UNITED STATES OF AMERICA OCCUPATIONAL SAFETY AND HEALTH REVIEW COMMISSION

Secretary of Labor,	
Complainant	
v.	
WCI Steel, Inc.,	
Respondent.	

OSHRC Docket No. 08-1237

Appearances:

Linda M. Hastings, Esquire, Office of the Solicitor, U.S. Department of Labor, Cleveland, Ohio For Complainant

Tod T. Morrow, Esquire, Buckingham, Doolittle & Burroughs, LLP, Canton, Ohio For Respondent

Before: Administrative Law Judge Ken S. Welsch

DECISION AND ORDER

WCI Steel Inc. (WCI), a steel producer in Warren, Ohio, was inspected by the Occupational Safety and Health Administration (OSHA) after the #2 overhead crane collapsed on January 31, 2008. As a result, WCI received a three-item serious citation for alleged violations of OSHA's "Overhead and gantry crane" standards on July 25, 2008. WCI timely contested the citation.

The serious citation alleges WCI violated 29 C.F.R. § 1910.179(j)(3) (Item 1) for failing to conduct periodic inspections of the overhead crane's runway support structure; 29 C.F.R. § 1910.179(l)(3)(ii)(b) (Item 2) for failing to maintain the correct function of the hoist limit switch on the #2 overhead crane; and 29 C.F.R. § 1910.179(n)(1) (Item 3) for loading the #2 overhead crane beyond its rated load capacity. The citation proposes penalties of \$2,500.00 for Items 1 and 2 and \$5,000.00 for Item 3.

The hearing, designated for Simplified Proceedings under 29 C.F.R. § 2200.200 et. seq., was held on November 21, 2008 in Akron, Ohio. Two witnesses testified; OSHA Compliance Officer

Aaron Priddy and WCI Safety Director Tim Headrick. The parties stipulated jurisdiction and coverage (Tr. 4). The parties filed post-hearing position statements.

WCI denies the violations. WCI asserts as to Item 1, the standard does not require periodic inspections of the crane's runway support structure; Item 2, the improper setting of the hoist limit switch does not constitute a failure to "maintain" the switch; and Item 3, the overloading of the crane was the result of unpreventable operator misconduct.

As discussed, Item 1 is affirmed and a penalty of \$2,000.00 is assessed. Items 2 and 3 are vacated.

The Crane Collapse

Until September 2008, WCI was a fully integrated producer of steel at a plant in Warren, Ohio. WCI employed approximately 1,300 employees. The Warren plant, under various owners, has been producing steel since the late 1800's. The plant is currently owned by Severstal (Tr. 124, 127-129, 131).

In WCI's Slab Processing Area (SPA), steel slabs were carried by three overhead cranes including the #2 crane to the rolling department where the slabs were turned into coils of steel. The three overhead canes traveled on elevated rails for several hundred feet. The #2 overhead crane had a 40-ton rated capacity (Exh. C-13; Tr. 38, 101, 105).

On January 30, 2008, at approximately 4:40 p.m., the #2 overhead crane collapsed. No one including the crane operator Gerald Mathieson was injured. WCI's internal investigation concluded the crane was moving (bridging) four slabs with a weight of almost 80 tons and the collapse at a runway girder was due to the excessive weight of the load (Exhs. C-1, C-3, C-4; Tr. 11, 148, 153, 156, 176).

After receiving several complaints, OSHA investigated the crane collapsed on February 1 and 13, 2008. Compliance safety and health officer (CSHO) Aaron Priddy was the primary inspector. OSHA's investigation was limited to the #2 SPA overhead crane involved in the collapse. WCI informed Priddy the crane's hoist limit switch was set at 660 amps instead of the proper 489 amps. According to calculations provided by WCI, any two slabs found in the area where the crane collapsed weighed 43.6 to 45.2 tons. The union told Priddy the crane was not bridging but hoisting two slabs at the time of the collapse (Tr. 45, 50, 90, 99, 107).

On July 25, 2008, WCI was issued three serious violations of OSHA's overhead crane standards involving periodic inspections, the limit switch, and overloading the crane.

