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

SECRETARY OF LABOR, Complainant, v. FRANCIS J. PALO, INC., Respondent.	OSHRC DOCKET NO. 15-2239

Appearances:
Oscar L. Hampton III, Esq., Regional Solicitor, Jennifer L. Gold., Office of the Regional Solicitor, Philadelphia, PA
For the Complainant

Jon Hogue, Esq., Michelle Smith, Esq., Murray, Hogue & Lannis, Pittsburgh, PA
For the Respondent

Before: Carol A. Baumerich
Administrative Law Judge

DECISION AND ORDER

Francis J. Palo, Inc. (Palo or Respondent) was the general contractor for a demolition and reconstruction project along State Route 219 in Ridgway, Pennsylvania. On June 18, 2015, multiple injuries occurred when a bridge that was part of this project partially collapsed. The Pennsylvania Emergency Management Agency (PEMA) notified the Occupational Safety and Health Administration (OSHA) of the collapse on June 19, 2015. OSHA sent Jennifer Harencame, a compliance health and safety officer (CO), to inspect the worksite that day and again about a week later on June 24, 2015. As a result of the inspection, a Citation and

Notification of Penalty (Citation) alleging a violation of 29 C.F.R. § 1926.856(a) because working surfaces were not of sufficient strength to support the imposed load of mechanical equipment and proposing a $4,900.00 penalty, was issued.[1] (Jt. Ex. 1.)

Palo timely contested the Citation, bringing the matter before the Occupational Safety and Health Review Commission (Commission) pursuant to section 10(c) of the Occupational Safety and Health Act of 1970, 29 U.S.C. §§ 651-678 (the Act). A hearing was held in Pittsburgh, Pennsylvania, on September 7th, 8th and 9th 2016. Both parties filed post-hearing briefs. For the following reasons, the Citation is affirmed and a $4,900 penalty is assessed.

JURISDICTION

Palo is an employer engaged in a business affecting interstate commerce within the meaning of section 3(5) of the Act. (Stip.1-4; Answer, ¶2; Tr. 9-10.)[2] Based upon the parties' stipulations and the record, Palo is a covered business and the Commission has jurisdiction.

BACKGROUND

Palo was selected by the Pennsylvania Department of Transportation (PennDOT) as the general contractor for a project to partially demolish and reconstruct the Pennsy Bridge (Bridge). (Stip. 10-12; Jt. Exs. 5, 7, 9.) The Bridge had two lanes (one northbound, one southbound) and a sidewalk on each side. (Stip. 10-12; Gov. Ex. 4.) It crossed the Elk Creek in Ridgway, Pennsylvania. *Id.*

[1] As issued, the Citation also alleged a violation of 29 C.F.R. § 1926.850(a), but this item was subsequently withdrawn and is vacated. Thus, only the violation of 29 C.F.R. § 1926.856(a) was tried. (Jt. Ex. 1; Complaint ¶ IX.)

[2] The parties' stipulated facts are set forth in Joint Exhibit 16.

As initially constructed in 1912, the Bridge had beams spanning in the north/south direction. The beams ran along the length of the Bridge and were fixed into abutments at each end. (Tr. 516.) Just above the abutments, the beams were interconnected through diaphragms at each end. (Tr. 303, 497-98, 515-517, 547.) The beams were cast in place concrete, in the shape of an arch, with the center of each beam about two to three feet shallower than the ends. (Tr. 497-99, 504.) Visually, the Bridge structure was apparent as a cast in place, rigid, fixed beam, arch bridge. (Jt. Ex. 6 at 1; Gov. Ex. 3 at 88; Tr. 497-99, 517, 567, 579-80.) Because of this structure, the Bridge's strength was at the ends of the beams, not at the center of the span. (Tr. 516, 498-99.)

Palo began working at the site in March 2015 and expected the work to continue for approximately eight months. (Stip. 13-14.) The worksite included workers from several entities. Palo retained various subcontractors, including Allegheny Diamond Service (ADS) to help with the project. (Stip. 31; Jt. Ex. 11; Tr. 144-45.) ADS provided saw cutting services and was directed by Palo to cut away those components of the Bridge that were being removed from the portions of the Bridge that were to remain. (Jt. Ex. 11; Tr. 145, 254.) PennDOT had an employee at the worksite and retained the engineering firm of Erdman Anthony to inspect the worksite on its behalf. (Stip. 30; Jt. Ex. 2 at 2-3; Tr. 39, 76-84, 329-30, 418-22.) However, as the general contractor, Palo oversaw the work being done and had responsibility for worksite safety. (Stip. 18-19; Tr. 110-11, 146, 325-27, 444-45.) Its superintendent was responsible for the safety of Palo's work crew. (Stip. 18-19; Jt. Exs. 17-19.)

The work proceeded according to a demolition plan prepared by Palo and accepted by PennDOT. (Stip. 12; Jt. Exs. 2, 10; Tr. 90-91, 146, 250.) The Bridge was to be partially demolished and rebuilt in phases. (Jt. Ex. 10.) The demolition plan called for the Bridge to be

demolished by cutting the concrete away from the supporting abutments on both sides. (Stip. 31; Jt. Exs. 11, 15; Gov. Ex. 3; Tr. 254-55, 388-402.) A longitudinal cut down the center of the Bridge roadway deck was made, separating the north side from the south side. (Gov. Ex. 3; Tr. 63-64, 175, 500, 505.) This enabled the southbound traffic lane to remain open during the partial demolition and reconstruction of the Bridge's north side. (Tr. 300, 607-08.) After this initial cut, workers focused on demolishing the north side of the Bridge by cutting the supporting abutments at each end. (Jt. Ex. 15; Tr. 388-393, 395, 425, 500.)

