



United States of America
OCCUPATIONAL SAFETY AND HEALTH REVIEW COMMISSION
1120 20th Street, N.W., 9th Floor
Washington, DC 20036-3457

Secretary of Labor,

Complainant,

v.

OSHRC Docket No. **18-0553**

Tower King II, Inc.,

Respondent.

Attorneys and Law Firms:

Dane Steffenson, Esq., U.S. Department of Labor, Office of the Solicitor, Atlanta, Georgia, for Complainant

Tod T. Morrow, Esq. and Susan Chae, Esq., Morrow & Meyer, LLC, for Respondent

JUDGE: Administrative Law Judge Heather A. Joys

DECISION AND ORDER

This case began with a tragic accident in which three men died when equipment attached to a communications tower on which they were working detached and fell approximately 1,000 feet to the ground, taking the three men with it. Respondent, Tower King II, Incorporated (Tower King), employed the three men, one of whom was the owner's son. Upon notification of the accident, the Fort Lauderdale Area Office of the Occupational Safety and Health Administration (OSHA) conducted an investigation with assistance from engineers with OSHA's Directorate of Construction. As a result of that investigation, the Secretary issued Tower King a single citation alleging a serious violation of § 5(a)(1) the Occupational Safety and Health Act of 1970, 29 U.S.C. § 651 (the Act), or the general duty clause. In the citation, the Secretary alleged Tower King exposed employees to fall and struck by hazards posed by overloading of the rigging components resulting from its failure to have a complete rigging plan for the equipment attached to the communications tower.¹ The Secretary proposes a penalty of \$12,934.00 for the alleged violation.

¹ The Secretary amended the original citation language in his Complaint.

Tower King timely contested the citation, bringing the matter before the Occupational Safety and Health Review Commission pursuant to § 10(c) of the Act. I held a hearing in this matter on March 14-15, 2019, in Fort Lauderdale, Florida. The parties filed post-hearing briefs on May 30, 2019.²

For the reasons discussed below, the citation is vacated.

JURISDICTION

At the hearing, the parties stipulated jurisdiction of this action is conferred upon the Commission pursuant to § 10(c) of the Act (Tr. 8). The parties also stipulated at the hearing that at all times relevant to this action, Tower King was an employer engaged in a business affecting interstate commerce within the meaning of § 3(5) of the Act, 29 U.S.C. § 652(5) (Tr. 8). Based upon the stipulations and the record as a whole, I find Tower King is an employer covered under the Act and that the Commission has jurisdiction over this proceeding.

BACKGROUND

Consensus Safety Standards for Work on Telecommunications Towers

This matter involves work on telecommunications towers. It takes no specialized knowledge to understand work on telecommunications towers is highly hazardous. Telecommunications towers can be in excess of 1000 feet tall and the components can weigh over 10,000 pounds (Tr. 55). The height and size of the tower in this case is graphically depicted in Exhibit C-8, a video of the top of the tower taken by drone. It is at this height, unprotected from the elements, that telecommunications tower workers employed by Tower King and other similar companies perform their jobs. As Tower King's foreman succinctly put it, in this line of work "you don't get a lot of second chances." (Tr. 121)

In recognition of the hazardous nature of the work, the telecommunications tower industry has developed consensus standards to address safe practices for this work, two of which are relevant here.³ ANSI/ASSE A10.48-2016, titled "Criteria for Safety Practices with the

² To the extent either party failed to raise any other arguments in its post-hearing brief, such arguments are deemed abandoned.

³ "Manufacturers' instructions and voluntary industry standards that contain explicit safety warnings regarding compliance may be probative evidence in establishing a general duty clause violation." *K.E.R. Enterprises, Inc.*, 23 BNA OSHC 2241, 2242 (No. 08-1225, 2013), citing *Young Sales Corp.*, 7 BNA OSHC 1297, 1299 (No. 8184, 1979).

Construction, Demolition, Modification and Maintenance of Communication Structures,” was developed by the American Society of Safety Engineers (Exh. C-10). Its stated purpose is to establish “minimum criteria for safe work practices and training for personnel performing work on communication structures...” (Exh. C-10 at p. 14). ANSI/TIA-322-2016, titled “Loading, Analysis, and Design Criteria Related to the Installation, Alteration and Maintenance of Communication Structures,” was developed by the Telecommunications Industry Association (TIA) (Exh. R-4). Its stated purpose is

to provide minimum loading, analysis and design criteria related to the installation, alteration and maintenance of communication structures. The intent is to address the strength and stability requirements based on information provided by the owner or the contractor for a proposed construction or maintenance activity.

