



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.

**FABI CONSTRUCTION INC. AND PRO
MANAGEMENTS GROUP,**

Respondent.


OSHRC DOCKET NO. 04-0776

ORDER

Upon consideration of the Secretary's October 19, 2005, Motion for Reconsideration of the undersigned's ruling striking from the record Mr. Ayub's expert testimony regarding longitudinal steel and Respondent's November 10, 2005, Brief in Opposition to said Motion, I find that the cited deposition testimony and written interrogatory do not provide sufficient or explicit notice that Dr. Ayub's trial testimony would supplement the conclusions contained within his expert report. I find that an expansion of Mr. Ayub's previously disclosed expert report would have had the effect of undermining Respondent's course of inquiry and trial preparation. I further find that the admission of such testimony at this time would disrupt the instant proceedings.

SO ORDERED.

Dated: 3/2/06
Washington, DC.


COVETTE ROONEY
Judge, OSHRC

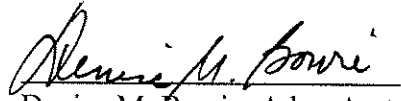
CERTIFICATE OF SERVICE

This is to certify that a copy of the Order was mailed to the parties listed below by first class mail on March 2, 2006.

04-0776

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NOTICE OF DECISION

IN REFERENCE TO:

SECRETARY OF LABOR v. Fabi Construction, Inc. and Pro Management Group
OSHR DOCKET NO. 04-0776

1. Enclosed is a copy of my decision. It will be submitted to the Commission's Executive Secretary on March 30, 2006. The decision will become the final order of the Commission at the expiration of thirty (30) days from the date of docketing by the Executive Secretary, unless within that time a Member of the Commission directs that it be reviewed. All parties will be notified by the Executive Secretary of the date of docketing.
2. Any party that is adversely affected or aggrieved by the decision may file a petition for discretionary review by the Review Commission. A petition may be filed with this Judge within twenty (20) days from the date of this notice. Thereafter any petition must be filed with the Review Commission's Executive Secretary within twenty (20) days from the date of the Executive Secretary's notice of docketing. See paragraph No. 1. The Executive Secretary's address is as follows:

**Executive Secretary
Occupational Safety and Health
Review Commission
One Lafayette Centre
1120 20th Street, N.W. 9th Floor
Washington, D.C. 20036-3419**

3. The full text of the rule governing the filing of a petition for discretionary review is 29 C.F.R. 2200.91 (51 Fed. Reg. 32026, Sept. 8, 1986). It is appended hereto for easy reference, as are related rules prescribing post-hearing procedures.

A handwritten signature in cursive script that reads "Covette Rooney".

Covette Rooney
Judge, OSHRC

Dated: March 2, 2006
Washington, D.C.



OCCUPATIONAL SAFETY AND HEALTH REVIEW COMMISSION

1120 20th Street, N.W., Ninth Floor
Washington, DC 20036-3457

SECRETARY OF LABOR,

Complainant,

v.

FABI CONSTRUCTION, INC., and
PRO MANAGEMENT GROUP,

Respondents.

OSHRC Docket No. 04-0776

APPEARANCES:

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For the Respondent.

BEFORE: Covette Rooney
Administrative Law Judge

DECISION AND ORDER

This case is before the Occupational Safety and Health Review Commission ("the Commission") pursuant to the Occupational Safety and Health Act of 1970, 29 U.S.C. §§ 651-678 ("the Act"), to review (1) two citations issued by the Secretary of Labor ("the Secretary") and (2) a proposed assessment of penalty therefor.

A hearing was held in Philadelphia, Pennsylvania, from May 17 through June 2, 2005. The parties have filed both opening and reply briefs, and this case is now ready for disposition.

Background

During the fall of 2001, Keating Building Corporation ("Keating") was the prime contractor for a large construction project involving the expansion of the Tropicana Hotel and Casino in Atlantic City, New Jersey ("the Project"). (Tr. 126). The Project consisted of a 20-floor hotel tower,