While this cutting work on the north side was ongoing, on June 16, 2015, a large piece of mechanical equipment, specifically Palo's CAT excavator (CAT), was delivered to the worksite and moved onto the Bridge.[3] (Stip. 15, 20-22, 31; Jt. Ex. 15; Gov. Ex. 4; Tr. 391.) On that day and the following day, Palo used this mechanical equipment to remove rubble created by the demolition process from the Bridge's deck. (Stip. 15, 20-21, 23-26, 31; Tr. 155, 391-92, 399-401.) The CAT weighed over 90,000 pounds. (Stip. 21; Gov. Ex. 7; Tr. 306-8, 374, 385-402.)

On June 18th, Palo had the CAT parked on the section of the closed northbound traffic lane. (Stip. 25, 28; Gov. Exs. 3-4; Resp't Ex. 15.) By this time, employees of Palo's subcontractor, ADS, had already made several cuts to the supporting abutments beneath the Bridge's deck and were continuing their work. (Stip. 20, 31; Jt. Ex. 15; Tr. 255, 388-90.) Horizontal cuts to the Bridge abutments at each end of the northbound lane were complete. (Tr. 62, 366, 389, 427, 449, 500, 528.) One of the abutments also had been vertically cut and vertical cuts to the second north lane abutment were in progress. (Stip. 31; Jt. Ex. 15; Tr. 71, 255, 388-

[3] The undersigned notes that Respondent's Brief appears to mistakenly state that some pre-collapse events occurred in "July," rather than June. (Resp't Br. at 32.) The Citation refers to events "on or about June 19, 2015," and the undersigned relied on the stipulations and other record evidence rather than the dates in the briefs.

89, 394, 528-29.) At one point, Palo's superintendent noticed that the Bridge deck on the north side was lower than it had previously been. (Stip. 8; Jt. Ex. 15; Tr. 436-37.) At that time, the superintendent and Erdman Anthony's employee were standing on the Bridge's deck. (Stip. 29, 30; Tr. 39, 395, 436.) The superintendent told the employee of Erdman Anthony to get off the Bridge and tried to warn the ADS employees, who were working underneath the Bridge, but there was not enough time and the north side of the Bridge collapsed into the creek below. (Jt. Ex. 15; Gov. Ex. 4; Tr. 395, 436-37.) The two workers on the Bridge's deck and the CAT fell as the Bridge collapsed. (Stip. 28-30; Gov. Ex. 3.) Palo's superintendent, the Erdman Anthony employee, as well as two other workers directly employed by ADS, suffered injuries as a result of the collapse. (Stip. 7, 28-31, Jt. Ex. 15; Tr. 38-40; 396-97.)

The next day PEMA notified OSHA of the incident and OSHA commenced an investigation. This investigation led to a Citation for allegedly violating 29 C.F.R. § 1926.856(a) by parking the CAT on the Bridge "without ensuring the bridge had sufficient strength to support the additional load." (Jt. Ex. 1.)

DISCUSSION

To establish a violation of any OSHA standard, the Secretary must prove that: (1) the cited standard applies; (2) its terms were violated; (3) employees were exposed to the violative condition; and (4) the employer knew or could have known with the exercise of reasonable diligence of the violative condition. *See Astra Pharm. Prods., Inc*., 9 BNA OSHC 2126, 2129 (No. 78-6247, 1981), *aff'd in pertinent part*, 681 F.2d 69 (1st Cir. 1982). The Secretary has the burden of proving each of these elements by a preponderance of the evidence. *Id*.

The cited standard, 29 C.F.R. § 1926.856(a), specifies that: "[m]echanical equipment shall not be used on floors or working surfaces unless such floors or surfaces are of sufficient

strength to support the imposed load." 29 C.F.R. § 1926.856(a). The Secretary alleges that Palo violated this standard by placing the CAT on a working surface without determining whether the Bridge could withstand its weight. (Jt. Ex. 1.)

Respondent does not contest the standard's applicability, the fact that the working surface collapsed, or that there was exposure to the violative condition. It does, however, claim it lacked actual or constructive knowledge that the Bridge could not support the imposed load. (Resp't Br. at 55-58.)

Applicability & Violation

Palo provides demolition and construction services to various entities. (Stip. 1, 2.) Its work on the Bridge constitutes construction work within the meaning of Part 1926. *See e.g., Fabi Constr. Co. v. Sec'y of Labor*, 370 F.3d 29, 34 (D.C. Cir. 2004) (construction work includes demolition work); *Morrison-Knudsen Co*., 16 BNA OSHC 1105, 1132 (No. 88-572, 1993) (affirming violations of Part 1926 standards at a bridge demolition site).

Since it was engaged in construction work, Palo needed to comply with the requirements of the cited standard, 29 C.F.R. § 1926.856(a). This standard precludes the use of mechanical equipment on a working surface "unless" such surface has sufficient strength to support the weight (or load) of the equipment. 29 C.F.R. § 1926.856(a). The use of "unless" signals that the standard presumes a hazard. *See Cent. Fla. Equip. Rentals, Inc*., 25 BNA OSHC 2147, 2152 (No. 08-1656, 2016).

Therefore, to prove a violation the Secretary needed to show that mechanical equipment was used on a working surface. 29 C.F.R. § 1926.856(a). If that is established, the burden then shifts to Respondent to show that the working surface was of sufficient strength to support the

load.[4] *Cent. Fla*., 25 BNA OSHC at 2152; *Bardav, Inc*., 24 BNA OSHC 2105, 2107-8 (No. 10-1055, 2014) (noting that "party claiming the benefit of an exception bears the burden of proving that its case falls within that exception," and finding that the respondent did not satisfy that burden); *C.J. Hughes Constr., Inc*., 17 BNA OSHC 1753, 1756 (No. 93-3177, 1996) (noting the same rule).