(Exh. R-4 at p. 6). James Ruedlinger,⁴ who was involved in the development of both standards, explained ANSI/ASSE A10.48 specifies the duties and responsibilities for contractors while ANSI/TIA-322 specifies those for engineers. The standards are intended to “work hand in hand.” (Tr. 356).

The two standards were written with the intent of creating an interactive process between the certifying engineer and the contractor performing the construction work (Tr. 387). Both standards place responsibility for developing a rigging plan on the contractor (Exh. R-4 at p. 15). ANSI/ASSE A10.48 defines a rigging plan as

A systematic and detailed presentation showing the equipment and procedures required for construction in accordance with this standard that will provide for the safety of personnel and for the stability of the structure and lifted components.

(Exh. C-10 at p. 20). ANSI/TIA-322 contains a nearly identical definition (Exh. R-4 at p. 10). The standard goes on to set out criteria that “shall be considered when completing a rigging plan” and includes a template for a rigging plan (Exh. C-10 at pp. 26-27 and Appendix A-4(d)).

⁴ Tower King called Mr. Ruedlinger to testify as an expert in engineering and the telecommunications tower industry. Mr. Ruedlinger is senior vice president of engineering for Electronic Research, Inc. (ERI) (Tr. 349-50). ERI is in the business of designing, fabricating, and installing telecommunications equipment (Tr. 351). Mr. Ruedlinger has extensive background in the industry. He holds a degree in electrical engineering technology and a license in civil engineering (Tr. 353). He is a member of numerous professional organizations including the TIA and the American Society of Safety Professionals. (Tr. 354). Mr. Ruedlinger served on committees involved in the development of ANSI/ASSE A10.48 and ANSI/TIA-322 (Tr. 355). I find Mr. Ruedlinger a credible witness based on his consistent testimony. I find him well qualified to testify regarding the history and intent of the two standards and custom and practice in the telecommunications industry based on his background.

For class IV construction, such as the project at issue,⁵ the contractor is to “coordinate the involvement of a qualified engineer as required when establishing rigging plans. A qualified engineer shall perform the analysis of structures and/or components for class IV construction.” (Exh. C-10 at p. 24). The contractor supplies the certifying engineer with the information necessary to determine whether the structure can withstand the imposed loads⁶ (Tr. 387-88). ANSI/TIA 322 specifies the considerations for the engineer performing the analysis of the impact of the rigging plan on the structure (Exh. R-4 at p. 15). It identifies that information that must be obtained from the rigging plan to make this evaluation. These are:

- a) Operational and non-operational construction loads.
- b) Construction equipment.
- c) Supporting structure.
- d) Construction sequence and duration, including considerations for interruption or delays.
- e) Proposed load testing and field monitoring.
- f) Type of temporary guy connection (non-slip vs. slip).
- g) Rigging anchorage loads to the structure or foundation.

(Exh. R-4 at p. 15). ANSI/ASSE A10.48 contains a similar list of criteria under § 4.8.5 titled “Rigging Plan Considerations.” (Exh. C-10 at p. 25-26).

Once the certifying engineer determines the structure can withstand the imposed loads, he issues a certified engineering review letter (Tr. 373). That letter includes the loads the engineer has calculated, as well as applicable load charts (see Exh. R-15). The contractor then uses these loads to determine the appropriate sizing for the rigging equipment (Tr. 123-24). Twice ANSI/TIA-322 notes this engineer review does not involve a specific evaluation of the means and methods of the rigging. It states, “evaluation of the impact of the rigging plan does not include evaluation of the rigging components.” (Exh. R-4 at p. 15) In that same paragraph it states, “Means and methods for the construction shall be the responsibility of the contractor.”

The Project

⁵ The standard sets out four classes of work, with class IV involving the heaviest loads and the most engineer involvement. It is undisputed the project was class IV work because the materials to be lifted weighed 12,000 pounds (Tr. 54-55).

⁶ The witnesses used several terms of art when referring to the load created by the construction equipment and processes. For consistency and clarity, I have used the term “imposed load” throughout to refer to any force or weight imposed on the rigging equipment or structure.

In 2017, Tower King contracted with TV station WSVN to perform work on the station's tower in Miami, Florida (Tr. 51-52). Tower King is a small company founded by Kevin Barber in 2002 (Tr. 37). The company is engaged in construction and maintenance of telecommunications towers (Tr. 38). Mr. Barber has been in the telecommunications tower industry since 1985 (Tr. 37). Tower King has nine employees who work in the field, and three who work in the office.

The tower stood approximately 1,000 feet and had a three-armed structure at the top called an "arbor." (Tr. 69-70). Each arm of the arbor had a pedestal on which an antenna sits (Tr. 72). According to Mr. Barber, the tower originally was to hold three antennas for three broadcasters. One of the broadcasters backed out, so the third antenna was not needed. To ensure the arbor was balanced, a "dummy pole" was attached to the pedestal in place of an antenna as a counterweight (Tr. 482-83). Tower King's contract with the TV station required it to remove the dummy pole and the pedestal on which it sat and replace it with a two-section pedestal and working antenna (Tr. 50, 482-83, 493).