ten levels of parking, and three levels of retail and entertainment establishments below the parking garage. (Joint Pretrial Statement (“JPS”), p.14, Ex. C-54). The parking garage was built in levels designated P1 through P10. (JPS, p. 14, Ex. C-54). Keating contracted with Fabi Construction, Inc. (“Fabi”) and its management company, Pro Management Group¹ to be the subcontractor responsible for concrete placement on the project. Fabi was required to provide labor, materials and equipment for performing the concrete work, including the building components such as foundations, shear walls, columns, beams and slabs. (Tr. 11-12). Fabi, in turn, subcontracted with several companies to assist it in fulfilling its contractual obligations. Specifically, Fabi retained Mid-State Filigree Systems, Inc., to furnish precast barrier walls and beam and slab products, including shoring drawings, erection shop drawings, piece drawings and perimeter edge forms. Fabi also retained Forrest Consultants to prepare steel reinforcement shop drawings which detailed the steel welded-wire reinforcement, or mesh. Fabi additionally retained Mitchell Bar Placement, Inc., to install the steel reinforcement bars and mesh. Mitchell placed all reinforcing steel on levels except P4-P6. (JPS, p.15, Tr. 188, 494-95). On level P5, and possibly on level P4, ironworkers on Fabi’s payroll and under its supervision placed the reinforcing steel and mesh along Column Line 1. (Tr. 188, 494-95). Penn Jersey Building Materials, Inc., was retained to furnish the cast-in-place concrete materials for the Project. Finally, Peri Formwork and Scaffolding prepared shoring drawings and rented or sold Peri Formwork products to Fabi. (JPS, p. 15).

The garage and tower consisted of continuous reinforced concrete slabs that spanned the wide, reinforced concrete beams or walls, creating floors. The beams were supported by reinforced concrete columns. (Tr. 66-67). These beams and slabs were constructed using the “Filigree

¹ The record reveals that Fabi and Pro Management are owned by Frank Zappone, who is also the President and sole officer, stockholder and director of both companies. Both companies share the same address and the same clerical staff that performs administrative functions for both companies. Moreover, the main function of Pro Management is the managing of Fabi. (Tr. 74-77, 774-77). Indeed, while McCarron stated at the hearing that at the time of the accident he was an employee of Pro Management (Tr. 74-77), during the inspection he identified himself to the compliance officer as superintendent of Fabi. (Tr. 1305) On this basis, the Secretary asserts that the companies should be treated as a single entity. I note that neither Fabi nor Pro Management has adduced evidence to the contrary and that neither has not objected to being considered a single entity. Accordingly, for purposes of this matter, Fabi and Pro Management are considered to be a single entity. *Trinity Indus., Inc.*, 9 BNA OSHC 1515, 1516-17 (No. 77-3909, 1981).

Wideslab” method of construction. The filigree system consists of precast slabs and beams that serve as permanent formwork for the cast-in-place concrete poured on site. The filigree system comprises about 15 percent of the concrete on the site, with the rest being poured on site. (Tr. 66-67). As the filigree precast components were brought to the site, they were placed on top of shoring used to temporarily support the filigree slabs and beams. (Tr. 55, 104-06). After the filigree components were set on the shoring, reinforcement bars (“rebar”) and mesh were put on top of the filigree precast concrete in anticipation of concrete being cast on top of the rebar and mesh.(Tr. 212-13).

Industry practice requires that steel reinforcement be placed in accordance with shop drawings which have been approved by the structural engineer. (Tr. 98, 129, 1642, 1692, 1696-98). These shop drawings are made from structural drawings prepared by engineers and provided to the architect. (Tr. 19, 129). Shop drawings for the Project were prepared by MFS, Southwest and Forrest. (Tr. 13, 718-19). At each level, after the steel reinforcement was laid and before the rest of the concrete was poured, inspections were conducted by Site-Blauvelt, who checked to ensure that the steel reinforcement was placed in conformance with the shop drawings. (Tr. 1459-60, 1469-71). Also, prior to the final pour, Atlantic City inspectors reviewed the site to ensure compliance with the shop drawings and municipal codes. (Tr. 511-12, 734, 1383-84, 1460).

On October 30, 2003, Respondent’s employees were pouring concrete on level P8 in the parking garage when levels P4 through P7 collapsed. (Tr. 177, 1475). The collapse occurred along the westernmost edge of the parking garage along Column Line 1 (Tr. 11-12) and extended east from Column Line 1 to Column Line 4 and south from the shear wall to Column F-6. (Tr. 1534-39, Ex. R-19, slides 2, 4, 5). As a result of the accident, four employees were killed and 21 injured. (Tr. 12).