There is no dispute that the Bridge's deck constituted a "working surface" within the meaning of the cited standard. Palo employees operated the CAT on the deck, using it to remove debris from the demolition process. (Stip. 24, 26; Jt. Ex. 15; Tr. 399-401.) *See* 29 C.F.R. § 1926.500 (defining "walking/working surface" to include any surface "on which an employee walks or works"). The CAT was moved onto the side of the Bridge being demolished at the direction of Palo's employee and it remained on the Bridge while at least one employee worked nearby and subcontractors worked beneath the deck. (Stip. 23-26, 29; Gov. Ex. 4.) This shows that the Bridge was a "working surface," within the meaning of the cited standard.

Similarly, there is agreement that the CAT was a piece of mechanical equipment that Palo used in the days preceding the collapse. (Stip. 21-23, 28; Tr. 155, 399-401.) The CAT was delivered to the worksite and Palo's superintendent directed that it be moved onto the Bridge. (Stip. 22-23; Jt. Ex. 15.) Once on the Bridge, it was used to remove material resulting from the demolition work being done. (Stip. 24, 26; Tr. 399-401.)

[4] The presumption of a hazard distinguishes the burden of proof in this matter from two cases Respondent cites, *Walden Healthcare Ctr.*, 16 BNA OSHC 1052 (No. 89-3097, 1993) and an un-precedential ALJ decision, *Crowley Am. Transport, Inc*., No. 97-1231, 1999 WL 603912 (O.S.H.R.C.A.L.J. July 29, 1999). (Resp't Br. at 71.) Those cases involved citations under the general duty clause which, unlike the specific standard at issue here, does not tell employers the actions it must take. *Compare* 29 U.S.C. § 654(a)(1) (the general duty clause) *with* 29 C.F.R. § 1926.856(a) (the cited standard). *See also Cent. Fla.*, 25 BNA OSHC at 2152-53 (finding that the standard at issue presumed a hazard).

As to whether the exception was established, there is no evidence that the Bridge, having been altered as a result of the demolition process, had sufficient strength to support the weight (or load) of the mechanical equipment referred to in the Citation, i.e. the CAT. (Jt. Ex. 1; Tr. 517, 534.) Mr. Ayub, a licensed professional engineer with a Master's degree in Civil Engineering, who has investigated multiple bridge collapses, was offered and accepted, without objection, as an expert in structural engineering.[5] (Tr. 476, 488, 491-92.) He explained that the demolition process weakened the Bridge's ability to hold the CAT's weight. (Gov. Exs. 14-15; Tr. 514-18, 527-35.)

According to Mr. Ayub, a visual inspection of the Bridge's shape immediately indicated that it was a cast in place, arched, rigid frame beam bridge. (Tr. 497-99, 517-18, 567, 579-80.) The arched shape was a structural component. (Tr. 567-68, 665.) Looking at the Bridge, it was apparent that the center of each curved beam was shallow. (Tr. 516-17.) The beam ends were deeper and supported by the diaphragm and abutment. *Id.* The beams were interconnected through the end diaphragms, which, in turn, connected to the abutments. (Tr. 515-16, 579-80.)

[5] Mr. Ayub's testimony was very helpful. His testimony and expert opinion are given great weight.

Respondent notes that Mr. Ayub is licensed in Maryland and had not investigated a bridge collapse in Pennsylvania before. (Resp't Br. at 48; Tr. 48.) The undersigned finds that these facts in no way undermine his testimony. Respondent points to nothing about why the Bridge's location in one state or another would impact the engineering principles Mr. Ayub discussed. As Palo's vice president Mark Schaffer noted, the laws of gravity do not change. (Tr. 616.) Nor did Respondent set forth any evidence that the licensing laws of Maryland and Pennsylvania differ in some material way so that only an engineer licensed in Pennsylvania would know some information that would alter the analysis. Palo's president, Paul Anthony Roman, is a civil engineer. (Stip. 5; Tr. 161-63.) He was in the courtroom throughout the hearing and yet Respondent failed to call him to rebut the testimony or indicate any deficiencies in Mr. Ayub's credentials that could have limited the strength of his analysis. (Tr. 7, 22.) *See Capeway Roofing Sys. Inc*., 20 BNA OSHC 1331, 1342-43 (No. 00-1986, 2003) (party would have provided the evidence had it been helpful).

Because of this design, the beam strength was not at the center of the span but at the ends. *Id.* When a load was imposed on the Bridge, the load path went to the end of the beam where the strength was. (Tr. 497-99, 515-17, 540, 547, 665-67).

The horizontal and vertical cutting work at the Bridge supporting ends, including the abutment, diaphragm, and beams, changed the Bridge's structural behavior from a fixed rigid frame bridge to a simple span bridge. (Gov. Exs. 14, 15; Tr. 515-18, 523, 532-35, 549, 560, 565-66, 585, 598-99, 662, 667.) These structural changes compromised the Bridge's load carrying capacity. *Id.* As a simple span, it was no longer strong enough to support loads placed on the deck. *Id.* Unlike a fixed rigid frame bridge, a simple span has a hinged connection at each end, not a fixed connection. (Gov. Ex. 4; Tr. 560, 564.) As such, a simple span bridge does not continue to distribute loads into the abutments. (Tr. 515-18, 667.)