To lower the old equipment from, and raise the new equipment to, the top of the tower, Tower King used a "gin pole." (Tr. 51) A gin pole is "[a] lifting device that consists of a latticed or tubular boom or mast" used to raise and lower parts of the tower into position (Exh. C-10 pp. 18 and 88; Tr. 492-93). The gin pole was attached to the arbor using a bridle connection at the top and a basket connection at the bottom (Tr. 491-92; see Exh. C-10 p. 95). To make these connections, Tower King used steel slings tightened with chain "come alongs." (Tr. 485) The gin pole and the equipment used to attach it to the tower compose the rigging system.

Prior to beginning work, Tower King needed to ensure the tower could sustain the loads the construction project, including the rigging system, would impose on it (Tr. 53). Tower King does not employ anyone with an engineering background. For that reason, and because the weights to be lifted placed the project in a class requiring it, Tower King hired a third-party engineer to approve its plan (Tr. 54). Tower King entered into a contract with Stainless, Inc., (Stainless)⁷ under which Stainless would perform an engineering review of the project (Tr. 52). Mr. Barber understood the purpose of the engineering review was to determine the imposed loads resulting from the rigging system and certify the structure could withstand those loads (Tr.

⁷ Stainless is also in the telecommunications tower construction and maintenance industry and had unsuccessfully bid on the project (Tr. 129, 172-73).

52, 149). Tower King chose to contract with Stainless because Stainless had originally designed and manufactured the tower (Tr. 52). According to Mr. Barber, he followed his standard practice of providing the rigging plan he developed to Stainless who then calculated the loads to be imposed by the rigging equipment and approved the plan (Tr. 6, 150, 291-20). The Tower King employees onsite were to then choose the size rigging equipment (slings and come alongs) based on the imposed loads calculated and provided by Stainless (Tr. 64-65).

Materials for the project came from three sources. Stainless manufactured and supplied the two-part pedestal onto which the new antenna would sit (Tr. 484). A third-party antenna manufacturer supplied the antenna. Tower King supplied all the rigging equipment, including the gin pole (Tr. 485).

Tower King had five employees on the worksite (Tr. 481). Two of the employees were to remain on the ground and three were to be working on the tower (Tr. 482). Although tower workers may climb towers to perform their work, in this instance, Tower King employees used an elevator (Tr. 491). It is undisputed each Tower King employee used a personal fall arrest system with a lanyard to tie off to the tower or gin pole during his work on the tower (See Exh. R-11).

Mr. Barber explained how the job was to progress. The gin pole must first be attached to the tower. The gin pole is raised into place and set in a track that was attached to the arbor⁸ (Tr. 490-92). Once the gin pole is set, it is “tied back” or attached to the tower with the rigging equipment (Tr. 72). After having fully installed the gin pole, the workers began the process of replacing the dummy pole by first detaching and lowering the old equipment to the ground using the gin pole (Tr. 493). The new equipment was to be raised to the arbor via the gin pole where the Tower King employees would attach it (Tr. 494). Once the new antenna was in place, all the rigging equipment would be removed, and the new equipment tested to be sure it was in working order (Tr. 494).

The Accident

On September 27, 2017, Tower King was in the process of completing the work to replace the dummy pole with the new antenna. Two employees were on the ground and three were on the tower, tied off to the gin pole. As the workers were moving the old pedestal section

⁸ Mr. Barber referred to this process as “jumping the pole.” (Tr. 491-92) This term appears throughout the documentary evidence.

that had already been lowered, the gin pole detached from the arbor, falling to the ground (Tr. 494). The three workers attached to the gin pole fell to the ground with it. All three died as a result of the fall.

The Investigation

The Miami Gardens Police Department and Tower King notified the Fort Lauderdale Area OSHA Office of the accident (Tr. 324). Compliance Safety and Health Officer (CSHO) Michael Marquez was assigned to investigate the accident. His investigation involved an onsite visit during which he took photographs and measurements (Tr. 324). He obtained documents from Tower King and interviewed the surviving employees. CSHO Marquez was assisted by Dr. Bryan Ewing of OSHA's Directorate of Construction. Dr. Ewing also visited the accident site several times during which he took photographs and measurements (Tr. 251).