Following an inspection and investigation, OSHA issued two citations. Citation 1 contained five items, two of which were withdrawn by the Secretary prior to the hearing. (JPS, p.15). Remaining is Item 1, alleging a violation of the General Duty Clause on the grounds that Fabi failed to place reinforcing steel as required by industry custom and practice; Item 2, alleging a violation of 29 C.F.R. § 1926.703(a)(2) for not having shoring plans available at the site for levels P3 to P8; and Item 5, alleging a violation of 29 C.F.R. § 1926.703(e)(1) on the grounds that Fabi failed to test the concrete before removing shoring. Citation 2 alleges that Fabi willfully failed to comply with 29 C.F.R. § 1926.703(a)(1) because it did not ensure that the formwork supporting level P8 was capable of supporting all actual and anticipated loads.

Citation 1, Item 1: Serious Violation of Section 5(a)(1)

Citation 1, Item 1 alleges a serious violation of section 5(a)(1)² of the Act, the “General Duty Clause.” According to the citation, employees were exposed to the recognized hazard of a collapse because reinforcing steel was not placed in accordance with industry standards and the structural and/or shop drawings. The Secretary alleges that Fabi failed to properly install three types of reinforcing steel: the top steel or mesh, the longitudinal steel, and the bottom steel.

To establish a violation of the General Duty Clause, the Secretary must prove that (1) there was an activity or condition in the employer’s workplace that constituted a hazard to employees; (2) either the cited employer or its industry recognized that the condition or activity was hazardous; (3) the hazard was causing or likely to cause death or serious physical harm; and (4) there were feasible means to either eliminate or materially reduce the hazard. *E.g. Well Solutions Inc.*, 17 BNA OSHC 1212, 1213 (No. 91-340, 1995); *Industrial Glass*, 15 BNA OSHC 1594, 1597 (No. 88-348, 1992).

Applicability of the General Duty Clause

The General Duty Clause is applicable only where no specific standard applies to the cited condition. *New York State Elec. & Gas Corp.*, 17 BNA OSHC 1129, 1130 (No. 91-2897, 1995), *aff’d in part*, 88 F.3d 98 (2d Cir. 1996); *Sun Shipbuilding & Drydock Co.*, 1 BNA OSHC 1381-82 (No. 161, 1973). However, a citation under section 5(a)(1) will not be vacated where the hazards presented are interrelated and not entirely covered by any single standard, or where a specific standard does not address the particular hazard for which the employer has been cited. *Ted Wilkerson, Inc.*, 9 BNA OSHC 2012, 2015 (No. 13390, 1981).

Fabi argues that the General Duty Clause was not applicable because the standard at 29 C.F.R. § 1926.703(d)(1) applies to the cited hazard. That standard provides that “Reinforcing steel for walls, piers, columns, and *similar vertical structures* shall be adequately supported to prevent overturning and to prevent collapse.” (Emphasis added). (Fabi Brief at 15-16).

² The General Duty Clause states that each employer:

(1) shall furnish to each of his employees 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;

The Secretary counters that the plain language of the standard addresses rebar placed in “vertical structures” such as “walls, piers, columns,” while Citation 1, Item 1 addresses steel placement in the horizontal plane of the concrete floor slabs. Moreover, the Secretary points out that the hazard addressed by the standard is different than that addressed by the citation. While the citation is concerned with a collapse of the concrete structure, the legislative history of the standard makes it clear that the hazard addressed by the standard is the possibility of a collapse of the reinforcing steel. (Secretary Reply Brief at 11). 53 Fed. Reg. 22612, 22633 (June 16, 1988).

I agree with the Secretary. By its plain words, the standard applies only to “vertical structures,” while the instant citation involves the horizontal support placed in the slabs. Clearly, they apply to different conditions. Furthermore, the legislative history of the standard supports the Secretary’s assertion that the hazard addressed by the standard was not the potential collapse of the structure, but the collapse of the vertical supports. *Id.* Accordingly, I hold that there were no specifically applicable standards and that the General Duty Clause applies to the hazard cited by the Secretary.

The Recognized Hazard

The recognized hazard as alleged by the Secretary has two parts. First, the Secretary asserts that it is a recognized hazard for a contractor not to follow the shop drawings³ provided to it by the structural engineer and/or detailer. It is not disputed that “shop drawings” are typically used by contractors in the field when performing the actual construction work. (Tr.128-29, 593). Moreover, the contractor is expected to follow the shop drawings and may not deviate from them unless expressly directed to do so by the structural engineer. (Tr. 96-98, 527, 593, 1132, 1814). It is not disputed that a contractor’s deviation from those drawings, without the permission of the structural engineer, constitutes a recognized hazard that could lead to structural failure and, therefore, expose employees to death or serious physical harm. It is also not disputed that the only feasible abatement method is to install the reinforcing steel in conformance with the drawings in the first instance.