DISCUSSION

The Secretary has the burden of proving a violation of the cited standards.¹ There is no dispute the overhead crane standards at § 1910.179 applied to the #2 SPA overhead crane involved in the accident. An overhead crane is defined at "a crane with a movable bridge carrying a movable or fixed hoisting mechanism and traveling on an overhead fixed runway structure." Section 1910.179(a)(8). WCI does not dispute (1) it did not inspect the crane's support structure as part of its crane inspections, (2) the hoist limit switch was improperly set at 660 amps, and (3) the crane was overloaded at the time of the collapse. Also, WCI does not dispute that employees were exposed to the hazard of a possible crane collapse if the cited violations are affirmed.²

WCI denies the violations. WCI asserts the overhead crane standards do not require periodic inspections of the runway support structure. With regard to the improper setting of the limit switch, WCI argues it was not a failure to "maintain" the switch as contemplated by the standard. Finally, WCI claims the overloading of the crane was the result of the operator's unpreventable misconduct.

Alleged Violations

Item 1 -Alleged Violation of § 1910.179(j)(3)

The citation alleges WCI failed to conduct periodic inspections of the overhead crane's runway support structure. Section 1910.179(j)(3) provides:

Periodic inspection. Complete inspections of the crane shall be performed at intervals as generally defined in paragraph (j)(1)(ii)(b) of this section, depending upon its activity, severity of service, and environment, or as specifically indicated below. These inspections shall include the requirements of paragraph (j)(2) of this section and in addition, the following items. Any deficiencies such as listed shall be carefully examined and determination made as to whether they constitute a safety hazard:

¹In 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).

²Issues not briefed are deemed waived. See *Georgia-Pacific Corp.*, 15 BNA OSHC 1127, 1130 (No. 89-2713, 1991).

The Secretary identifies subsections (i) and (ii) which involves "deformed, cracked, or corroded members" and "missing bolts or rivets" as applicable to the crane's support structure (Tr. 34, 123).

Under § 1910.179(j), an employer must conduct "frequent" and "periodic" inspections of its overhead cranes. A "frequent" inspection requires an employer to examine for defects or deficiencies the crane's functional operating mechanisms; lines, tanks, valves, drain pumps and other parts of air or hydraulic systems; hooks; hoist chains; and ropes. Section 1910.179(j)(2). During a "periodic" inspection, an employer is required to examine for defects or deficiencies those items identified for the "frequent" inspection as well as examining for deformed, cracked or corroded members; bolts or rivets; sheaves and drums; parts such as pins, bearings, shafts, gears, rollers, locking and clamping devices; brake system parts, load, wind and other indicators; gasoline, diesel, electric or other powerplants, chain drive sprockets; and electrical apparatus. Section 1910.179(j)(3).

WCI performed daily and monthly inspections of its overhead cranes (Tr. 140). WCI's daily inspections performed by the crane operators included, according to the written checklist, hoist cables, limit switches, brakes, cab, lights, and crane hooks and cables (Exh. C-9). The Secretary agrees WCI's daily inspections met the requirements of OSHA's "frequent" inspections (Tr. 64).

WCI's monthly inspections³ performed by maintenance employees included, according to the written checklist, the superstructure, bridge, trolley, main hoist, auxiliary hoist, runway, and accessories (Exh. C-10; Tr. 76). Under "runway" the checklist specifies the "runway rails and fastenings" (Tr. 68-69).

WCI does not dispute that neither its daily nor monthly inspections included an inspection of the overhead crane's elevated runway support structure (Tr. 77, 161). WCI considered the support structure part of the building and not the overhead crane (Tr. 154-155). Several support columns were tied by steel "tie backs" to the structure support of the building (Exh. R-8).

During the OSHA investigation, Priddy identified several corroded areas and missing bolts and rivets on the #2 crane's runway support structure (Exhs. C-5, C-6). Priddy testified that WCI had performed comprehensive inspections of the crane's support structure until it changed from

³Depending on the circumstances, the standard requires "periodic" inspections at intervals of one to twelve months. Section 1910.179(j)(1)(ii)(b).

annual to monthly inspections in the mid 1990's (Tr. 40, 73). Priddy was given two documented inspections of the support system structure performed in October 1993 and July 1989 (Exhs. C-11, C-12). These inspections had found missing grout, sheared or missing anchor bolts, torn and bent flanges, and loose bolts rivets within the cross bracing in the support structure.

