

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

Secretary of Labor,

Complainant

v.

Mast Climber Manufacturing, Inc. d/b/a

American Mast Climbers

Respondent.

OSHRC Docket No. 09-2112

Appearances:

John Bernstein, Esq., U. S. Department of Labor, Office of the Solicitor, Dallas, Texas
For Complainant

William F. Mims, Jr., *Pro Se*, Whitney, Texas
For Respondent

Before: Administrative Law Judge Ken S. Welsch

DECISION AND ORDER

Mast Climber Manufacturing Inc. d/b/a/ American Mast Climbers (AMC) was in the business of manufacturing, renting/selling, erecting, and servicing the mast climber tower scaffold system for use on construction projects from a facility near Waco, Texas. On June 10, 2009, four employees of a contractor who were applying exterior finishing insulation (EFIS) to a 21-story apartment/retail building under construction in Austin, Texas, fell when the work platform on AMC's mast climber system collapsed. Three employees died from the collapse. AMC had contracted by the project's general contractor to erect, disassemble, move, and service the mast climber system at the project.

As a result of an investigation by the Occupational Safety and Health Administration (OSHA), AMC received serious and willful citations on December 3, 2009. AMC timely contested the citations.

Serious Citation No. 1, which proposes total penalties of \$16,800.00, alleges AMC violated:

Item 1 - 29 C.F.R. § 1910.178(l)(4) (iii) for failing to evaluate each powered industrial truck operator's performance at least once every three years;

Item 2 - 29 C.F.R. § 1926.451(a)(1) for failing to ensure that each scaffold component was capable of supporting its own weight and at least 4 times the maximum intended load;

Item 3 - 29 C.F.R. § 1926.451(b)(10) for intermixing scaffold components by different manufactures without a competent person determining the scaffold was structurally sound;

Item 4 - 29 C.F.R. § 1926.451(f)(3) for failing to inspect the scaffold and scaffold components by a competent person before each shift;

Item 5 - 29 C.F.R. § 1926.451(f)(4) for failing to repair or replace any part of a scaffold damaged or weakened;

Item 6 - 29 C.F.R. § 1926.451(g)(1)(vii) for failing to protect each employee on a scaffold by use of a personal fall arrest system or guardrail system;

Item 7 - 29 C.F.R. § 1926.451(g)(3) for failing to attach a personal fall arrest system by lifeline to a vertical lifeline, horizontal lifeline or scaffold structure member; and,

Item 8 - 29 C.F.R. § 1926.454(b) for failing to train each employee involved in erecting, moving, operating, repairing/maintaining, or inspecting a scaffold by a competent person to recognize associated hazards.

Willful Citation No. 2, which proposes a penalty of \$70,000.00, alleges AMC violated:

Item 1 - 29 C.F.R. § 1926.451(a)(6) for failing to design scaffolds by a qualified person and construct and load them in accordance with that design.

The hearing was held on September 10-11, 2012, in Austin, Texas. The parties stipulated jurisdiction and coverage (Tr. 11). AMC was represented by its owner, William Sims, *pro se* after dismissing its attorney (Tr. 7). At the hearing, the parties settled Citation No. 1, items 1, 6 and 7 and their agreement is approved and incorporated into this decision (Tr. 10-11). The delay in scheduling the hearing occurred because of the parties' attempt at mandatory settlement; AMC's filing for bankruptcy; and the withdrawal of two attorneys representing AMC. The Secretary and AMC filed post-hearing briefs on or before December 17, 2012.

AMC denies the remaining alleged violations, the willful classification, and the proposed penalties. AMC argues that the scaffold standards at §1926.451, “*General Requirements*,” do not apply to its mast climber system. It insists that the requirements at § 1926.453, “*Aerial Lift*,” apply. AMC claims no affirmative defense.

For the reasons discussed, Citation No. 1, items 3, and 8 are affirmed as serious. Citation No. 2, item 1 is affirmed as willful. Items 2, 4, and 5 of Citation No. 1 are vacated. A total penalty, including the parties’ settled items, of \$17,150.00 is assessed.

The Collapse

AMC, a small company in Waco, Texas, employed approximately 10 employees and was engaged in manufacturing, erecting, servicing, and disassembling of mast climber systems. AMC was formed in 2000 and was closed by January 2010, after the collapse. AMC’s owner and president was Mr. William Mims who has worked with the mast climbing system since 1983 (Tr. 96, 337, 338).