³ The citation also alleged that the contractor’s failure to follow the structural drawings constituted a recognized hazard. The evidence, however, overwhelmingly demonstrates that, under industry practice, contractors are expected to follow the shop drawings which are prepared by the structural engineer or detailer from the structural drawings. (McCarron, Tr. 98, Ayub, Tr. 1131-34, Cagley, Tr. 1349-50, Guedelhoefer, Tr. 1642, 1692, 1696-98, 1814).

Second, the Secretary alleges that it is a recognized hazard for an employer to install reinforcing steel in a manner that contravenes industry custom and practice. This hazard would only be manifested where the structural and/or shop drawings call for the contractor to install the reinforcing steel in a manner it knows to be contrary to industry custom and practice.

The parties differ over a contractor's duty when it has reason to believe that the shop drawings are in error. According to the Secretary, where the contractor believes the shop drawings are in error it must not proceed. Rather, under such circumstances a contractor has the duty to bring its concerns to the structural engineer. If the structural engineer confirms the details as set forth in the drawings, the contractor has fulfilled its duty and must comply with the shop drawings. (Cagley, Tr. 600-03, 612, 665, Ayub, Tr. 1138-40). On the other hand, Fabi contends that as long as the contractor makes sure that it has interpreted the shop drawings correctly, it has no further duty to question the propriety of the drawings and must follow the drawings. (Guedelhofer, Tr. 1814).

Although Fabi's expert, Otto Guedelhofer, who had more recent experience in actual concrete construction work than the Secretary's experts James Cagley and Mohammed Ayub, testified that industry custom and practice requires the contractor to always follow the shop drawings, I find that industry practice requires a contractor to consult the structural engineer when that contractor knows or has reason to know that the drawings are or may be in error. (Tr. 598-600, 603, 1131-34). While the contractor may lack the engineering expertise to overrule or ignore the shop drawings, to hold that he must slavishly follow them ignores the fact that the contractor has practical experience in the field and is in a position to know when the shop drawings are contrary to generally accepted practice. The shop drawings may be unclear and confusing, or the detailer who prepared them may have made a mistake. Under such circumstances, to conclude that industry practice requires the contractor to follow the shop drawings without first contacting the structural engineer is an invitation to disaster and clearly contrary to the intent of the General Duty Clause.

Moreover, the evidence demonstrates that Fabi had occasion to contact the structural engineer and request revisions. Allen Zappone, Fabi's owner, testified that there was an instance where the drawings created the possibility that the slab could disengage and fall onto employees below. To avoid this, he requested and received revisions that changed the location of the beams and installed a "crash wall." (Tr. 801-02). Clearly, then, industry custom and practice recognizes the

contractor's right and obligation to contact the structural engineer when it has reason to believe that the shop drawings are in error or are otherwise in need of revision.

Accordingly, the Secretary has demonstrated by a preponderance of the evidence that it is a recognized hazard in the concrete construction industry for a contractor to deviate from the shop drawings, or to follow those drawings when it knows or has reason to know that they call for construction methods contrary to industry custom and practice, without first contacting the structural engineer to ensure that those drawings are not erroneous.

Instance (a): The Mesh (Top Steel)

The top steel placed over the filigree panels were composed of two types of steel mesh. Shop drawings indicate that S9 mesh was to be placed from Column B-9 to Column E, and that the S21 mesh was to be placed from Column E to Column F-6. (Ex. C-24).⁴ It is undisputed that this steel mesh was not embedded into the columns or hooked over dowels near the shear wall. The evidence demonstrates that, in many areas, it was not possible to place it into the columns because of the presence of the precast crash wall. In those instances, the mesh was placed as far into the concrete as possible. In those areas, the mesh either butted up to the dowels or was embedded 2-4 inches. (Fiorentino, Tr. 510, DeStefano, Tr. 722, Ayub, Tr. 898-99, Guedelhoefer, Tr. 1790-91).

Robert Rodriguez, an ironworker for Mitchell Rebar, who was installing the mesh, testified that he was concerned that the mesh abutted but was not hooked over the dowels and that he brought his concerns to the attention of his foreman, Frank DeStefano. Although DeStefano told Rodriguez that the installation was correct, Rodriguez remained concerned because he had never seen mesh installed in that manner. Rodriguez continued to raise his concerns. The night before the collapse, after being rebuffed for a third time, Rodriguez hooked several sheets of mesh over the dowels to demonstrate that such an installation was possible. The next morning, after the collapse, the sheets he installed were the only ones still hanging from the dowels. (Tr. 693-96).