Although not part of its "periodic" overhead crane inspections, safety director Headrick testified that plant engineers had inspected the support structure as part of the building's general inspection (Tr. 166). Although such building inspections may have been conducted, there is no showing the inspections were performed at least annually as required by OSHA's periodic inspection criteria. Such inspections were admittedly not part of WCI's crane inspections. WCI's contention that because of the tie backs, the crane's structural support is intertwined with the building structure is rejected. Clearly, the steel structure supports the overhead crane and not the building.

The issue raised by WCI is whether OSHA's "periodic" overhead crane inspections require an inspection of the runway support structure. In support of its position, WCI cites former Judge DeBenedetto's decision in *Jones & Laughlin Steel Corp.*, 7 BNA OSHC 2148 (No. 78-5558, 1979). The *Jones* case involved an alleged violation of § 1910.179(l)(3)(i) for failing to repair missing and loose bolts on the corner of a bridge end truck discovered during an inspection under § 1910.179(j). The judge concluded the missing bolts were not an unsafe condition and the inspection standard did not apply to the structure support.

The judge's reasoning in the *Jones* case regarding the scope of the crane inspection standard is rejected. The decision is an unreviewed judge's decision and is not binding authority. Also, the decision fails to recognize the standard's intent and limits its scope in requiring a complete crane inspection. Although § 1910.179(j) does not specifically identify the structure support, it provides no exemption or exception for such components.

In interpreting § 1910.179(j)(3), it is noted "Periodic inspection" specifically requires "a complete inspection of the crane." The definition of an "overhead crane" includes the "overhead fixed runway structure." Section 1910.179(a)(8). "Runway" is defined as "an assembly of rails, beams, girders, brackets, and framework on which the crane or trolley travels." Section

⁴In interpreting a standard, consideration is given to the language and structure of the specific standard, the legislative history, and, if the drafters' intent remains unclear, the reasonableness of the agency's interpretation. *Arcadian Corporation*, 17 BNA OSHC 1345, 1346 (No. 93-3270, 1995) *aff'd* 110 F.3d 1192 (5th Cir. 1997).

1910.179(a)(53). Under § 1910.179(j)(3)(i), a periodic inspection includes examining for "Deformed, cracked or corroded members" which would be the beams, girders, and framework of the support structure. The periodic inspection needs to include an inspection of the crane's runway support structure to be complete. The fixed runway structure supports the rails and overhead crane. The support structure makes it an overhead crane. Corrosion and damaged or missing bolts and rivets in the support structure could make the crane's bridge unsafe. The #2 overhead crane was operated daily and made numerous lifts (Tr. 143). The crane collapse, here, occurred at a runway girder.

WCI's violation of § 1910.179(j)(3) is established and was properly classified as serious. A violation is "serious" under § 17(k) of the Occupational Safety and Health Act (Act), if there is a substantial probability of death or serious physical harm that could result from the cited condition and the employer knew or should have known with the exercise reasonable diligence of the presence of the condition.

WCI's failure to at least annually inspect the overhead crane's runway support structure could have resulted in an overhead crane collapse. In this case, it is unknown whether the crane collapse was the result of overloading or a failure in the support structure (Tr. 109). Also, WCI knew such inspections were not conducted based on its belief such inspections were not required by the standard.

Item 2 -Alleged Violation of § 1910.179(l)(3)(ii)(b)

The citation alleges WCI failed to maintain the correct function of the limit switches. Section 1910.179(l)(3)(ii)(b) provides, in part:

(ii) Adjustments shall be maintained to assure correct functioning of components. The following are examples:

One such component is "(b) Limit switches." A "limit switch" is "a switch which is operated by some part or motion of a power-driven machine or equipment to alter the electric circuit associated with the machine or equipment." Section 1910.179(a)(60).

There is no dispute that at the time of the crane collapse, the hoist limit switch was not properly set. The #2 SPA 40-ton overhead crane has a number of limit switches including two for the hoist motor. The limit switch on the crane's hoist motor restricts the amount of power the crane hoist can pull and prevents the operator from overloading the hoist (Tr. 44, 89, 103). The hoist limit

switch is manually set (Tr. 47). For the #2 SPA 40-ton crane, the hoist limit switch's proper setting is 489 amps (Tr. 45).