The Millennium mast climber at issue consisted of work platforms attached to either side of a motorized unit which traveled up and down a tower attached to the exterior of the building. The tower was made of sections (modules) that were stacked on top of each other. As described in the AMC’s *Operations Manual*, “The Millennium system is capable of working in a large combination of platform widths and tower heights able to cover most applications encountered in scaffolding access situations” (Exh. C-2, section 2.4; Tr. 60, 339-340).

In 2008 AMC was contracted by the general contractor to erect, disassemble, move, and service the Millennium mast climber on the exterior of a 21-story apartment/condominium building under construction on top of a 7-story parking garage in Austin, Texas. The mast climber was taken in sections to the project by truck where AMC erected it. To move the system to other locations around the building, the mast climber system was broken down into sections and moved to the appropriate location where it was reassembled. When there was a problem with the system, AMC was contacted to perform the necessary repair/maintenance work (Exh. C-1; Tr. 24-25, 29-30, 71, 342).

In May 2009 AMC moved the mast climber to the location where the accident occurred. The AMC employees erected the tower with the motorized unit, installed the work platforms on either side of the unit, and placed the system into operation. Three AMC employees were on site

on June 10, 2009, when the right side work platform collapsed, fatally injuring three employees applying exterior insulation (Tr. 348).

After the platform collapsed and based on a referral from the police department, OSHA compliance safety officers initiated an investigation. The compliance officers took photographs of the site, interviewed AMC's employees including Mr. Mims, and contracted a metallurgist (Exh. C-8; Tr. 22-24).

As a result of the investigation, OSHA issued the citations at issue to AMC on December 3, 2009.

Discussion

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).

Application of § 1926.451

As the first element of the Secretary's burden of proof, the standards at § 1926.451 must be shown applicable to AMC's mast climber. The citations at issue allege violations under § 1926.451.

AMC argues that the scaffold standards at § 1926.451, *General Requirements*, applicable to all scaffolds do not apply to the mast climber system. AMC claims that the mast climber is an aerial lift covered by § 1926.453. Neither standard makes specific reference to mast climbers.

Subpart L, *Scaffold* at § 1926.450 *et. seq.* contains the requirements for the use of scaffolds and aerial lifts in construction. The standards set performance-based criteria to protect employees from scaffold-related hazards such as falls, structural instability, and overloading.

Section 1926.451 covers the general requirements for scaffolds, including load capacity, construction, access, and use. A "scaffold" is defined as "any temporary elevated platform (supported or suspended) and its supporting structure (including points of anchorage), used for supporting employees or materials or both." § 1926.450(b). AMC's Millennium mast climber at issue satisfied this definition. The mast climber consisted of a temporary tower erected on the exterior of a building upon which work platforms were mounted to the motorized unit which

travels up and down the tower (Tr. 35, 339). AMC's own literature describes the mast climber as a scaffold (Exhs. C-2, C-9, C-10, Tr. 388). Section 1926.451 specifically "does not apply to aerial lifts, the criteria for which are set out exclusively in § 1926.453."

Section 1926.453 which exclusively covers aerial lifts, does not define an aerial lift. However, § 1926.453(a) provides that aerial lifts "shall be designed and constructed in conformance with the applicable requirements of the American National Standards of 'Vehicle Mounted Elevating and Rotating Work Platforms' ANSI A92.2-1969." The standard then identifies various types of vehicle-mounted aerial devices used to elevate employees to jobsites above ground. There is no dispute that the mast climber at issue was not vehicle mounted.

The requirement that an aerial device be vehicle mounted to qualify as an aerial lift is more explicitly set forth in the 2001 OSHA Letter of Interpretation (Exh. C-5). The Letter provides in pertinent part that the requirements covered by § 1926.453 apply to vehicle-mounted aerial devices are identified in ANSI A92.2-1969, under 1.1.1 *Equipment Covered*. It states that "to be within the coverage of the ANSI standard, and thus the requirements of §1926.453, the aerial device can be powered or manually operated, but it must be vehicle-mounted – and the vehicle must be a carrier that is not manually propelled." The Letter of Interpretation concludes that a scissor lift is not covered by § 1926.453 but by § 1926.451.

OSHA had cited Mr. Mims' previous company, Texas Mobile Scaffolding, in April 2000 as a result of another platform collapse in 1999 under the § 1926.451 standards (Exh. C-4; Tr. 42, 306-307, 337).