According to the Secretary, this failure to adequately embed the mesh into the columns and shear wall, or to place the mesh over the vertical dowels, compromised the integrity of the beam-

⁴ S9 mesh is 8 feet wide and 15 to 16 inches long, with bars spaced every 12 inches and cross wires running into the mesh at each end. S21 mesh is 7 feet wide, rather than 8 feet, and does not have a cross wire at the end. (Tr. 889-91).

column joints and exposed employees to the hazard of a partial or full collapse of the structure. (Ayub, Tr. 903-04, 927-28). The Secretary asserts that the mesh should have been embedded 8 to 9 inches into the wall. (Ayub, Tr. 899). She argues that the failure to embed the mesh or hook it over the dowels was contrary to the shop drawings, which called for the steel to be embedded into the columns or shear wall. (Ayub, Tr. 895-96).

On the other hand, Fabi contends that the shop drawings did not call for the mesh to be embedded into the columns. (Guedelhofer, Tr. 1582-85, 1591-92, 1683-85, 1693-94). Fabi asserts that the purpose of the mesh was not to secure the beam to the column but rather to reinforce the juncture between the beam and the slab. (Guedelhofer, Tr. 1583, 1687). Therefore, there would be no need for the mesh to be embedded into the column. (Guedelhofer, Tr. 1687).

The preponderance of the evidence establishes that the shop drawings called for the mesh reinforcement to be embedded into the columns. Frank DeStefano testified that the shop drawings prepared by Forrest Consultants for levels P5 through P9 called for the mesh to be brought to the edge of the building. (Tr. 722, Ex. C-24). However, DeStefano testified that it was not possible to take the mesh to the edge of the building because of the presence of the crash wall, which extended down the entirety of Column Line 1 and prevented the mesh from being embedded more than 4 inches. (Tr. 722-24, Ex. C-105, p. 9 of 118). DeStefano's reading of the drawings was supported by Ayub. (Tr. 895-96, Ex. C-105, p. 9 of 118). In contrast, Guedelhofer's testimony that the shop drawings did not call for mesh embedment was based on shop drawings prepared by Mid-State Filigree. (Tr. 1684-85, Ex. R-2). However, the record reveals that Exhibit R-2 was not intended to constitute the shop drawings for the placement of the mesh reinforcement. Hugh McCarron testified that Mid-State Filigree did not provide the top steel and that Exhibit R-2 was not intended to show the reinforcing mesh. (Tr. 350-51). Indeed, an examination of Exhibit R-2 clearly reveals that it was never intended to be used as the shop drawing for mesh installation. In both section 1 and section 6 of the drawing, where the top steel is indicated, the drawing clearly states "Top steel as req'd. (By others)." These "others" are the Forrest Consultants shop drawings, specifically, Exhibit C-24, which, as previously noted, required that the mesh be taken to the edge of the building.

While the shop drawings called for the mesh to be either fully embedded into the columns or hooked over the dowels, the evidence is undisputed that, except for the mesh sheets placed by

Rodriguez, the mesh was only partially embedded or abutted against the dowels. Fabi contends that a violation of the General Duty Clause did not occur because the placement of the crash wall made full embedment impossible. While the Secretary does not dispute that full embedment was not possible, Fabi's defense misses the point. Although the "recognized hazard" was the failure to properly embed or otherwise secure the mesh as required by the shop drawings, the Secretary does not claim that abatement could only have been achieved by fully embedding the mesh. Rather, the Secretary asserts that abatement could have been accomplished by Fabi contacting the structural engineer and pointing out its inability to conform to the shop drawings.

I agree. It is undisputed that the failure to follow the shop drawings constitutes a recognized hazard. Where it is not possible to follow those drawings, the contractor can either (1) do the best it can, or (2) bring the difficulty to the attention of the structural engineer. By definition, the first option requires the contractor to take it upon itself to deviate from the shop drawings, an action that all parties agree constitutes a recognized hazard. Thus, the only feasible option is for the contractor to stop work and contact the structural engineer for further instructions. Here, it is undisputed that Fabi chose the first option. By doing so, it exposed its employees to a recognized hazard.