The fact that the cutting work changed the source of the Bridge's strength and prevented it from being able to redistribute loads was not surprising. Mr. Ayub concluded that an experienced demolition and construction contractor would have understood that cutting the abutments in multiple places, as was done here, would change the structural behavior of the Bridge, and render it unable to support an excavator's load. (Tr. 255, 534.)

Respondent's Brief implies that there were inconsistencies in Mr. Ayub's testimony. (Resp't Br. at 48-54.) However, there is no dispute that the Bridge was cut down the center and that after that step, workers made horizontal and vertical cuts to the Bridge's supporting abutments. (Jt. Ex. 15; Tr. 63-68, 150-51, 156-7, 255, 346-48; Resp't Br. at 32.) These horizontal and vertical cuts to the Bridge's end supports altered the Bridge's structure and load bearing capacity. (Tr. 515.) Mr. Ayub explained how the Bridge's support mechanisms (the abutment, diaphragm, and beam) worked together. (Tr. 589-90, 595-96, 598-99.) Whether the

cut was at the juncture of three support mechanisms, or within a few inches thereof, the effect was the same. *Id.* Either action undermined the Bridge's ability to support the weight of the Bridge itself and any superimposed load. (Tr. 589-90.) Placing the heavy CAT on the Bridge after workers altered its structural integrity led to the collapse. (Gov. Ex. 14-15; Tr. 514-18, 523, 527-35, 662.)

Palo never credibly refutes Mr. Ayub's conclusions. Of the three Palo employees who testified only one had an engineering degree, Palo's president, Roman. (Stip. 5; Tr. 114.) Although he was in the courtroom, Palo's president was never offered as an expert, nor was he called to testify in rebuttal, in Respondent's defense case, after Mr. Ayub offered his expert opinion that an experienced demolition contractor would have been aware that cutting the Bridge affected its structural behavior and should not have placed the CAT on the Bridge at the time alleged in the Citation.[6] (Tr. 532-35, 664-65, 668, 672-73.) *See Capeway*, 20 BNA OSHC at 1342-43 (noting that when one party fails to present evidence within its possession it is reasonable to infer that such evidence would not help the party's case).

Palo also argues that the CAT was just parked on the Bridge and had not been used on the day of the collapse. (Resp't Br. at 32.) The Citation is for the use of mechanical equipment without ensuring that the surface had sufficient strength to support the imposed load "[o]n or about June 19, 2015 and times prior thereto." (Jt. Ex. 1.) Palo used the CAT on the Bridge the day before the collapse, as well as on another day. (Stip. 24-26; Tr. 155, 399-401.) Further, while Palo claims that the CAT was not actually operated on the day of the collapse, it was parked on the Bridge and available for use. *Id. See Well Sols., Inc.,* 15 BNA OSHC 1718, 1722

[6] Rather than recalling president Roman in its defense case, Respondent recalled Palo's vice president Schaffer, who was a long time employee but lacked a college degree or engineering license. (Tr. 257, 601; Stip. 6.)

(No. 89-1559, 1992) (finding evidence of equipment being used in the past and its availability for future use sufficient).

Palo used mechanical equipment on the Bridge and, at least as of the time alleged in the Citation, the working surface lacked sufficient strength to support its weight. The Secretary showed that the working surface was not of sufficient strength to bear the load of the mechanical equipment like the CAT and Palo never refutes this. (Gov. Ex. 4; Tr. 534-35, 660.) Thus, the cited standard applies and Palo violated it.

Exposure

There is no dispute that Palo's superintendent was standing on the Bridge when it collapsed and was exposed to the hazardous condition the standard is designed to protect against. (Stip. 7, 17, 28, 29; Jt. Ex. 15; Tr. 395.) This establishes actual exposure.[7] *See S&G Packaging, Co., LLC*, 19 BNA OSHC 1503, 1506 (No. 98-1107, 2001) (injuries establish actual exposure to the violative condition).

Knowledge

The knowledge element requires a showing that the employer knew or, with the exercise of reasonable diligence, could have known of the violative condition. *See e.g., Revoli Constr. Co.,* 19 BNA OSHC 1682, 1684 (No. 00-0315, 2001); *Conagra Flour Milling Co.*, 15 BNA OSHC 1817, 1823 (No. 88-2572, 1992) (finding knowledge when violative condition would have been discovered if employer exercised due diligence to inspect its machinery). The Secretary does not have to prove that the employer knew that the condition constituted a

[7] In addition to actual exposure, the record also shows that access to the violative condition was reasonably predictable. *See Phoenix Roofing*, 17 BNA OSHC 1076, 1079 (No. 90-2148, 1995), *aff'd*, 79 F.3d 1146 (5th Cir. 1996) (unpublished). Palo assigned between six and eight employees to the project. (Stip. 16.) There is no evidence that any of these workers were precluded from being on the Bridge while the CAT was parked there.

violation. *Id.* It is enough to show that the employer failed to engage in reasonable diligence to identify the violative condition. *See Kokosing Constr. Co.,* 21 BNA OSHC 1629, 1632 (No. 04-1665, 2006) (finding that in light of the known hazardous situation reasonable diligence required further action on the part of the employer), *aff'd*, 232 F. App'x 510 (6th Cir. 2007)(unpublished).

As noted above, Respondent disputes that the Secretary established knowledge. But, it is a narrow dispute. Palo had actual knowledge that heavy mechanical equipment was being used on a working surface.[8] (Tr. 375; Jt. Ex. 3 at 3-4.) It stipulated that: (1) the CAT was its "mechanical equipment," (2) it directed the CAT be moved onto and used on the Bridge, (3) its superintendent was on the Bridge at the same time as the CAT, and (4) the CAT was on the Bridge at the time of the collapse. (Stip. 15, 21, 23-26, 28-29.) Multiple employees knew that the CAT was delivered to the site and Palo's superintendent acknowledged that he approved it being parked on the Bridge on the day of the collapse. (Jt. Ex. 15; Tr. 399, 431.)