Based upon his investigation, Dr. Ewing concluded the cause of the accident was the overloading of the rigging components at the bridle connection (Tr. 251). This conclusion was based on Dr. Ewing's independent calculations of the imposed loads (Tr. 253-54). Dr. Ewing found the Stainless engineer had miscalculated the imposed loads because he incorrectly used a lever arm length (the distance between the bridle and basket connection) of 70 feet rather than the correct length of 12 feet despite the rigging plan indicating attachment points on the 12-foot arbor (Tr. 176-78, 288-90; Exh. R-7 at p. 20; and Exh. R-15). This resulted in an undercalculation of the forces on the bridle connection of 11,700 pounds (Exh. R-7 at p. 20). Tower King used rigging components sufficient "to carry those predicted loads" but insufficient to carry the actual load (Tr. 298). Unrelated to his finding regarding the cause of the accident, Dr. Ewing found the rigging plan Tower King provided to Stainless prior to Stainless calculating the imposed loads was missing information or had incorrect information (Tr. 255). Based upon these conclusions, the Secretary issued a citation alleging a serious violation of the general duty clause for failure to have a complete rigging plan which Tower King timely contested.

The Citation

The citation alleges a serious violation of the general duty clause, § 5(a)(1) of the Act. Section 5(a)(1) requires each employer to “furnish to each of his employee’s employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees.” 29 U.S.C. § 654(a)(1). The amended citation alleges a violation of § 5(a)(1) as follows:

The employer did not furnish employment and a place of employment which were free from recognized hazards that were causing or likely to cause death or serious physical harm to employees in that employees were exposed to fall and struck-by hazards:

On September 27, 2017, employees were performing work on a communications tower without a complete rigging plan and exceeded the capacity of the rigging attachments of a gin pole that was attached to the tower and used to hoist loads, exposing employees who were tied off to the gin pole to fall hazards and employees on the ground, to struck-by hazards.

As a feasible means of abatement, OSHA proposed the employer:

Ensure a complete rigging plan is developed and implemented, including, when appropriate, having a qualified engineer review the pertinent parts of the plan such as the means and methods of rigging attachments of the gin pole to the tower.

DISCUSSION

Elements of a § 5(a)(1) Violation

Section 5(a)(1) of the Act mandates that each employer “furnish to each of his employee’s employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees.” 29 U.S.C. § 654(a)(1). To establish a violation of the general duty clause, the Secretary must show that: (1) a condition or activity in the workplace presented a hazard; (2) the employer or its industry recognized the hazard; (3) the hazard was likely to cause death or serious physical harm; and (4) a feasible means existed to eliminate or materially reduce the hazard. *Pegasus Tower*, 21 BNA OSHC 1190, 1191, 2005 CCH OSHD ¶ 32,861, p. 53,077 (No. 01-0547, 2005).

Erickson Air-Crane, Inc., No. 07-0645, 2012 WL 762001 at *2 (March 2, 2012).

In addition to the above-quoted elements of a § 5(a)(1) violation, the Secretary must also establish the employer had either actual or constructive knowledge of the hazardous condition. *Deep South Crane & Rigging Co.*, 23 BNA OSHC 2099 (No. 09-0240, 2012), *aff’d Deep South Crane & Rigging Co. v. Seth D. Harris*, 24 BNA OSHD 1089 (5th Cir. 2013).

Whether an Activity or Condition at the Site Constituted a Hazard

In a recent decision the Commission reiterated

In a general duty clause case, “[the] hazard must be defined in a way that apprises the employer of its obligations, and identified conditions and practices over which the employer can reasonably be expected to exercise control” *Arcadian Corp.*, 20 BNA OSHC [2001, 2007 (No. 93-0628, 2004)]; *Peron Corp.*, 12 BNA OSHC [1833, 1835 (No. 82-388, 1986)]. The Secretary must show, among other things, that the hazard was present. *Wheeling-Pittsburgh Steel Corp.*, 16 BNA OSH 1218, 1221 (No. 89-3389, 1993).

Mid South Waffles, Inc. d/b/a Waffle House #1283, 27 BNA OSHC 1783, 1785 (No. 13-1022, 2019).

The Secretary defined the hazard in this case as the overloading of the tower or components of the rigging system resulting from deficiencies in the rigging plan (or failure to have a complete rigging plan). Because Tower King was responsible for developing the rigging plan, defining the hazard as deficiencies in that plan informed it of a preventable condition over which it could exercise control. To establish the rigging plan was not complete, i.e., it posed a hazard of overloading the tower or rigging components, the Secretary must show that deficiencies in Tower King’s rigging plan created a hazard. *Quick Transport of Arkansas, LLC*, 27 BNA OSH 1947, 1949 (No. 14-0844, 2019). To prove deficiencies in the rigging plan created a hazard, the Secretary has the burden to establish reliance by Stainless engineer on the information provided in the rigging plan could result in an underestimate of the imposed loads sufficient to create a “significant risk” of overloading.