That the peculiarities of this construction might have made it unnecessary to embed the mesh into the columns because, as Guedelhofer stated, the purpose of the mesh was to tie the beams to the slab, not the beam to the column, does not mandate a different result. The shop drawings plainly called for mesh embedment and, as Fabi points out in regard to the longitudinal and bottom steel, *infra*, it lacked the authority to take it upon itself to ignore those drawings. If Fabi knew that embedment was unnecessary or impossible to achieve, yet required by the drawings, industry practice clearly called for it to halt the installation and seek guidance from the structural engineer.

For the foregoing reasons, Item 1, Instance (a) of Serious Citation 1 is affirmed as a serious violation.

Instance (b): Longitudinal Steel

The approved shop drawings called for the placement of longitudinal bars or rebars along Column Line 1. The evidence is undisputed that none of the bars passed through the column cores. (Fiorentino, Tr. 502, 505, Rodriguez, Tr. 702-03). Both Cagley and Guedelhofer testified that it was

contrary to industry custom and practice for at least some of the rebars to pass through the columns. (Cagley, Tr. 602-03; Guedelhofer, Tr. 1811-12). Moreover, Guedelhofer testified that the failure of the rebars to pass through the columns violated the structural integrity requirements of the ACI (American Concrete Institute) industry code. (Tr. 1686-90). Fabi Superintendent Hugh McCarron testified that he was generally familiar with the ACI code and was usually provided with sections of the code relevant to the work he was performing. (Tr. 87-88).

The preponderance of the evidence establishes that the approved shop drawings did not call for these rebars to pass through the columns. (Cagley, Tr. 659-661,⁵ Guedelhofer, Tr. 1639, 1688). Moreover, the narrow 12- inch columns effectively prevented the rebars from being placed within the column core. (Rodriguez, Tr. 703, 707-09, Guedelhofer, Tr. 1706).

The Secretary does not seriously dispute that the shop drawings did not call for the longitudinal rebars to pass through the columns and concedes that, due to the small size of the columns, it was not possible to do so. However, she asserts that because it was contrary to industry custom and practice to install the longitudinal rebars without at least some of them passing through the columns, Fabi should have stopped work and consulted with the structural engineer. Fabi does not dispute that the rebars should have passed through the columns, but asserts that it fulfilled its duty by complying with the shop drawings.

Unlike the mesh, the evidence here demonstrates that Fabi was in compliance with the shop drawings. The problem, however, is that Fabi knew or should have known that it was contrary to industry custom and practice to install the longitudinal steel without having some of them pass through the column. Fabi is an experienced concrete contractor. While not qualified to take it upon itself to violate the shop drawings, it was sufficiently experienced to know that those drawings required it to perform its duties in a manner that violated industry custom and practice and compromised the structural integrity of the building. Fabi would have the Commission conclude

⁵ In her brief, the Secretary asserts that Cagley testified the shop drawings called for the rebars to pass through the columns. (Tr. 601-03). However, an examination of that testimony at best demonstrates uncertainty. According to Cagley, “they’re graphically depicted as going across the area where the column is. It’s not very specific as to whether they go through the column or adjacent to the column.” Elsewhere, however, Cagley more definitively agreed the shop drawings did not show the rebars passing through the columns. (*e.g.*, Tr. 659-61).

that it satisfied the General Duty Clause, and freed the workplace of a recognized hazard, by slavishly adhering to the shop drawings, regardless of whether it knew or should have known that those drawings compromised the structural integrity of the project. As noted *supra*, such a holding would be contrary to the General Duty Clause. Accordingly, I conclude that by not stopping to consult the structural engineer to ensure that the shop drawings were either properly drawn or interpreted, Fabi failed to free the workplace of the recognized hazard posed by performing construction in a manner that violated industry custom and practice.⁶

On the basis of the record, Item 1, Instance (b) of Serious Citation 1 is affirmed as a serious violation.