AMC's Millennium mast climber at issue is not an aerial lift because it was not mounted on a vehicle. The mast climber scaffold was constructed on top of the parking garage and was assembled by stacking the sections of the tower on top of each other. The mast climber was disassembled in sections and moved to a new location where it was reassembled (Exh. C-1; Tr. 41, 64).

In support of its position that the mast climber was an aerial lift, AMC offered an October 10, 2010, letter drafted by DH Glade & Associates, Inc., an engineering company (Exh. R-1). The letter asserted that the scaffold standards do not apply to mast climbers but are considered "aerial lifts by ANSI and OSHA."

Despite the assertion, AMC's letter is not afforded weight because there is no basis shown supporting the opinion or the author's knowledge of ANSI coverage or OSHA standards. Neither

the author of the letter nor AMC offered an explanation or other evidence supporting the conclusion. The letter also fails to describe the author's background, education, experience or credentials which might support his opinion. Therefore, the letter lacks reliability and trustworthiness.

In light of the plain language of the standard and deference given to the Secretary's interpretation, OSHA properly cited AMC's mast climber system under the § 1926.451 general requirements applicable to scaffolds.

SERIOUS CITATION NO. 1

The remaining elements of the Secretary's burden of proof, is discussed as to each citation remaining in dispute.

Item 2 - Alleged Serious Violation of § 1926.451(a)(1)

The citation alleges:

The employer does not ensure that each scaffold and scaffold component is capable of supporting without failure, its own weight and at least 4 times the maximum load applied or transmitted to it. On or about June 4, 2009, and in times prior thereto and thereafter, employees were exposed to the hazards of catastrophic failure on Millennium mast climber scaffolds in that they were equipped with extensions, which applied a torsion load to the scaffold platform support bolts, and the scaffold structure had other defects including, but not limited to being constructed in a manner which permitted excessive lateral movement of platforms.

Section 1926.451(a)(1) provides:

Except as provided in paragraphs (a)(2), (a)(3), (a)(4), (a)(5) and (g) of this section, each scaffold and scaffold component shall be capable of supporting, without failure, its own weight and at least 4 times the maximum intended load applied or transmitted to it.¹

The record establishes that the mast climber scaffold used at the Austin project contained or lacked components different than stated in AMC's Millennium 2000 *Operations Manual* (Exh. C-2). AMC's *Operation Manual*, under Technical Data, specifically provides for installing the platform that:

Particular attention must be paid to the 4 bolts which mount the first pair of deck modules through the twin ears at each end of the platform. These bolts are 3½ x ¾ in dia. Grade 8 with a 1½ shank

¹ The exceptions involving rope suspensions and fall protection are not applicable.

and are fitted with a single flat GB washer under both bolt head and the GB nut which should be torqued down to 376 ft. lb. when installed. As a key load bearing component, these bolts must be carefully examined and any found damaged, discarded. **THESE FOUR BOLTS, WHICH MOUNT THE DECK MODULES ADJACENT TO EACH SIDE OF THE MAINFRAME, SHOULD BE INSTALLED NEW AT EACH JOB** – Bolts with fully threaded body should not be used. (Exh. C-2, section 2.5.2).

The changes made to the mast climber used at the Austin project included using fully threaded bolts to support the first set of work platforms, reusing the bolts, having single ears at the end of the platform to secure the bolts, not adequately torqueing the nuts on the bolts, lacking washers for the bolts, and mismatching tower sections with rounded or squared corners which affected the wear of the rollers travelling up and down the tower (Exh. C-1).

Because of these changes from its manual which are undisputed, OSHA argues that AMC was unable to ensure that the mast climber system on site was capable of supporting at least 4 times the maximum intended load (Tr. 89). As evidence, the work platform on the right side of the tower collapsed on June 10, 2009, causing the death of three employees.

The metallurgist hired by OSHA investigated the bolts and determined, among other things, that that two threaded bolts where the right side work platform attached to the motorized unit sheared off at the treads at the time of the collapse (Exh. C-8). The rated capacity of the scaffold was 5,000 pounds (Tr. 88).

The metallurgist, however, was unable to identify that the mast climber or any component was not capable of supporting four times its anticipated weight. He concluded that the accident was the result of overloading the platform but could not specifically identify the “load source which caused the accident.” It “could have resulted from any number of human errors, assembly errors and/or equipment malfunctions” (Exh. C-8, p 7). His testing of the failed bolts showed that the bolts surpassed the Grade 8 hardness/strength requirement of SAEN J429 (Exh. C-8, p. 9).