Tower King’s focus on the cause of the accident is misplaced. “Proof that a cited activity actually caused harm or necessarily could have caused harm under the precise physical conditions that happened to be present at the time of the violation, or at any other specific time, is not required.” *Id. citing Bomac Drilling*, 9 BNA OSHC 1682, 1691-92 (No. 76-450, 1981). The parties do not dispute the accident was caused by overloading of the rigging components at the bridle connection. Nor does there appear to be a dispute that the overloading was due to a miscalculation of the imposed loads by the Stainless engineer. Whether the deficiencies in the rigging plan identified by the Secretary contributed to that miscalculation is not relevant to the inquiry here. *See Safeway Inc. v. OSHRC*, 382 F.3d 1189, 1195 n.5 (10th Cir. 2004) *citing Dye Construction v. OSHRC*, 698 F.2d 423, 426 (10th Cir. 1983). Rather, the Secretary must

establish the identified deficiencies could have resulted in a miscalculation sufficient to pose an overloading risk. The Secretary has not met that burden.

The Secretary's evidence of the hazard created by the deficiencies in its rigging plan is based on the testimony of its expert in engineering, Dr. Ewing.⁹ In his testimony, Dr. Ewing identified the information missing from Tower King's rigging plan (Tr. 256). In his post-hearing brief, the Secretary articulated those deficiencies as 1) failure to identify the angles of the rigging components at the bridle connection; 2) failure to identify the correct size gin pole; and 3) failure to identify the loads created by, and location of, employees working on the tower.

1) Failure to Identify the Angles of the Rigging Components at the Bridle Connection

Dr. Ewing explained the purpose of the engineer review is to calculate the load imposed by the construction equipment on the tower to ensure the tower can withstand the load (Tr. 254-55; see also Exh. R-4 at p. 15). The calculated loads are then used by riggers to select the correct size rigging components, e.g., slings and come alongs. According to Dr. Ewing, if the rigging plan does not specify the angle of the slings at the bridle connection, the engineer would assume an angle of 45 degrees (Tr. 273). He based this conclusion on his interpretation of ANSI/ASSE A10.48 § 13.5.2(a) (Tr. 274). Based upon the information available to him, Dr. Ewing calculated the angle of the slings at the bridle connection as approximately 29 degrees. Because the angles were less than 45 degrees, the forces applied to the rigging components at the bridle connection were as much as 40 percent greater than they would be if placed at a 45-degree angle (Tr. 273). This had the potential to create an overloading hazard because the rigging components selected based on the loads calculated by the engineer would be insufficient.

Tower King called its engineering expert, Mr. Ruedlinger, to rebut this testimony. Mr. Ruedlinger's experience in the telecommunications tower industry is lengthy and varied. Mr. Ruedlinger and Dr. Ewing did not disagree regarding general engineering principles, specifically that a change in the angle of the rigging components would impact the imposed load on those components. Mr. Ruedlinger's testimony contradicted Dr. Ewing's regarding the application of those principles to the telecommunications tower industry specifically. Based upon his greater

⁹ Dr. Ewing holds a Ph.D. in civil engineering and is a licensed engineer (Tr. 240). He has worked in the engineering field for over 10 years (Tr. 241). Dr. Ewing was a straightforward, articulate, and candid witness. I found him credible and credit his testimony regarding those matters that require knowledge of general engineering principles. Dr. Ewing authored a report in conjunction with that investigation (Exh. R-7). That report laid out Dr. Ewing's findings regarding the cause of the accident. For that reason, it is of limited probative value. Nothing in the report contradicts Dr. Ewing's testimony.

applicable experience, I give Mr. Ruedlinger's testimony greater weight, particularly as it applies to custom and practice in the telecommunications tower industry.

Mr. Ruedlinger testified Dr. Ewing's premise an engineer would assume the angle of the rigging components used to attach the gin pole to the arbor were 45 degrees is incorrect. Mr. Ruedlinger testified the attachment of the gin pole to the arbor at the bridle connection point is fixed (Tr. 424). Section 13.5.2(a) of ANSI/ASSE A10.48, to which Dr. Ewing referred, does not apply in the situation where the angles are fixed, but where sling angles may be variable (Tr. 426). Where the angles are fixed, the reviewing engineer can calculate the angle if all the dimensions of the tower components, the loads to be lifted, and the lifting equipment are known (Tr. 377-78, 424). Contrary to the Secretary's contention, and as Dr. Ewing conceded, the rigging plan Tower King submitted to Stainless did indicate the gin pole was to be attached to the arbor (Tr. 289; Exh. R-15 at pp. 5-7). Because Stainless had the information regarding the track, arbor, and the gin pole, it could calculate the angle at which the slings would necessarily be placed. Dr. Ewing conceded the sling angle does not change and that he was able to calculate it based on the blueprints and shop drawings of the tower and the gin pole (Tr. 276, 279).