Instance (c): Bottom Steel

⁶Fabi cites to a line of cases for the proposition that when a cited hazard falls within the expertise of a specialist, “an employer is justified in relying upon the specialist to protect against hazards related to the specialist’s expertise so long as the reliance is reasonable and the employer has no reason to foresee that the work will be performed unsafely. *Sasser Elec. and Mfg. Co.*, 11 BNA OSHC 2133, 2136 (No. 82-178, 1984). *See also City Oil Well Serv. Co.*, 12 BNA OSHC 1249, 1250 (No. 81-1797, 1985); *Cities Serv. Oil Co.*, 4 BNA OSHC 1514, 1518 (No. 4648, 1976), *aff’d* 577 F.2d 126 (10th Cir. 1978). Thus, Fabi argues that it properly relied (1) on the structural engineer to properly prepare the shop drawings, and (2) on Site-Blauvelt and the Atlantic City inspectors whose job was to inspect to ensure that the steel reinforcement was properly placed. Fabi’s reliance is misplaced. The line of cases cited by Fabi involves situations where an employer hires another party to perform work because it lacks the expertise or ability to perform that work itself. Even in those situations, however, the employer may still be responsible where it has reason to foresee that the work is being performed in an unsafe manner. *Sasser Elec. and Mfg. Co.*, 11 BNA OSHC at 2136; *Cities Serv. Oil Co.*, 4 BNA OSHC at 1518. Here, Fabi’s reliance on the shop drawings was not reasonable where it knew those drawings were contrary to industry custom and practice. Similarly, knowing the shop drawings were contrary to industry custom and practice, it was irresponsible to place the duty to uncover the errors on third parties. An employer has no right under the Act to gamble with employee safety. I would also note that the record shows that the purpose of the Site-Blauvelt inspections was to ensure that installation complied with the shop drawings. (Ayub Report, Ex. C-105, p. 17 of 118). Thus, Fabi could not reasonably rely on Site-Blauvelt to uncover errors where its base of reference itself was in error.

The Secretary asserts that Fabi violated industry custom and practice by not installing B49 bottom reinforcing steel bars⁷ along Column Line 1 for the floor slabs.

The evidence establishes that the structural drawings called for the installation of B49 bottom steel, but that the bottom steel was omitted from the approved shop drawings for levels P4 through P8. (Tr. 145-46, 357-59, 659-61, 1000-04, Exs. C-11, R-4, R-5, R-6).⁸ Ayub testified that the shop drawings showed B49 bottom steel for level P3 but did not show it for levels P4 through P8. He had no explanation for the shop drawings not showing the bottom steel for those levels. (Tr. 1874-75). Guedelhofer suggested the B49 bars were part of the filigree panels provided by Mid-State Filigree and were therefore not shown by the detailer. (Tr. 1591-92). This was disputed by Ayub, who noted that all rebars were provided by the contractor and not by Midstate Filigree. (Tr. 1591-92).

I find that the Secretary failed to establish by a preponderance of the evidence that the failure to include bottom steel in the shop drawings presented a hazard of sufficient notoriety that Fabi should have stopped work to check the correctness of those drawings with the structural engineer. Whether he was correct or not, Guedelhofer's theory that the bars were included in the filigree panels posited a plausible theory regarding why Fabi might have concluded that the shop drawings were not in error. Moreover, while the evidence regarding industry recognition of the hazard posed by failing to pass the longitudinal steel through the column core was overwhelming, evidence regarding industry recognition of the failure to include bottom steel was equivocal. Thus, while all the experts agreed that the longitudinal bars needed to pass through the columns, there was a dispute among the experts regarding whether the bottom bars depicted in the structural drawings would have added to the stability of the structure. Ayub testified that the failure to include bottom steel created a serious construction flaw which could lead to collapse. (Tr. 1003-04) On the other hand, Guedelhofer noted that the bottom bars depicted on the structural drawings were too short to have any structural value. (Tr. 1691-93). Moreover, Cagley testified only that it was "typical" that bottom steel goes 6 inches into the support. (Tr. 611-12).

⁷ "B49 bottom reinforcing steel bars" refers to bottom steel bars of number 4 size that are to be placed 9 inches apart. (Tr. 998-99, 1002).

⁸Guedelhofer testified that the structural drawings were unclear and that while the bars were shown in some of the drawings, they were omitted in others. (Tr. 1691-93)

On this record, I find that the Secretary failed to establish by a preponderance of the evidence that Fabi knew or should have known that the failure to install bottom rebars was contrary to industry custom and practice such that it should have stopped work to consult with the structural engineer. Accordingly, Item 1, Instance (c) of Serious Citation 1 is vacated.

Citation 1, Item 2: Serious Violation of 29 C.F.R. § 1926.703(a)(2)

The Secretary alleges that Fabi failed to comply with 29 C.F.R. § 1926.703(a)(2) by not having shoring plans available at the site for levels P3 to P8. The cited standard provides that:

Drawings or plans, including all revisions for the jack layout, formwork (including shoring equipment), working decks, and scaffolds, shall be available at the jobsite.