According to Cook Consultants, Inc. (Cook), an engineering firm, contracted by Mr. Mims after a similar collapse in 1999, the shear capacity of a Grade 8 bolt drops approximately 30 percent if its threads are included in a shear plane (Exh. C-3; Tr. 95). However, the ¾ inch diameter Grade 8 bolt has the shear strength of 42,000 pounds. Even with a 30 percent drop in shear capacity, the bolts still met the 4 to 1 safety factor.

Similarly, the other changes to the mast climber from AMC's *Operations Manual* found by OSHA were not shown to have reduced the support capability of the scaffold or components below the 4 to 1 safety factor of the component. Although the numerous changes from AMC's *Operations Manual* are troubling and Mr. Mims failed to identify justifications for the changes, the Secretary's evidence fails to establish that the mast climber or its components failed to support the 4 to 1 safety factor required by § 1926.451(a)(1).

A alleged violation of § 1926.451(a)(1) is not established.

Item 3 - Alleged Serious Violation of § 1926.451(b)(10)

The citation alleges:

The employer does not ensure that scaffold components manufactured by different manufacturers are not modified in order to intermix them without a competent person determining the resulting scaffold is structurally sound. On or about June 4, 2009, and in times prior thereto and thereafter, employees accessed Millennium Mast climbing scaffolds which had adjoining mast tower sections of differing dimensions and manufacture, one of which had been modified in order to be joined with the other. The combination was not structurally sound.

Section 1926.451(b)(10) provides:

Scaffold components manufactured by different manufacturers shall not be intermixed unless the components fit together without force and the scaffold's structural integrity is maintained by the user. Scaffold components manufactured by different manufacturers shall not be modified in order to intermix them unless a competent person determined the resulting scaffold is structurally sound.

There is no dispute that the tower contained components from England with round edges and components manufactured by AMC with squared edges (Tr. 26-27). Because of the intermixing of these components, the tower sections were not properly aligned which according to OSHA caused defections and displacements sometimes as much as ½ inch where the tower sections were joined. The tower sections did not fit together properly and failed to provide a smooth, continuous track for the rollers of the motorized unit to move up and down the tower. The displacements caused excessive wear and deterioration of the rollers (Exh. C-1, pp. 8 and 30; Tr. 34, 36-37, 92-93).

Also, OSHA argues that Mr. Mims or his foreman who erected the mast climber scaffold were not competent persons under the scaffold standards. A “competent person” is defined at § 1926.450(b) as:

One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Mr. Mims admitted that he did not consult an engineer for impact or authorization to intermix the different tower components (Tr. 57, 63, 394-395). He alone decided and authorized the intermixing of the components (Tr. 413).

Although as owner he had the authority to take corrective measure, Mr. Mims failed to show that he was capable of identifying existing and predictable hazards. He lacks any formal qualifications other than 30 years working with the mast climber system. He is not an engineer nor does he have any education or other certification that would qualify him as a person with specialized or technical knowledge regarding the structural integrity of the system (Tr. 102). He has not received any safety training or education from OSHA in recognizing hazards (Tr. 410).

Mr. Mims’ lack of judgment was shown by his conduct in contradiction to the recommendations made by Cook following the 1999 collapse of a platform owned by Texas Scaffolding LLC, a predecessor company owned by Mr. Mims (Exh. C-3). Mr. Mims hired Cook to analyze the failure (Tr. 58). Cook’s report concluded that the possible reasons for the bolt failure was (1) improper loading, (2) the use of threaded bolts as opposed to shank bolts, and (3) untightened connections (Tr. 59-60). Despite having the problems pointed out by a certified engineering firm, Mr. Mims terminated Cook after the report and continued the same problems at the Austin project in 2009 (Exh. C-8; Tr. 72).

Further, when OSHA questioned Mr. Mims after the 2009 collapse, he was unable to recognize the potential hazards created by the changes from the *Operations Manual* (Tr. 102). He acknowledged that he did not have the knowledge or experience to address technical matters. He stated that he would “have to talk to an engineer.” (Tr. 104, 393).

Mr. Mims’ reliance on his lengthy experience with mast climbers was not shown to have adequately equipped him with the knowledge to identify potential hazards and the requirements of the OSHA standards. The standard specifically prohibits mismatching components when as here

the components are forced together and it potentially affects the integrity of the rollers moving the work platform up and down the tower. Mr. Mims failed to identify any basis or justification that the use of intermixed components was acceptable.