What is at issue is whether Palo had knowledge that the Bridge lacked sufficient strength to support the weight of the mechanical equipment being used. As a preliminary matter, it is important to note what the Secretary is not arguing. The Secretary is not suggesting that the superintendent deliberately caused the collapse or that he had actual knowledge that having the CAT on the Bridge would lead to its collapse. (Tr. 103-4.) The Secretary's contention is more

[8] The Secretary suggests that Palo's actual knowledge of the mechanical equipment's use on a working surface satisfies the knowledge element. (Sec'y Br. at 16.) Regardless of whether it was necessary to do so, for the reasons discussed herein, the Secretary has also shown that Palo could have known the Bridge lacked sufficient strength to support the weight of the mechanical equipment placed on it after the cutting work commenced. *See Cent. Fla*., 25 BNA OSHC at 2152 (finding that the employer had actual knowledge when it failed to ascertain either the clearance between an excavator and the edge of a berm or the berm's load bearing capacity relative to the excavator's weight).

narrow—namely, that Palo failed to engage in reasonable diligence to determine whether the Bridge could withstand the CAT's weight after the abutments were cut. (Sec'y Br. at 17.)

And, on this issue, the distance between the parties is small. Palo concedes that the CAT was moved onto the Bridge and used to move material. (Stip. 23, 25-26; Tr. 392.) It acknowledges that it knew that the CAT was a heavy piece of equipment and that its weight was an important factor to consider when deciding whether to put it on a bridge.[9] (Resp't Br. at 70 n. 11; Tr. 374.) Palo also acknowledges that it took no specific actions to determine whether the Bridge would be able to continue to support the excavator's weight after it was cut multiple times, including through both supporting abutments. (Tr. 74, 154-57, 255, 260-61, 402.)

But, Palo argues that this is not enough to establish knowledge because: (1) it reviewed information PennDOT provided as part of the bidding process, (2) it "inspected" the Bridge, (3) the work proceeded according to a demolition plan, and (4) it was an experienced contractor. (Resp't Br. at 56-72.) The Secretary responds that neither the information from PennDOT nor the information Palo provided to PennDOT shows that it was reasonable for Palo to conclude that a forty ton excavator could be used on the Bridge at the time alleged in the Citation. (Sec'y Br. at 17-18.) According to the Secretary, a reasonably diligent contractor would have obtained more information about whether the Bridge could support the equipment's load after the cutting work began before it moved the CAT onto the Bridge. *Id.*

First, with respect to the information Palo reviewed, PennDOT informed bidding contractors, that the Bridge was over 100 years old and that there were no actual structural drawings for it. (Jt. Ex. 5; Tr. 124-28, 181, 237, 359.) It directly cautioned contractors to verify

[9] The CAT was a large piece of equipment and took up a notable portion of the work area. (Gov. Ex. 4; R. Ex. 15.)

the information provided. (Jt. Ex. 5 at 174; Tr. 236-38, 359-60.) PennDOT had not assigned the Bridge a specific weight limit before the project began and nothing in PennDOT's documentation specified that the Bridge could withstand a piece of mechanical equipment, weighing in excess of forty tons, being used or parked on it, particularly after the cutting work began. (Tr. 124-28.) Therefore, the contention that reviewing the information from PennDOT supported Palo's decision or constituted reasonable diligence is rejected.

Second, as to whether Palo's inspection was sufficient, while Palo conducted a pre-bid site visit and prepared a demolition plan, the record establishes that had this work been done in a reasonably diligent manner, it would have alerted the employer to question the Bridge's ability to withstand the CAT's weight after the cutting work began. (Tr. 518, 567, 668.) Before submitting a bid to PennDOT for the Bridge's demolition, Palo's vice president Schaffer, an experienced employee but not an engineer, conducted a site visit for Palo.[10] (Stip. 9; Jt. Exs. 6-7; Tr. 115, 231, 257.) During this site visit, he took photographs, wrote down a few bullet points on the back of other documents, and made a rudimentary sketch of the Bridge. (Jt. Exs. 6, 7; Gov. Ex. 9 at 11; Tr. 231, 331, 333-44.) Mr. Schaffer referred to his site visit as an "engineering survey," but he is not an engineer and his collection of notes included only a few measurements and very limited information. (Jt. Ex. 7; Tr. 240, 296.) No engineer signed or sealed the notes and Palo employees acknowledged that there was no engineering analysis prepared by an engineer. (Jt. Ex. 7; Gov. Ex. 9; Tr. 73, 154, 260-61.) Mr. Schaffer's notes do not reference the mechanical equipment Palo planned to use, nor do they contain any analysis about the Bridge's weight bearing capacity. (Stip. 9; Jt. Ex. 7.) Nor, as Palo acknowledges, is there any other documentation showing any analysis (engineering or otherwise) supporting Palo's conclusion

[10] He was the only employee who visited the site before the bid was awarded. (Tr. 120, 250.)

that the Bridge could withstand the CAT's weight after the supporting abutments were cut. (Tr. 74, 156.)