At the time of the crane's collapse, there is no dispute the hoist limit switch was set at 660 amps (Exh. R-5; Tr. 45, 106). Priddy did not determine who had improperly adjusted the limit switch or how long it had been misadjusted. Also, Priddy did not actually see the limit switch. The information was provided by WCI (Tr. 83, 104-105).

Approximately six months (August 2007) prior to the collapse, WCI discovered another incident where the limit switch had been improperly set (Tr. 46, 105). After discovery, WCI reset the limit switch to 489 amps (Tr. 77, 105). According to Priddy, there was no indication WCI retrained the operators or maintenance technicians as to the proper setting of the limit switch and the associated hazard (Tr. 47).

WCI's argument that the improper setting of the limit switch does not constitute a failure to "maintain" the switch is rejected. The parties agree the limit switch was not malfunctioning (Tr. 88, 161). As noted by WCI, §1910.179(l) is entitled "Maintenance." However, in addition to preventive maintenance, the standard addresses "Adjustments and repairs" to the crane and requires the correction of "any unsafe conditions." Section 1910.179(l)(3). An unsafe condition includes adjustments to maintain the correct functioning of components, *i.e.*, correcting the hoist limit switch to reflect the loads to be hoisted within the crane's capacity.

The remaining issue for determination is whether WCI knew or should have known of the improper setting of the hoist limit switch at the time of the crane's collapse. In order to establish employer knowledge, the Secretary must show the employer knew, or with the exercise of reasonable diligence could have known of a hazardous condition. *Dun-Par Engineered Form Co.*, 12 BNA OSHC 1962, 1965-66 (No. 82-928, 1986). In this case, there is no evidence WCI had actual knowledge the limit switch was improperly set.

An employer can have constructive knowledge of a violation if the employer fails to use reasonable diligence to discern the presence of a violative condition. *Pride Oil Well Serv.*, 15 BNA OSHC 1809, 1814 (No. 87-692, 1992). An employer is expected to make a reasonable effort to anticipate the particular hazards to which its employees may be exposed during the course of their scheduled work. *Automatic Sprinkler Corporation of America*, 8 BNA OSHC 1384, 1387 (No 76-5089, 1980).

In this case, WCI was aware the hoist limit switch had been improperly set to 660 amps on a prior occasion in August 2007. Also, WCI was aware crane operators had an incentive to hoist loads in excess of the crane's rated capacity in order to quickly finish their work and take a rest brake (Tr. 143).

The record shows WCI's efforts under the circumstances were reasonable to prevent a recurrence through employee training and regular inspections of the limit switch. Prior to the collapse, the record shows only one incident of an improperly set limit switch despite having numerous overhead cranes which were in constant use (Tr. 99). In response to the August 2007 incident, WCI reset the limit switch to 489 amp and instructed crane operators not to change the setting. At the time of the collapse, there is no showing how long the limit switch of the #2 crane was improperly set. Also, the limit switch was not shown to be located where it was readily visible to supervisors.

WCI's daily and monthly inspections by operators and maintenance technicians included specifically examining the cranes' limit switches (Exhs. C-9, C-10; Tr. 87, 141). WCI's safety rules and training instructed operators to not overload the crane which would include maintaining the proper function of the limit switches (Exhs. R-1, R-2; Tr. 78, 132-133, 153).

These efforts do not equate to WCI's knowledge that five months later the hoist limit switch was again improperly set to 660 amps. WCI's violation of § 1910.179(1)(3)(ii)(b) is not established.

Item 3 -Alleged Violation of § 1910.179(n)(1)

The citation alleges WCI permitted the #2 SPA 40-ton overhead crane to hoist and carry loads beyond its rated load capacity. Section 1910.179(n)(1) provides:

The crane shall not be loaded beyond its rated load except for test purposes as provided in paragraph (k) of this section.