AMC employees were exposed to the fall hazard during the employees' erection and servicing of the mast climbers (Tr. 98). Also, AMC as the creating contractor was responsible for the safety of the contractor employees applying the installation on the building's exterior.

With regard to knowledge, AMC's general foreman was onsite when the mast climber was erected and during servicing. Mr. Mims admitted that the mast climber tower was constructed from two differently constructed sections (Tr. 26-27).

In order to establish that a violation is "serious" under § 17(k) of the Occupational Safety and Health Act (Act), the Secretary must establish that 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 violation. In this case, as evident by the collapse on June 10, 2009, the failure of a platform is death or serious injury and AMC knew of the conditions through its erection and repair of the mast climber.

AMC's serious violation of § 1926.451(b)(19) is established.

Item 4 - Alleged Serious Violations of § 1926.451(f)(3)

The citation alleges:

The employer does not ensure that scaffolds are inspected for visible defects by a competent person before each work shift and after any occurrence which could affect a scaffold's structural integrity. On or about June 4, 2009, and in times prior thereto, employees were replacing rollers on Millennium mast climbers on the west side of the building under construction without the scaffolds being inspected for defects by a competent person, exposing the employees to the hazards associated with working on scaffolding.

Section 1926.451(f)(3) provides:

Scaffolds and scaffold components shall be inspected for visible defects by a competent person before each work shift, and after any occurrence which could affect a scaffold's structural integrity.

Based on OSHA's interviews, AMC's crew members including the foreman acknowledged that AMC did not perform pre-shift inspections of the mast climber and components for visible defects (Tr. 117). The crew performed the repairs and service to the mast

climber when notified of problems by the contractor. OSHA received copies of AMC's repair reports.

The record, however, is undisputed that daily inspections for visible defects were performed by the foreman of the contractor (Tr. 109, 118-119). Copies of the contractor's daily inspection reports were provided to OSHA.

Although OSHA questions whether AMC was competent to provide training, the record fails to establish that the contractor's foreman who performed the daily inspections was not a competent person under the standard. There is no showing that he was not capable of identifying hazards or lacked the authority to correct the hazards. His daily inspection reports were not found inadequate by OSHA. If defects were detected, the contractor foreman notified AMC to perform the repairs. Many of the problems OSHA found such as reusing threaded bolts and the lack of torquing and washers were not visible defects subject to inspection.

Since the mast climber system was rented by AMC to the contractor, it is impractical to require AMC to perform the daily inspections. The AMC facility was approximately 2 hours from the project (Tr. 269). AMC's contract required it erect, disassemble, move, service and repair the mast climber.

The alleged violation of § 1926.451(f)(3) is not established.

Item 5 - Alleged Serious Violation of § 1926.451(f)(4)

The citation alleges:

The employer does not ensure that any part of a scaffold, damaged or weakened, such that its strength is less than that required, is not immediately repaired or replaced, braced to meet those provisions, or removed from service until repaired. On or about June 4, 2009, and in times prior thereto and thereafter, critical parts of the Millennium Mast Climbers on site including, but not limited to connector bolts, extension rails, rollers and mast section were not removed from service or repaired on site, exposing employees working on the mast climbers to a fall hazards.

Section 1926.451(f)(4) provides:

Any part of a scaffold damaged or weakened such that its strength is less than that required by paragraph (a) of this section shall be immediately repaired or replaced, braced to meet those provisions, or removed from service until repaired.

The OSHA inspectors detected numerous cracks in welds on various sections of the tower. These cracks are shown in OSHA's photographs of the mast climber (Exh. C-1 p. 31; Tr. 105). Also, the OSHA compliance officer observed that the rollers on the motorized unit were excessively worn, including some rollers that were completely worn down and stripped of their polymer coating (Exh. C-1, p 10; Tr. 107). The Secretary argues that the defects were visible and could have affected the scaffold structural integrity.

The record fails to establish that the defects reported or otherwise known by AMC were not immediately repaired. There is no showing how long the cracked welds or worn rollers existed or that AMC should have known of the conditions. Also, the Secretary failed to establish that these conditions did not meet the 4 to 1 safety factor required by § 1926.451(a)(1).

A alleged violation of § 1926.451(f)(4) is not established.