Third, regarding Palo's work allegedly proceeding according to plan, after the site visit, Palo created a demolition plan that PennDOT accepted.[11] (Jt. Ex. 10; Tr. 111, 154, 192.) This fact does not show that Palo's actions were reasonable. The demolition plan does not discuss using the CAT on top of the Bridge at any time, let alone it being there after multiple cuts had been made to both abutments.[12] (Jt. Ex. 10 at 3; Tr. 149, 255, 260-61, 364-65.) As Palo prepared to commence work at the site, it did not request any additional information, such as inspection reports, from PennDOT to ascertain the Bridge's structure and strength. (Tr. 140-41, 246, 249.) It did not go back and expand or formalize the notes Mr. Schaffer took during his site

[11] The CO's inspection report includes a few notes about her conversations with PennDOT employees. (Jt. Ex. 2 at 7.) This document indicates that one PennDOT employee said he did not think the demolition plan was correct for this job and another acknowledged that he had not read it. *Id.* Neither of these individuals was called to testify. These statements do not address the reasonableness of Palo's diligence and are given little weight. *See Morrison-Knudsen*, Inc., 13 BNA OSHC 1121, 1126 (No. 80-345, 1987) (taking into account the fact that the testimony was hearsay when deciding what weight to accord it).

[12] The demolition plan did specify that: "[a]t no time during the demolition process will men or equipment work on or from the component being demolished." (Jt. Ex. 10 at 3; Tr. 252, 365.)

visit. Nor did it prepare an engineering survey or retain an outside engineer to do so.[13] (Tr. 73-74, 154, 260-61, 402.) *See Kokosing*, 21 BNA OSHC at 1632 (finding that employer could have known that conditions presented a hazard).

Respondent's brief suggests that Palo's proposed demolition was "under the engineering seal of McCormick Taylor" and "also under the review engineering seal" of Erdman Anthony. (Resp't Br. at 23, 31, 56-57.) The record is not so clear. PennDOT's project proposal includes a drawing of the "existing structure data" (i.e., as of December 15, 2014) that indicates McCormick Taylor, Inc. (McCormick) prepared it. (Jt. Ex. 5 at 173; Tr. 34, 234-36.) The same drawing also has a stamp indicating that a representative of Erdman Anthony conducted a "design review" of McCormick's drawing of the existing structure. (Jt. Ex. 5.) Contrary to Palo's assertion, the document does not show that anyone from either of these firms approved of how Palo was going to conduct the demolition or that the Bridge could support the CAT's weight after being cut multiple times. *Id.* In fact, the drawing specifies that "the information shown on the plans for the existing bridge is not part of the plans, proposal or contract," and advises that no

[13] In noting the constructive knowledge test, Respondent cites the inapposite *Milliken & Co*., 14 BNA OSHC 2079 (No. 84-767, 1991). (Resp't Br. at 55 n. 3.) In *Milliken*, the employer engaged in air monitoring before concluding that further action was unnecessary. 14 BNA OSHC at 2083. It was not attempting to rely on experience and third party information for its conclusions. *Id.* Not only did Palo fail to engage in the same level of analytical work as the employer in *Milliken* did, the standards at issue also differ in critical respects. As noted above, 29 C.F.R. § 1926.856(a) precludes employers from using mechanical equipment on working surfaces "unless" the employer can show that the surface is of sufficient strength to bear the equipment's weight. The Commission clarified that these types of standards require the employer to take action unless the employer can show that the precaution the standard prescribes is unnecessary. *See Odyssey Capital Grp. III, LP*, 19 BNA OSHC 1252, 1255 (No. 98-1745, 2000) (distinguishing the standard at issue in *Milliken* from standards that include exceptions preceded by the word "unless"), *aff'd*, 26 F. App'x 5 (D.C. Cir. 2001)(unpublished); *Cent. Fla.,* 25 BNA OSHC at 2152 (upholding a violation of 29 C.F.R. § 1926.606(a)(3)(1) when an employer failed to obtain enough information about a berm's ability to support the weight of equipment).

one should "consider any of the data on the existing structure supplied … as positive representations of the conditions that you will encounter."[14] (Jt. Ex. 5 at 174; Tr. 234-26.) Nor does it refer to the placement of a forty ton excavator on the working surface after cuts have been made to the supports, let alone indicate that such an action would be appropriate.[15] *Id*. No one from Erdman Anthony, McCormick, or PennDOT testified and the document Palo relies on does not reflect approval of Palo's decision to place heavy mechanical equipment on the Bridge after the cutting of the supporting abutments began.[16] *Id.* Thus, the record lacks sufficient evidence from which it can be concluded that anyone else involved with the project agreed with Palo's

[14] Mr. Schaffer acknowledged that he reviewed this page before submitting the bid for the project. (Tr. 237, 268, 273.) In addition, in its contract with PennDOT, Palo warranted that it "had sufficient time to examine and has examined the site of the contract work to ascertain for itself those conditions such as may be determined by inspection, investigation, and inquiry, including the location, accessibility, and general character of the site." (Jt. Ex. 9 at 3.) As Mr. Ayub explained the Bridge could be identified upon visual inspection as an arched shaped bridge. (Tr. 498-99.) And an experienced demolition and construction contractor should have understood that cutting the abutments in multiple places, would change the Bridge's structural behavior and ability to bear weight. (Tr. 255, 534.)

[15] The drawing does note that pneumatic hammers weighing more than thirty pounds should not be used. (Jt. Ex. 5 at 174.)

[16] The CO's inspection report includes a few notes about conversations with PennDOT employees and a representative of Erdman Anthony. (Jt. Ex. 2 at 7.) The notes indicate that one PennDOT employee and the Erdman Anthony employee knew the excavator was on the Bridge. *Id.* There is no indication that they knew Palo had no documentation showing any analysis (engineering or otherwise) that the Bridge could withstand the CAT's weight. *Id.* Because there is no claim that these individuals were unavailable to testify, the hearsay statements in the report are not persuasive, particularly because the basis of the conclusions represented is unknown. *See Morrison-Knudsen*, 13 BNA OSHC at 1126 (taking into account the fact that the testimony was hearsay when deciding what weight to accord it).

