintenance person was on shift. It's a matter of unscrewing two screws and splicing the guard and screwing the screws back in," which, Bradford contended, "would have taken all of two minutes to have it repaired" (Exh. C-5, p.29).

Although the employees' confusion regarding Bradford's status as a supervisor seems odd, it is the Secretary's burden to prove that Bradford was, in fact, a supervisor. The Secretary adduced no evidence regarding Bradford's supervisory status other than the opinions of Wilson and Kyser. The testimony of Evergreen president Price and of Bradford herself that she was not a supervisor effectively rebuts the Secretary's case.

Furthermore, the record does not establish that Bradford knew about the faulty guard. Runge contradicts Wilson's testimony that he pointed the guard out to her, and Bradford disputes Wilson's claim that she told Bradford about Runge's comment. None of the witnesses' testimony appears to be markedly more credible than the others. It is the Secretary's burden to establish by a preponderance of the evidence that Bradford knew of the faulty guard. The Secretary has failed to demonstrate by a preponderance of the evidence that Wilson informed Bradford that the guard was detached from the crosshead.

The testimony of Donna Kyser does establish, however, that Evergreen had constructive knowledge of the detached guard. Donna Kyser, unlike the other employee witnesses, no longer works at Evergreen. She is a disinterested third party with no evident bias for or against either side.[1] Kyser testified that she began work in November 1997, approximately three weeks before Wilson's accident. Wilson trained her on the big Instron machine (Exh. C-4, pp. 8-9, 12). When she began working at Evergreen, Kyser noticed that there was a gap where the guard had separated from the crosshead.[2] Over time, the condition of the guard "got worse" (Exh. C-4, p. 21). Kyser estimated that the gap between the crosshead and the guard was from 6 to 8 inches when the crosshead was raised. The gap would not be visible when the crosshead was lowered (Exh. C-4, pp. 15, 45).

Kyser operated the Instron machine with the guard detached every day from the time she began training until Wilson's accident. The lab technicians on the other shifts operated the Instron machine with the guard down during the same time period (Exh. C-4, pp. 21-22, 25-26).

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[1] Wilson is suing a number of her co-workers over the accident, including Bradford and Fussell (Tr. 75). Bradford, Fussell, and Runge were still working at Evergreen at the time of the hearing. Price is the president of Evergreen and Fussell is its safety director. All of these relationships factor into the witnesses' potential for bias.

[2] Kyser initially testified that the gap appeared at the bottom of the support above the machine's table top (Exh. C-4, p. 15), but then recalled that the gap was at the top of the support immediately below the crosshead (Exh. C-5, p.18-19). Evergreen is not disputing that when the guard separated from the crosshead, the gap appeared at the top of the support below the crosshead.

Melvin Owens and Keith Burleson were the shift supervisors for the day and night shifts. Each of them would come into the lab a couple of times during their shifts (Exh. C-4, pp. 31-32).

Kyser gave uncontradicted testimony that the guard was visibly detached from the crosshead for at least three weeks before Wilson's accident. (While Runge, Bradford, and Fussell testified that they did not notice that the guard was down, they did not claim that the guard was actually attached properly to the crosshead during this time.) Shift supervisors were in the lab on a daily basis. Safety director Fussell testified that he personally performed monthly safety audits in each area of the plant (Tr. 218).

The Secretary has established that Evergreen could have known about the detached guard with the exercise of reasonable diligence. For a period of at least three weeks, lab technicians on four different shifts operated the big Instron machine with the guard down. Supervisory personnel were in and out of the lab on a daily basis. Reasonable diligence on the part of the Evergreen's supervisors would have resulted in the detection and repair of the faulty guard. The gap exposing the internal screw was an obvious condition observable to anyone who troubled to look. The fact that the gap was not visible when the crosshead was lowered does not excuse Evergreen. The lab technicians ran at least ninety-six tests every shift. Over a three-week period with the lab operating 24-hours a day, the gap would have been visible most of the time. Evergreen had constructive knowledge that the guard was not attached to the crosshead, thus exposing the internal driver screw.

Employee access

The Secretary contends that the lab technicians operating the big Instron machine had access to the exposed drive screw. Evergreen argues that Wilson's accident resulted from a unique set of circumstances that was unforeseeable by the company (essentially, that Wilson was injured in a freak accident). Evergreen asserts that its lab technicians would not have access to the exposed screw in the normal operation of the big Instron machine.

Generally, the question of whether employees had access to a violative condition is determined by looking at the employees' exposure to the zone of danger.

> The Secretary may prove employee exposure to a hazard by showing that, during the course of their assigned working duties, their personal comfort activities on the job, or their normal ingress-

> egress to and from their assigned workplaces, employees have been in a zone of danger or that it is reasonably predictable that they will be in the zone of danger. . . . The zone of danger is determined by the hazard presented by the violative condition, and is normally that area surrounding the violative condition that presents the danger to employees which the standard is intended to prevent.

RGM Construction Co., 17 BNA OSHC 1229, 1234 (No. 91-2107, 1995) (citations omitted).

The starting point for an analysis of whether there was employee exposure in a machine guarding case is *Rockwell Intl. Corp.*, 9 BNA OSHC 1092 (No. 12470, 1980). In *Rockwell*, the Commission held :

> The mere fact that it was not impossible for an employee to insert his hands under the ram of a machine does not itself prove that the point of operation exposes him to injury. Whether the point of operation exposes an employee to injury must be determined based on the manner in which the machine functions and how it is operated by the employees.