There is no dispute that at the time of the collapse, the #2 SPA overhead crane was loaded beyond its rated capacity of 40-tons. Based on information, Priddy believed the crane was lifting two steel slabs weighing approximately 43.6 to 45.2 tons (Tr. 50). WCI, based on its investigation, determined the crane was lifting four slabs weighing 80 tons (Tr. 90, 153). In a memorandum dated February 3, 2008, WCI's superintendent of Operations Support stated:

I believe it can be deduced that by carrying two slabs that the weight carrying capacity of the crane has been compromised unless all employees follow the JSA S8005, which all employees were contacted on 09/27/07. This JSA as you can see, gives the mathematical formula for calculation of the weight of the slabs.

From the best I can determine there has never been a formal system developed to identify slab weights (writing the weights on the slab or something more sophisticated). Since the Blooming Mill days and continuing the past 17 years of the Spa, employees used their experience to determine what the lift weight was. (Exh. R-8).

It was common practice for operators to carry two steel slabs at a time with the crane (Tr. 49-50, 89). The weight of a steel slab, however, depended on its width which various from 26 to 40 inches and its length which various from 20 to 30 feet. The thickness of a slab was 9 inches (Tr. 50-51, 53, 91, 107, 149).

According to Priddy, it was difficult for an operator to determine the slab's weight. It was not written on the slab and the company did not maintain a record of the weight. As noted, WCI's own investigation, found that it lacked a formal system to identify slab weights and that operators had used their experience to determine a lift's weight.

According to Safety Director Headrick, crane operators could determine a slab's weight by checking a computer in the office or calculating the weight by using a mathematical formula provided by WCI (Exh. R-8; Tr. 36). After the crane collapse in January 2008, WCI began marking the weight on each steel slab (Tr. 55).

The Secretary failed to call any witnesses from WCI including the crane operator to support its claims of recurring overloading. Instead the Secretary relied on the testimony of Priddy who could provide only limited support for her position. Initially Priddy claimed WCI officials told him they permitted overloading if it was within the crane's safety factor. On cross examination, Priddy conceded it was the union that provided this information. Similarly, Priddy claimed WCI tolerated overloading because employees told him that they were permitted to lift two slabs at once. However, on cross examination, Priddy conceded slabs are cut to various lengths and widths. The mere fact a crane routinely lifted two slabs at once is meaningless unless one knows the size of the slabs (Tr. 92). Priddy's assumption that two slabs always exceeded the 40-ton lifting capacity is incorrect. He conceded "the Company lifts slabs where two slabs would easily fall under the crane's rated capacity (Tr. 92).

The issue is whether WCI knew or should have known with reasonable diligence the #2 SPA crane was overloaded at the time of the collapse. WCI through its supervisors was aware the SPA overhead cranes generally transported two slabs at a time. As evident by the calculations provided to Priddy, two steel slabs can exceed the crane's 40 ton capacity. The weight of any two of the four slabs found where the crane collapsed was 43.2 to 45.6 tons (Tr. 50).

Other than on the day of the crane collapse, there is no evidence the overhead cranes carried loads beyond their rated capacities. The record fails to show crane overloading was a regular and a recurring problem. There is no showing WCI through its management knew or should have known the #2 crane was overloaded when transporting two steel slabs.

However, if the #2 overhead crane was carrying four steel slabs as claimed by WCI, the weight of four slabs would clearly exceed the 40-ton crane capacity and should have been obvious to any WCI supervisor in the SPA. Such constructive knowledge is imputed to WCI unless it is shown the operator's conduct was unpreventable misconduct.

Unpreventable Employee Misconduct

WCI asserts the violation of § 1910.179(n)(1) was the result of the operator's misconduct. As an affirmative defense, it is WCI's burden to show the misconduct was unpreventable. In order to establish unpreventable employee misconduct, an employer must show it has (1) established work rules designed to prevent the violation, (2) adequately communicated these work rules to its employees, (3) taken steps to discover violations, and (4) effectively enforced the rules when violations are discovered *American Sterilizer Co.*, 18 BNA OSHC 1082, 1087 (No. 91-2494, 1997).

1. WCI's Work Rule

As essential element of the misconduct defense, the employer needs to establish it has work rules designed to prevent the unsafe condition or violation of an OSHA standard. *Pride Oil Well Serv.*, 15 BNA OSHC *supra* at 1816. A work rule is defined as "an employer directive that requires or proscribes certain conduct, and that is communicated to employees in such a manner that its mandatory nature is made explicit and its scope clearly understood." *J.K. Butler Builders, Inc.*, 5 BNA OSHC 1075, 1076 (No. 12354, 1977).