Similarly, the superintendent's vague testimony regarding his general comments to the PennDOT and Erdman Anthony employees regarding the excavator's use during the demolition work is given little weight. (Tr. 423-24.) There is no claim that PennDOT or Erdman Anthony was responsible for site safety—Palo acknowledges that it had responsibility for site safety, including the safety of its own employees. (Stip. 18-19; Jt. Exs. 17-19; Tr. 146, 325-27, 444-45.)

assertion that it engaged in reasonable diligence or made a reasonable determination in deciding to move and leave the CAT on the Bridge after the cutting began. *See Capeway,* 20 BNA OSHC at 1342-43. Respondent's reliance on the drawings provided by PennDOT and its own demolition plan does not justify its failure to ascertain whether the working surface of the Bridge could withstand the CAT's load after the demolition saw cuts were made.

Fourth, as for experience, Palo's reliance on the experience of certain employees did not make up for its failure to obtain sufficient information about the ability of the working surface to sustain the weight of heavy equipment throughout the project. (Gov. Ex. 9 at 12; Tr. 74, 154, 156-57, 668.) Vice president Schaffer's experience mirrored that of the company as a whole, in that the vast majority of bridge demolition projects he worked on involved bridges of a different structure than the one that collapsed.[17] (Gov. Ex. 9 at 9; Tr. 136-37, 255-56, 363.) Unlike most of Palo's past projects, the load capacity of this cast in place, rigid, fixed beam, arched shaped Bridge changed early in the cutting process with the horizontal and vertical cuts to the supporting abutments. (Tr. 515-17.) Mr. Schaffer and the superintendent both had limited work experience with bridges of this type and neither had the educational background of a professional engineer.[18] (Tr. 255, 257, 353, 363.) Despite this lack of experience with rigid, fixed beam, arch-shaped bridges, Mr. Schaffer and the superintendent both indicated that other than relying on their experience, they did not take any specific action to ensure that the Bridge would be able to

[17] Because of this gap in their background, it is plausible that neither the superintendent nor Mr. Schaffer personally apprehended the impact the cutting work was having on this Bridge's load bearing properties.

[18] Mr. Schaffer acknowledged that it did not mean anything to him that he could not confirm that the Bridge had a rigid frame. (Tr. 295.)

support the CAT's weight after it was cut multiple times through both supporting abutments. (Tr. 154-7, 260-61, 402.)

The CAT's presence on the Bridge was known throughout Palo. Mr. Schaffer knew that an excavator was going to be used and the site superintendent kept other Palo employees informed of the work's progress by uploading daily work reports into a shared system. (Jt. Exs. 3, 15; Tr. 306-7, 385.) The superintendent's entry from two days before the collapse notes the CAT's arrival and provides updates on the cutting work.[19] (Jt. Ex. 15.) So, even if neither Mr. Schaffer nor the superintendent had actual knowledge that the Bridge was no longer of sufficient strength to support the imposed load, other employees or an outside engineer could have known this.

Mr. Ayub explained that a walk over and under the Bridge would have confirmed its structural type as having arched beams. (Jt. Ex. 6; Resp't Ex. 12; Tr. 499, 517, 567, 579-80.) The shape of the Bridge made it visually immediately identifiable to an experienced contractor as a cast-in-place rigid, fixed beam, arched bridge. (Tr. 343, 361-62, 496-99, 518.) He did not believe that the Bridge could be mistaken for other types of bridges because it would have been "obvious" to any demolition contractor that multiple cuttings to the supporting abutments would

[19] There were entries for every day of the project except the day before the collapse and July 3, 2015. (Jt. Ex. 15; Tr. 392, 452, 458.)

change the Bridge's structural behavior and make it unable to support the imposed load.[20] (Tr. 518, 567.)

Palo claims that it thought there was more rebar supporting the Bridge and that it was only later that it learned how little there was. (Resp't Br. at 38-40.) Mr. Ayub convincingly countered this argument explaining that the narrowness of the arches should have alerted a reasonably diligent person that there could not possibly be enough rebar to continue to sustain the same weight after the abutments were cut. (Tr. 662-63.) Further, the beam was simply not big enough to accommodate a large amount of rebar.[21] (Tr. 662-63, 669.)

Likewise, even if Palo thought that the arches underneath the Bridge's deck were decorative, had it engaged in reasonable diligence, it would have known otherwise. (Tr. 610, 665-66.) Mr. Ayub explained that the arch's role as a structural component could be surmised from a visual inspection. (Tr. 665-66.) In fact, in his experience, whenever he saw an arch attached to a single beam, as was the case here, the arch was always a structural component,

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[20] The ease with which the structural characteristics of the Bridge could have been identified distinguishes this case from *Donohue Indus., Inc*., 20 BNA OSHC 1346 (No. 99-0191, 2003). In *Donohue*, the record showed that a piece of equipment was calibrated at the start of the workday and appeared to be working properly. 20 BNA OSHC at 1347. A visual inspection later in the day would not have revealed the defect of concern. *Id.* at 1351. Here, we have the opposite situation; a visual inspection by a qualified person would have revealed the Bridge's structure as a cast in place rigid, fixed beam, arched bridge. (Tr. 518, 567.)