Item 8 - Alleged Serious Violations of § 1926.454(b)

The citation alleges:

The employer does not ensure that each employee involved in erecting, disassembling, moving, operating, repairing, maintaining, or inspecting a scaffold trained by a competent person to recognize any hazards associated with the work in question. On or about June 4, 2009, and in times prior thereto and thereafter, employees were operating, performing maintenance on, repairs to, and disassembling the mast climbers erected on the west side of the building under construction without being trained by a competent person to recognize the hazards, exposing the employees to a fall hazard.

Section 1926.454(b) provides:

The employer shall have each employee who is involved in erecting, disassembling, moving, operating, repairing, maintaining, or inspecting a scaffold trained by a competent person to recognize any hazards associated with the work in question. The training shall include the following topics, as applicable.

The training topics required by the standard include the nature of scaffold hazards, the correct procedures in erecting and maintaining the type of scaffold in question, the design criteria, maximum intended load-carrying capacity and any other pertinent requirements of this subpart.

The record establishes that AMC's general foreman was responsible for training the AMC crew members in erecting and servicing the mast climber. However, the foreman was not shown to be a competent person. He was not aware of the existence of AMC's *Operations Manual* for

the Millennium mast climber. His lack of competence is also shown by the crew members who were unaware of the proper Mast Climber erection techniques, what tools to use, or any other criteria set forth in AMC's manual. AMC produced no documents showing that any AMC employee received training in the erection of the mast climber system (Exh. C-2; Tr. 122-123).

AMC argument that the foreman had in excess of 15 years of experience in erecting the mast climber system without incident does not establish that he was capable of recognizing and correcting hazards. It was not shown the nature or extent of his training in recognizing hazards. There were a number of changes in the mast climber system at the Austin project which were contrary to AMC's *Operations Manual* including the re-use of threaded bolts, the lack of torsion, the use mismatched components, and cracked welds. AMC failed to show the industry standard or the justification for such changes from the manual's criteria.

AMC knew of the lack of training and such lack of training can cause serious injury or death from an improperly erected scaffold.

AMC's serious violation of § 1926.454(b) is established.

WILLFUL CITATION NO. 2

Item 1 - Alleged Willful Violation of § 1926.451(a)(6)

The citation alleges:

The employer does not ensure that scaffolds are designed by a qualified person and are constructed and loaded in accordance with that design. On or about June 4, 2009, and in times prior thereto and thereafter, employees were performing maintenance and disassembly from the platforms of the mast climbers on the west side of the building that were not erected in accordance with their design, exposing the employees to a fall hazard.

Section 1926.451(a)(6) provides:

Scaffolds shall be designed by a qualified person and shall be constructed and loaded in accordance with that design. Non-mandatory Appendix A to this subpart contains examples of criteria that will enable an employer to comply with paragraph (a) of this section.

It is undisputed that AMC's Millennium mast climber at the Austin project was not constructed in accordance with an engineer's approved design or AMC's *Operations Manual* (Exh. C-2; Tr. 45). AMC failed to show the basis or justification for not complying with its

manual. The disparities between AMC's manual and the mast climber at the Austin project included:

(1) AMC's manual specified the use of Grade 8 bolts with 1½ inch shank to ensure the threads were not within the shear plan (Exh. C-2, section 2.5.2). The bolts actually used were fully threaded (Tr. 51). The failed bolt on the outer side of the work platform had ¼ inch threads in the shear plane (Exh. C-8). The bolts in the bin at AMC shop provided for the scaffold erectors did not contain the specified bolts (Tr. 68);

(2) The manual required support bolts to be new each time the mast climber was erected (Exh. C-2, section 2.5.2). In bold, capital print, the manual states that **"THESE FOUR BOLTS, WHICH MOUNT THE DECK MODULES ADJACENT TO EACH SIDE OF THE MAINFRAME, SHOULD BE INSTALLED NEW AT EACH JOB – Bolts with full threaded body should not be used."** In practice at Austin, the bolts were reused. AMC's purchased of new bolts were commingled with used bolts (Tr. 53-54, 68);

(3) The manual required a torque of 376 ft-lb for the support bolts (Exh. C-2, section 2.5.2). The erectors did not have a torque wrench. Bolts were tightened using an impact wrench with an unknown torque setting (Tr. 52-53, 63). The employees who erected the mast climber did not know the torque requirements. Testing performed by the Secretary's metallurgist of several bolts which had not failed indicated torques ranging from 30 to 90 ft-lb (Exh. C-8; Tr. 62);