The Secretary presented no evidence regarding how Stainless assessed the impact of the imposed loads resulting from the rigging components being placed at an angle. The record contains no evidence supporting a conclusion Stainless assumed the angle was 45 degrees. On this record it is equally likely Stainless calculated the angle of the rigging components at the bridle connection using all the data available to it as the manufacturer of, and having erected, the tower, just as Dr. Ewing calculated the angle using the blue prints and shop drawings. Because the evidence does not establish the failure to specify the angle of the rigging components at the bridle connection in the rigging plan submitted to Stainless deprived Stainless of information necessary to perform an accurate calculation of the imposed loads, the Secretary has failed to establish this omission posed a significant risk of harm.

2) Failure to Identify the Correct Size Gin Pole

There is no dispute Tower King used a longer gin pole than specified in the plan it submitted to Stainless. A longer gin pole is heavier. The expert witnesses agreed it was necessary to know the size of the gin pole to accurately calculate the loads on the tower imposed by the lifting equipment. Because the imposed loads were calculated using the smaller gin pole, the use of the longer gin pole had the potential to expose Tower King employees to an

overloading hazard.¹⁰ The fault in the Secretary's case is that this is not the violation alleged in the citation.

The citation alleges Tower King did not have a complete rigging plan. An incomplete rigging plan poses a hazard, the Secretary's theory goes, because the reviewing engineer cannot properly calculate the imposed loads. At the point at which the engineer is doing his review, a rigging plan is complete if it contains accurate information necessary to perform the calculations. Because the gin pole used was not the gin pole specified in the plan provided to Stainless, the information was not accurate and the plan not complete. The fault with the Secretary's theory is that the information regarding the gin pole did not become inaccurate until a decision was made, in the field, to use the longer gin pole. The record is thin regarding who made the decision, how it was made, and what, if any, steps were taken to ensure the use of the larger gin pole did not overload the structure or the rigging components. It was not the contents of the rigging plan submitted to Stainless that posed the hazard, but the deviation from that plan in the field after the engineer had certified the plan. The citation does not address deviations from the plan, but the contents of the plan.¹¹ The Secretary cannot rely on the deviation from the plan to meet this element of his burden of proof.

3) Failure to identify the loads created by, and location of, employees working on the tower

The Secretary contends the rigging plan Tower King provided to Stainless lacked information about the number and location of workers that would be tied off to the structure. Dr. Ewing explained that if workers were tied off to the gin pole, their additional weight would "be transferred from the gin pole through the load path, which would be the bridle connection, and then back down to the tower and back down to the foundation." (Tr. 265) If workers were tied off to the tower, the imposed force on the bridle connection is unaffected (Tr. 267). According to Mr. Ruedlinger, it is "taken for granted" that workers would be "up with the load" to perform the work (Tr. 437). Mr. Ruedlinger did not dispute Dr. Ewing's testimony regarding the

¹⁰ There is no dispute the use of the longer gin pole, because of the way it was rigged, reduced the load at the bridle connection but increased it at the basket connection.

¹¹ It is likely once a rigging plan is certified by the engineer, deviations from the plan that increase the imposed load have the potential to pose a significant risk of overloading. I agree with Tower King it lacked fair notice the citation addressed deviations from the plan. Although the proposed abatement refers to implementation of the rigging plan, the violative conduct alleged was the failure to have a complete rigging plan. Dr. Ewing's testimony focused on the information necessary for the engineer to calculate the imposed loads not the result of deviations from the plan after the engineer has certified it.

difference between how the load is transferred depending on whether the workers are tied off to the gin pole or the structure or that workers tied off to the gin pole would impose a greater load on the bridle connection.

Dr. Ewing and Mr. Ruedlinger did disagree as to how the weight of the workers is to be factored into the imposed load. Dr. Ewing testified the procedure he used is contained in “Introduction to Fall Protection,” a book published by the American Society of Civil Engineers (Tr. 317). According to that text, a fall arrest force of 5,000 pounds is used for the first person tied off to the structure (Tr. 317-18). For a second and third person tied off to the structure, the force is reduced to 20% of the 5,000-pound fall arrest force (Tr. 318).¹² The actual weight of any additional person is used if more than three people are tied off to the structure. Mr. Ruedlinger testified it is standard practice to use a weight of 300 pounds per person (Tr. 438). He conceded it would be necessary to know the number of workers on the structure to determine the imposed load of the workers (Tr. 438). Dr. Ewing assumes the workers are using a fall arrest system such that should the worker fall, he would fall away from the structure leading to a 5,000-pound force being applied to the structure at the point he reaches the end of his free fall. Mr. Ruedlinger assumes the workers are using a positioning system which would eliminate the fall arrest force because the worker does not fall away from the structure. Given Mr. Ruedlinger’s experience in the telecommunications tower industry, his testimony regarding the application of engineering principles to that industry is given greater weight. The Secretary has not met his burden to present evidence sufficient to accept Dr. Ewing’s assumption and reject Mr. Ruedlinger’s assumption.