WCI's safety program included a detailed manual on crane safety that contained specific rules against overloading the crane. WCI's safety rules if followed would have prevented the unsafe condition and a violation of § 1910.179(n)(1) (Exh. R-2).

2. WCI's Communication of its Work Rules

WCI communicated its safety rules through periodic safety training and monthly "safety contacts." The training was provided to employees including operator Mathieson (Exh. R-1). In the four months preceding the January 30, 2008 accident, crane operator Mathieson received at least two safety contacts regarding crane overloading. The contacts occurred on September 27, 2007 and January 18, 2008; less than two weeks before the accident. The JAS/SOP S6005 safety contact plainly discussed the rule against overloading; "Never, under any circumstances, lift a load that exceeds the equipment's capacity." Employees were told how to calculate the weight of each slab to avoid overloading. The JSA specifically instructed operators of the lift capacity of each overhead crane and warned operators that "going over hoist limitations could result in a dropped crane block causing serious personal injury from lift itself or flying debris" (Exh. R-8).

3. WCI's Steps to Discover Violations

Although an employer is not required to provide constant surveillance, it is expected to take reasonable steps to monitor for unsafe conditions. *Ragnar Benson, Inc.*, 18 BNA OSHC 1937, 1940 (No. 97-1676, 1999).

As discussed, WCI had a system of daily and monthly inspections of the crane. Its safety staff regularly walked throughout the plant looking for unsafe conditions.

4. WCI's Enforcement of Safety Rules

Adequate enforcement of safety rules by an employer is also viewed as a critical element of the misconduct defense. To show an employer's disciplinary system is more than a paper program, an employer must have evidence of having actually administered the discipline outlined in its policy and procedures. *Rawson Contractors, Inc.*, 20 BNA OSHC 1078, 1081 (No. 99-0018, 2003).

Headrick testified WCI had a zero tolerance policy against overloading a crane (Tr. 172). Though he was eventually reinstated with a one-month unpaid suspension after his union intervened, Mathieson was initially fired as a result of the January 2008 crane collapse (Tr. 145). Additionally, as a result of the August 2007 limited switch incident, supervisor Foos issued a verbal reprimand to the crane operator. Foos was disciplined for not suspending the operator.

WCI's unpreventable employee misconduct defense is established. A violation of § 1910.179(n)(1) is not established.

Penalty Consideration for Item 1

OSHA proposes a penalty of \$2,500.00 for WCI's violation of § 1910.179(j)(3). Section 17(j) of the Occupational Safety and Health Act requires that when assessing penalties, the Commission must give "due consideration" to four criteria: (1) the size of the employer's business, (2) the gravity of the violation, (3) the good faith of the employer, and (4) the prior history of violations. 29 U. S. C. § 666(j).

WCI was a large company with approximately 1,300 employees. WCI is not entitled to credit for history because it has received serious citations within the preceding three years (Tr. 43). WCI is given credit for good faith based on maintaining a safety program consisting of safety rules, training and a safety department with four safety professionals (Tr. 130).

A penalty of \$2,000.00 is reasonable for WCI's serious violation of § 1910.179(j)(3). The failure to periodically inspect the overhead crane's rail support systems exposed the operator and other employees to a crane collapse hazard as experienced on January 31, 2008. Priddy identified areas on the support columns and girders which showed evidence of corrosion and missing or deformed bolts and rivets.

FINDINGS OF FACT AND CONCLUSIONS OF LAW

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

ORDER

Based upon the foregoing decision, it is ORDERED:

Date: January 8, 2009

- 1. Serious violation of § 1910.179(j)(3) is affirmed and a penalty of \$2,000.00 is assessed;
- 2. Serious violation of § 1910.179(l)(3)(ii)(b) is vacated and no penalty is assessed; and
- 3. Serious violation of § 1910.179(n)(1) is vacated and no penalty is assessed.

/s/Ken S. Welsch

KEN S. WELSCH

Administrative Law Judge