Id. at 1097-1098.

The employer is not required to protect against every conceivable injury that could possibly occur during the use of a machine. The Commission has stated:

> [I]n order for the Secretary to establish employee exposure to a hazard she must show that it is reasonably predictable either by operational necessity or otherwise (including inadvertence), that employees have been, are, or will be in the zone of danger. We emphasize that, as we stated in *Rockwell*, the inquiry is not simply whether exposure is theoretically possible. Rather, the question is whether employee entry into the zone of danger is reasonably predictable.

Fabricated Metal Products, Inc., 18 BNA OSHC 1072, 1074 (No. 93-1853, 1997) (citations and footnotes omitted).

There is no "operational necessity" that would require employees to be in the drive screw's zone of danger. The gap exposing the screw was 6 to 8 inches long.[3] The exposed screw

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[3] This estimate was provided by Kyser, the only witness who testified credibly on this point (Exh. C-4, p. 15). Wilson was unable to give anything more than a vague estimate of the length of the gap (Tr. 37, 41, 87-88). Runge, who repaired the guard after Wilson's accident, said that the top of the guard was approximately 18 inches from the crosshead when he repaired it (Tr. 185). However, the Instron machine had been cleaned after Wilson's

(continued...)

was 10 inches to the left of where the lab technicians clamp the material into place for testing. The lab technicians start the operation of the machine using a computer on a table to the right of the Instron machine. The lab technicians do not remove the samples from the clamps until the machine is stopped. They are not required to be in the zone of danger while the machine is operating.

Was it reasonably predictable that the employees could be exposed to the zone of danger through inadvertence?

It is not unusual for the lab technicians to drop the samples of material. Kyser said that she dropped samples "all the time" (Exh. C-4, p. 29), estimating that she dropped at least one out of four samples she handled (Exh. C-4, p. 30). Kyser would either walk around and pick up the samples after several had accumulated behind the machine, or she would reach through the vertical supports of the Instron machine and pick up the sample if she could reach it. She only reached through the machine if it was not running (Exh. C-4, pp. 39, 55-56). Bradford had observed lab technicians reach through the machine when the machine was not in operation (Exh. C-5, p. 30). Wilson would normally walk around the Instron machine to pick up any dropped samples (Tr. 72).

It is reasonable to assume that employees would retrieve the dropped samples, either by reaching through the machine or walking around it, only before or after a test was run. The Instron machine could not operate until the lab technician turned away from the machine and pressed the "Enter" key on the keyboard of the computer. Evergreen could not reasonably anticipate that an employee would drop a sample, insert a sample into the clamps, turn away to start the machine at the keyboard, and then turn back to the machine and reach through the moving parts to retrieve the sample. Aside from the obvious hazard and inconvenience this presents, the technicians knew that any contact with the moving parts of the Instron machine would invalidate the test results (Tr. 62, 81).

Wilson testified that when she dropped the sample behind the machine on November 22, it fell to the far right of the back of the machine (Tr. 82-83). She intended to walk around the

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[3](...continued)
accident and the guard may have been pushed down during that process (Tr. 181). Compliance officer Critopoulos estimated that approximately 2½ feet of the drive screw was exposed at the time of the accident (Tr. 107). Nothing in the record supports this estimate, and Critopoulos's only justification for it was, "That's my opinion" (Tr. 138).

machine at some point and get the sample herself, but just then Williams came in. Thinking to save herself from walking around the machine, Wilson asked Williams to pick up the sample for her. When Williams did not immediately see it, Wilson attempted to point it out to her. Wilson thinks she may have placed her knee on the chair (Tr. 72). She then reached between the left support and the rising upper clamp to point at the sample. In reaching through the machine, Wilson brought her head into the zone of danger of the exposed drive screw. Because the dropped sample was to the far right of the back of the machine, Wilson would have had to turn her head so that the back of her head was next to the left support.

It is this odd confluence of events that resulted in Wilson's terrible accident. Evergreen could not have reasonably predicted that an employee would place her upper body into the Instron machine while it was operating. The operation of the machine did not require employees to be in the zone of danger, and the employees' predictable behavior during the running of the tests did not include reaching through the operating Instron machine. There was no reason, either by necessity or convenience, for an employee to reach through the machine in such circumstances.

No one in this case was unconcerned about safety. Evergreen valued Wilson as an excellent, experienced employee. The impression Wilson made as a witness at the hearing was illustrative of why this was so (Exh. C-5, p. 21; Tr. 194-195, 198-199). Wilson herself stated that safety was Evergreen's number one priority (Tr. 56-57). Despite Wilson's grievous injuries, the undersigned cannot find that Evergreen violated the standard. The employer could not have reasonably predicted that its employees would act as Wilson did. The Secretary has failed to establish that Evergreen's employees had reasonably predictable access to the zone of danger.

Because it is determined that Evergreen was not in violation of the cited standard, it is not necessary to address its unpreventable employee misconduct defense. Item 1 of the citation is vacated.

FINDINGS OF FACT AND CONCLUSIONS OF LAW

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

ORDER

Based upon the foregoing decision, it is hereby ORDERED that:

Item 1 of citation No.1, alleging a serious violation of § 1910.212(a)(1), is vacated and no penalty is assessed.

NANCY J. SPIES
Judge

Date: July 6, 1998