The Secretary has established omission of information regarding the number and location of workers tied off to the structure would have an impact on the engineer’s calculation of the imposed loads. The Secretary has failed to establish this omission created a significant risk of overloading the rigging components. Mr. Ruedlinger testified, in the field of engineering, “a load increase of less than five percent” is deemed insignificant (Tr. 383). This testimony was un rebutted. The Secretary has the burden to establish the imposed load of the workers tied off to the gin pole would increase the overall imposed load beyond five percent. In his testimony, Dr. Ewing did not explain what the additional imposed load would be assuming either the fall arrest

¹² In his report, Dr. Ewing refers to ANSI/ASSE A10.48, § 6.5.2 (Exh. C-10 at p. 32) which requires “Anchorages specified in a fall protection plan shall have a strength requirement of 5,000 lbs. or for an engineered anchor 3,600 lbs. per employee attached.” (Exh. R-7 at p. 25).

force or 300 pounds per person. Dr. Ewing's testimony made clear performing this calculation required a certain "skill set." (Tr. 268) Without this testimony, the Secretary cannot meet his burden to establish a significant risk of overloading.¹³

Based upon the foregoing, I find the Secretary has not met his burden to establish Tower King's failure to provide the identified information to Stainless for its engineering review of the rigging plan exposed Tower King employees to a hazard.¹⁴

Assuming the Secretary could meet his burden to establish the hazard of overloading, the record fails to establish Tower King or the industry recognized the failure to provide the identified information as a hazard.

Whether the Activity or Condition was a Recognized Hazard

It is undisputed Tower King and the telecommunications tower industry recognize the hazard posed by overloading either the structure or the rigging components. To sustain a general duty clause violation, it is not enough for the Secretary to simply identify a hazardous aspect of the work of an employer or its industry.

Obviously, some industrial activities are by the very nature dangerous. To permit the normal activities in such an industry to be defined as a "recognized hazard" within the meaning of section 5(a)(1) is to eliminate an element of the Secretary's burden of proof and, in fact, almost to prove the Secretary's case by definition, since under such a formula the employer can never free the workplace of inherent risks incident to the business. To respect Congress' intent, hazards must be defined in a way that appraises the employer of its obligations, and identifies conditions or practices over which the employer can reasonably be expected to exercise control.

Pelron Corp., 12 BNA OSHC 1833, 1835 (No. 82-388, 1986), *citing Davey Tree*, 11 BNA OSHC 1898, 1899 (No. 77-2350, 1984). The Secretary must show the condition he identified as creating the hazard is recognized by the cited employer or the employer's industry as hazardous.

¹³ Assuming the fall arrest force is the correct weight to include in calculations, there is no evidence in the record explaining how that seemingly significant additional weight factors into the calculation of the imposed loads. As made clear in Dr. Ewing's report, it is not simply a matter of adding the additional weight. The Secretary has the burden of proof on this issue on which the record is silent.

¹⁴ There is some overlap of the alleged hazard and the proposed abatement in this case. The Secretary has defined the hazard as an incomplete rigging plan and identified those aspects of Tower King's plan that were deficient. It is well recognized the general duty clause is limited to those hazards that are preventable. *National Realty & Construction Co. v. OSHRC*, 489 F.2d 1257, 1266 (D.C. Cir. 1973). To meet this requirement, it is necessary to define the hazard in terms of those elements of the rigging plan that were inaccurate or missing. Were the hazard more broadly defined, for reasons articulated herein, he could not meet his burden to establish feasible abatement existed that would materially reduce the hazard because the evidence establishes the Stainless engineer could have made accurate calculations of the imposed loads with the information provided by Tower King.

Id. In his post-hearing brief, the Secretary defines the condition creating a hazard as “working without a complete rigging plan” which can result in the overloading of the rigging components or the structure. (Complainant’s Post-Hearing Brief at p. 6). He then identifies the deficiencies in Tower King’s rigging plan or how it was incomplete. To meet his burden in this case, the Secretary would need to establish either Tower King or the telecommunications tower industry recognized these deficiencies posed a hazard.¹⁵ The Secretary has not met that burden.