[21] Mr. Ayub did concede that the hinged hooking of the Bridge's rebar was unusual. (Tr. 540, 558-59.) That said, even if the Bridge structure had used rebar meeting current day standards, after the multiple cuts the Bridge still would have collapsed. (Tr. 580.) It was the cutting of the arch shaped Bridge that changed its load bearing capacity and undermined the ability of the working surface to bear the mechanical equipment's weight. (Tr. 534-35.) The Secretary does not argue that Palo should have known about the hinged hooked rebar. His contention is that Palo should have known what was capable of being visually determined, i.e., that cutting a fixed-beam arch bridge through its supporting abutments compromises its ability to carry its own load, as well as the weight of anything placed on top of it. (Gov. Exs. 14-15; Tr. 255, 513-18, 521-24, 527-35.)

never merely decorative. (Tr. 567.) Thus, Mr. Ayub concluded that Palo failed to apply reasonable and sound judgment or engineering analysis to this project. (Tr. 668.)

The CAT's presence on the Bridge at the time referenced in the Citation was open, obvious, and indisputably known to supervisory personnel. (Stip. 23, 25-26.) *See Hamilton Fixture*, 16 BNA OSHC 1073, 1089 (No. 88-1720, 1993) (finding an employer is chargeable with knowledge of conditions which are plainly visible to its supervisory personnel), *aff'd*, 28 F.3d 1213 (6th Cir. 1994). Palo knew the CAT was a heavy piece of mechanical equipment and it knew that this was an important consideration. (Stip. 15; Tr. 374.) Yet, it failed to take steps to determine whether it could be safely moved onto the Bridge. (Jt. Ex. 15; Gov. Ex. 9 at 8-12; Tr. 74, 154, 255, 260-61, 402, 535, 658, 662, 673.) Cutting a fixed-beam arch bridge through its supporting abutments indisputably compromises its ability to carry its load. (Gov. Exs. 14-15; Tr. 255, 513-18, 521-24, 527-35.) The Secretary showed that an experienced demolition and construction contractor should not have placed mechanical equipment like the CAT on the Bridge without conducting an engineering analysis to ascertain whether the Bridge could take the load after the abutments were cut. (Tr. 73, 154, 534-35, 668.) Like the employer in *Central Florida*, Palo neglected to obtain "critical information" to ascertain whether the working surface could withstand the load of the CAT. 25 BNA OSHC at 2154-55. This satisfies the knowledge element.

Affirmative Defenses and Rebuttal

Respondent failed to rebut any element of the Secretary's prima facie case. It did not recall its own engineer to contradict the analysis of the Secretary's structural engineering expert.[22] *See Capeway,* 20 BNA OSHC at 1342-43; *Well Solutions, Inc., Rig No. 30*, 17 BNA OSHC 1211, 1214-15 (No. 91-340, 1995) (holding that the Secretary can rely on the "best available evidence" and even a slim showing of a prima facie case is sufficient absent rebuttal by party who has "full possession of all the facts"); *Kaspar*, 16 BNA OSHC at 1521 (evidence cited by employer did not rebut Secretary's evidence that hazard was accessible). Nor did the Respondent press any affirmative defenses. It does not allege that superintendent's actions violated any company policies or even the demolition plan. (Tr. 18.)

Accordingly, the violation is affirmed.

Characterization and Penalty Amount

The Secretary characterizes this Citation item as serious. A violation is "serious" if there ***was a substantial probability that death or serious physical harm could have resulted from the violative condition. 29 U.S.C. § 666(k).***

As the Bridge's collapse shows, placing mechanical equipment on working ***surfaces of insufficient strength can lead to serious injuries. (Tr. 28, 31, 38.) Four workers sought medical treatment as a result of injuries sustained as a result of the collapse. (Tr. 38.) Two were treated and released and the other two were admitted for a period of time. (Tr. 39-40, 396.) One of the victims remained out of work as of the hearing time and his injuries may be permanent. (Tr. 39-***

[22] As noted above, Palo's president has a civil engineering degree and was in the courtroom throughout the hearing. (Gov. Ex. 9 at 9; Tr. 114.)

40, 44.) In addition to the actual injuries sustained, the violative condition could have led to even more serious injuries, including death. (Jt. Exs. 2-3; Tr. 44.)

As for the penalty amount, the Act requires consideration of four factors: (1) the gravity of the violation; (2) the employer's size; (3) the employer's history; and (4) its good faith. *Orion Constr., Inc.,* 18 BNA OSHC 1867, 1868-69 (No. 98-2014, 1999). Of these, gravity is generally the most important factor. *Id.* at 1867. The CO indicated that $7,000 would be the typical penalty amount for a violation with the gravity of the one at issue here. (Tr. 32.) However, the Secretary proposes a reduced penalty of $4,900 because of Palo's relatively small size. *Id.*

Having considering the penalty factors, the undersigned finds that the proposed penalty is appropriate. The violation's high gravity warrants that factor receiving the most weight. The collapse of a working surface can, and in this case did, cause serious injuries. (Tr. 38, 44.) Palo has had OSHA inspections within the past five years and some of these resulted in citations. (Jt. Ex. 2 at 3.) However, the Secretary did not indicate that this history warranted an increase in the penalty amount. (Sec'y Br. at 20; Tr. 32.) Balancing this is Palo's size and the safety steps it did take.[23] ***Accordingly, a penalty of $4,900 is assessed.*** See Cent. Fla.***, 25 BNA OSHC at 2155 (assessing a $4,900 penalty in a case with a similar hazard).***

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.

[23] The superintendent also acted immediately after the collapse to address the injuries of others despite being injured himself. (Tr. 437.)

ORDER

Based on the foregoing decision, it is hereby ORDERED that Citation 1, Item 2, alleging a serious violation of 29 C.F.R. § 1926.856(a) is AFFIRMED, and a penalty of $4,900 is assessed.

/s/Carol A. Baumerich

Carol A. Baumerich
Judge, OSHRC

Dated: September 19, 2017