(4) The manual's design did not show that the use of tower sections from different manufactures was permitted (Exh. C-2). The tower sections with rounded corners were attached to sections with square corners causing mismatched frames which were not properly aligned at their junction (Tr. 26-27, 34);

(5) The manual's design requires two ears on each attachment point on the elevating unit at which the working platform was attached (Exh. C-2, section 2.5.2). The actual scaffold in use had a single ear attachment (Exh. C-1 p 2, 4); and

(6) The manual required that the bolts be fitted with a flat G8 washer (Exh. C-2, section 2.5.2). The OSHA compliance officer found no washers on the bolts. The only washers observed were used as a shim or help level the mast sections (Tr. 52).

The Secretary argues that the mast climber at the Austin project with these changes from the manual was not designed by qualified person. Mr. Mims created the Millennium Mast

Climber *Operations Manual* (Tr. 43). Cook was hired to consult with him on the design and approved the manual in 2000-2001(Tr. 48, 60).

Mr. Mims argues that he was a qualified person to make the changes from the manual. He has worked with mast climbers since 1983 (Tr. 263, 393). He has manufactured the mast climber equipment and for three decades has sold, rented, erected, serviced and repaired the equipment.

A “qualified person” is defined by OSHA at 29 C.F.R. § 1926.450(b), *Definitions*, as;

One who, by possession of a recognized degree, certificate or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his/her ability to solve or resolve problems related to the subject matter, the work, or the project.

The record establishes that AMC failed to comply with its manual when it erected the scaffold at the Austin project. The compliance officer’s lack of experience in inspecting a mast climber system does not mean he was unable to identify hazards and noncompliance with AMC’s manual (Tr. 45).

Mr. Mims does not dispute the changes were made. The changes from the *Operations Manual* were not reviewed or approved by a degreed professional. Mr. Mims lacked an engineering background (Tr. 410). Mr. Mims failed to show the basis and justification for the changes from the requirements in the *Operations Manual*. He did not ensure that the changes did not affect the structural integrity of the mast climber or employee safety. There is no showing that he or an engineer made the appropriate analysis or calculations created by the changes (Tr. 395, 398, 414).

Mr. Mims, even if qualified, did not show support for the changes. To be qualified, he must have successfully demonstrated the ability to recognize problems and resolve problems related to changes to the design of the scaffold. § 1926.450(b). He failed to meet this test. He provided no evidence for the changes or their justification.

In 1999 Mr. Mims, while president of Texas Scaffolding, experienced the failure of another mast climber scaffold which had such changes. Based on test reports and observation Cook advised Mr. Mims that the possible reasons which caused these bolts failure are (a) improper loading; (b) threaded bolts in the connection; and (c) un-tightened connections (Exh. C-3, sheet 2; Tr. 58-59). Cook’s report also stated that “the bolts failed from fatigue brought on partially by the load coupled with lack of proper tightening or torquing of the bolts, allowing the bolt-actual load

to exceed the preload fracturing in the threadroot.” Despite this information, Mr. Mims allowed the changes to the mast climber at the Austin project including the use of threaded bolts and the improper torqueing of the bolts. Mr. Mims’ experience did not qualify him to ignore the concerns expressed by Cook which had analyzed the cause of the prior collapse (Tr. 263).

AMC’s violation of § 1926.451(a)(6) is established.

Willful Classification

The Secretary classified AMC’s violation of § 1926.451(a)(6) as “willful” under § 17 of the Act. It is well settled that a willful violation is one committed with intentional, knowing or voluntary disregard for the requirements of the Act, or with plain indifference to employee safety. *Continental Roof Systems, Inc.*, 18 BNA OSHC 1070, 1071 (No. 95-1716, 1997). To find willfulness involves determining that the employer had a heightened awareness, rather than simple knowledge, of the violative conditions. *Williams Enterprises, Inc.* 13 BNA OSHC 1249, 1256-57 (No. 85-35, 1987).

As discussed, Cook in 2000 had expressed concerns with the use of threaded bolts and the lack of torqueing on the mast climber system as a result of a 1999 collapse (Exh. C-3). Contrary to its *Operations Manual* and the concerns raised by Cook, AMC continued the use of threaded bolts and improper torqueing at the 2009 project.