The Secretary presented no evidence Tower King recognized the deficiencies in its rigging plan submitted to Stainless posed a hazard. Mr. Barber testified he hired Stainless to determine whether the tower could support the loads Tower King would be imposing on it as a result of the construction project (Tr. 53). He understood for the engineer to perform those calculations, Tower King would need to specify what “you’re going to use...what hoist, what gin pole, and where you’re attaching it, and where you’re putting your base blocks and your gin pole, and what you’re lifting” and he had supplied that information (Tr. 53-54). Mr. Barber and the Stainless engineer exchanged emails to clarify certain details of the planned work and the equipment. Nowhere in any of those emails did the Stainless engineer suggest he needed the information the Secretary identified as missing to perform his calculations.

Nor has the Secretary presented compelling evidence the industry recognized the plan Tower King submitted to Stainless was deficient. The Secretary presented no testimony from industry representatives or any individual with background in the telecommunications tower industry regarding what is generally understood to constitute a complete rigging plan. Although providing a definition, neither ANSI/ASSE A10.48 nor ANSI/TIA 322 specifies the required contents of a rigging plan. Section 4.8.5 of ANSI/ASSE A10.48 identifies “rigging plan considerations.” (Exh. C-10 at p. 25). They are

- a) Operational and non-operational construction loads.
- b) Construction equipment.
- c) Supporting structure.
- d) Construction sequence and duration.
- e) Required load testing and field monitoring.

¹⁵ The Secretary did not argue Tower King or the telecommunications tower industry recognized the hazard posed by an incomplete rigging plan. He argued he had established employer and industry recognition of an overloading hazard. This was an incorrect formulation of his burden of proof.

(Exh. C-10 at p. 26). In § 4.8.6, ANSI/ASSE A10.48 identifies “data” the contractor “shall” consider when completing a rigging plan (Exh. C-10 at p. 26). ANSI/ASSE A10.48 also contains a rigging plan template at Appendix A-4(d) (Exh. C-10 at pp. 79-82). ANSI/TIA 322 contains a list of information the engineer is required to obtain from the rigging plan at § 2.2.1 (Exh. R-4 at p. 15). This list is nearly identical to the list of rigging plan considerations in ANSI/ASSE A10.48 § 4.8.5, save for the addition of information for the “[t]ype of temporary guy connection” and “[r]igging anchorage loads to the structure or foundation.” (Exh. R-4 at p. 15) Although these consensus standards provide a guideline, they lack the specificity necessary to establish industry recognition of the specific conditions identified by the Secretary as creating an overloading hazard. Without more, the Secretary cannot meet his burden of proof.

The record contains testimony from Tower King’s expert supporting its contention the rigging plan submitted to Stainless was consistent with industry custom and practice and, consequently, would not be recognized as deficient by a conscientious safety expert familiar with the industry. *See Arcadian Corp.*, 20 BNA OSHC 2001, 2011 (No. 93-0628, 2004). Mr. Ruedlinger testified the final document contained in Exhibit R-15 was a complete rigging plan (Tr. 364, 372). He testified Stainless had been provided sufficient information to properly calculate the imposed loads (Tr. 368). In his opinion Tower King provided sufficient information regarding attachment points for the gin pole (Tr. 372). He testified it is not customary, feasible, or necessary to include fall arrest attachment points in a rigging plan (Tr. 372).¹⁶ The Secretary presented no testimony from an individual familiar with the industry in rebuttal to this testimony.

The only testimony presented by the Secretary by an individual with industry experience was Greg Fehrman, vice president of field operations for FDH Infrastructure Services, the parent of Stainless (Tr. 128-29). Mr. Fehrman testified the procedure followed for this project deviated from the procedures Stainless typically follows when providing an engineer review under ANSI/TIA 322 (Tr. 150-51). He testified Stainless receives from the contractor the calculated imposed loads (Tr. 150). Stainlesses role is then to ensure the structure can support those loads (Tr. 150). In this case, Stainless chose to calculate those loads itself to “speed the process along”

¹⁶ The Secretary did not identify where ANSI/ASSE A10.48 or ANSI/TIA-322 state a rigging plan should contain information regarding attachment points for fall protection. The definitions of operational load and non-operational load do not specifically include the load imposed by workers and the rigging plan template at Appendix A-4(d) of ANSI/ASSE A10.48 does not include a space for information regarding worker tie off locations.

and because they had the ability to do so in-house (Tr. 151). Notably, he did not testify Tower King failed to provide any information necessary to make these calculations. This testimony, limited to the procedures of one company, does not directly rebut Mr. Ruedlinger's testimony regarding the industry as a whole.

The Secretary has failed to meet his burden to establish Tower King failed to render its workplace free of a hazard recognized by Tower King or the telecommunications tower industry. He has failed to meet his burden to establish Tower King violated the general duty clause. The citation is accordingly vacated.

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:

Item 1, Citation 1, is vacated.

/s/ _____

Date: July 17, 2019

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