The record establishes AMC’s conscious disregard or plain indifference. It is shown by Mr. Mims involvement with an earlier scaffold failure under similar circumstances. AMC made numerous changes to the design of the mast climber at issue from its *Operations Manual* without providing the basis or justification and the degree, if any, such changes affected the climber’s structural integrity and employee safety. Mr. Mims knew the scaffold was not erected in accordance with AMC’s manual. He performed no analysis or calculations showing the impact or effect on the mast climber.

Mr. Mims admitted that he was aware threaded bolts were used (Tr. 57). When OSHA searched the AMC bolt inventory for shank bolts, the compliance officer did not find any such bolts (Tr. 68). Also, Mr. Mims admitted that his crew was not provided with torque wrenches nor did he verify the bolts were properly torqued (Tr. 63). He also knew the crew was reusing bolts and only a single ear (Tr. 56, 67). He knew the scaffold was constructed with mix-matched components (Tr. 389-390).

The changes in the mast climber system from the requirements of its manual were problematic and establish willful violation. Although the actual cause of the collapse was not determined, the changes to the system may have contributed to the collapse. AMC had the responsibility to erect, disassemble, move, and service the mast climber scaffold. This was Mr. Mims' second collapse of a mast climber platform within ten years, resulting in multiple employees' fatalities.

AMC's violation of § 1926.451(a)(6) is established as willful.

Penalty Consideration

The Review Commission is the final arbiter of penalties in contested cases. In determining an appropriate penalty, the Commission is required, pursuant to § 17(j) of the Act, to consider the size of the employer's business, history of previous violations, the employer's good faith, and the gravity of the violation. Gravity is the principal factor in considering a reasonable penalty.

AMC is entitled to credit for size because it employed approximately 10 employees in 2009 (Tr. 74, 96). It also is entitled to a reduction in penalty for history because it received no OSHA citations in the preceding three years (Tr. 97). AMC is not entitled to good faith credit because it failed to show a written health and safety program. The employees involved in erecting the mast climber were not aware of the *AMC Operation Manual* (Tr. 78, 80).

A penalty of \$2,000.00 is reasonable for serious violation of § 1926.451(b)(10) (Citation No. 1, item 3). It is undisputed that tower sections with rounded and square corners were intermixed causing wear on the rollers moving up and down the tower. AMC employees and contractor employees were exposed when riding the platform.

A penalty of \$2,000.00 is reasonable for serious violation of § 1926.454(b) (Citation No. 1, item 8). AMC employees involved in erecting the mast climber system were not shown properly trained in the erection of the system. The employees were not aware of AMC's *Operations Manual*.

A penalty of \$10,000.00 is reasonable for willful violation of § 1926.451(a)(6) (Citation No. 2, item 1). AMC failed to show justification for not complying with its *Operations Manual* when it made numerous changes to the erection of the mast climber system at the Austin project (Tr. 77-78). Three contractor employees died as a result of the collapse of the work platform,

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 that serious Citation:

1. Citation No. 1, Item 1, alleged serious violation of § 1910.178(l)(4)(iii), as settled by the parties, is affirmed as other than serious and a penalty of \$1,050.00 is assessed.
2. Citation No. 1, Item 2, alleged serious violation of § 1926.451(a)(1), is vacated and no penalty is assessed.
3. Citation No. 1, Item 3, alleged serious violation of § 1926.451(b)(10), is affirmed and a penalty of \$2,000.00 is assessed.
4. Citation No. 1, Item 4, alleged serious violation of § 1926.451(f)(3), is vacated and no penalty is assessed.
5. Citation No. 1, Item 5, alleged serious violation of § 1926.451(f)(4), is vacated and no penalty is assessed.
6. Citation No. 1, Item 6, alleged serious violation of § 1926.451(g)(1)(vii), is affirmed in accordance with the parties settlement and a penalty of \$1,050.00 is assessed.
7. Citation No. 1, Item 7, alleged serious violation of § 1926.451(g)(3), is affirmed in accordance with the parties settlement and a penalty of \$1,050.00 is assessed.
8. Citation No. 1, Item 8, alleged serious violation of § 1926.454(b), is affirmed and a penalty of \$2,000.00 is assessed.
9. Citation No. 2, Item 1, alleged willful violation of § 1926.451(a)(6), is affirmed and a penalty of \$10,000.00 is assessed.

SO ORDERED.

Ken S. Welsch
Judge Ken S. Welsch
1924 Building, Suite 2R90
100 Alabama Street, S.W.
Atlanta, Georgia 30303-3104
Phone (404) 562-1640

Dated: January 29, 2013
Atlanta, Georgia