To establish a violation of a specific 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).

The Secretary asserts that Fabi failed to produce any drawings specifically showing the shoring plans for levels P3 to P8. In particular, she notes that, despite producing an extensive set of Peri shoring plans that were used for levels P2 and below, Fabi failed to produce any plans specifically applicable to levels P3 to P8. (Ex. R-1). Moreover, she argues that although McCarron testified that he made drawings by hand for levels P3 to P8 (Tr. 231), those drawings were not produced in discovery or during the hearing.

The Secretary also argues that while the shoring plans set forth in Exhibit R-1 showed only Peri equipment, Fabi also used shoring manufactured by Waco and Aluma. (Tr. 105-06). The Secretary also points out that Foreman James Cincotti, who supervised employees engaged in shoring operations, testified that he never saw a shoring plan. (Tr. 762). Finally, the Secretary asserts that, while testimony established that the same shoring plan may be used for multiple levels if those levels are "typical" (Cagley, Tr. 632), levels P3 to P8 were not identical to level P2. The Secretary observes that, unlike level P2, levels P3 to P8 had a 48-foot slab along Column Line 1. (Tr. 1297). Furthermore, on level P2 and below, there was an additional horizontal beam along Column Line 2 that was narrower than its counterpart on levels P3 to P8.

Contrary to the Secretary's assertions, a review of Exhibit R-1, pp. 134-142, reveals that the shoring plan specifically applied to levels P3 to P8. Although labeled as applicable to P2, the legend box, which gave applicable floor elevations, noted that the plan was to be repeated for each of the upper levels. (Tr. 1717). Indeed, Guedelhoefer testified that this type of shoring plan was customary in the industry and did not create any hazard. (Tr. 1717-18, 1723). These plans were kept in the Fabi field trailer and copies were available to employees erecting the shoring. (Tr. 257). While those plans applied to Peri shoring, McCarron testified that he gave workers marked-up drawings to show the spacing of the Waco and Aluma shores. (Tr. 331-39, 342). Although copies of these marked-up plans were not provided during these proceedings, other evidence supports McCarron's assertion that they were available at the site. In particular, Cincotti testified that he received marked-up shoring plans from McCarron. (Tr. 768-69). I note that this testimony is inconsistent with Cincotti's earlier testimony that he never saw a shoring plan. (Tr. 762). Moreover, he also testified that he was specifically directed by McCarron where to place the shoring and that McCarron even placed chalk marks to indicate its placement. (Tr. 768-69) Thus, regardless of whether he actually received a written plan, these explicit instructions may well have made it unnecessary for Cincotti to actually receive a copy of the shoring plans.⁹ Finally, both McCarron and Guedelhoefer testified that the Peri drawings contained notations for "other" brands of shoring and, therefore, were part of the plans. (McCarron, Tr. 375, Guedelhoefer, Tr. 1802).

Finally, I find unpersuasive the Secretary's argument that differences in levels P3 to P8 from level P2 made the shoring plan set forth in Exhibit R-1 inapplicable to these upper levels. The Secretary failed to adduce evidence to establish that these differences rendered the plans set forth in Exhibit R-1 inapplicable to levels P3 to P8.¹⁰ What the preponderance of the evidence does establish is that levels P2 and higher had a common ceiling height of 10 feet and a typical configuration requiring a shoring plan that did not change. (Tr. 262, 328-29, 334-35). Furthermore,

⁹ I note that the standard only requires that the shoring plans be available.

¹⁰ I find it particularly relevant that the Secretary has not cited Fabi for any deficiencies in the shoring for levels P3 to P9, even though OSHA was able to substantially recreate the shoring plan during its investigation of the collapse. (Ex. R-19, slides 106-109).

both McCarron and Cincotti testified that McCarron provided marked-up plans for the upper levels and that these plans were used to place shoring. (Tr. 331-39, 342 768-69).

Accordingly, I find that the Secretary failed to establish by a preponderance of the evidence that Fabi violated 29 C.F.R. § 1926.703(a)(2). Item 2 of Serious Citation 1 is therefore vacated.

Citation 1, Item 5: Serious Violation of 29 C.F.R. § 1926.703(e)(1)

The Secretary alleges that Fabi failed to comply with 29 C.F.R. § 1926.703(e)(1) which states that:

Forms and shores (except those used for slabs on grade and slip forms) shall not be removed until the employer determines that the concrete has gained sufficient strength to support its weight and superimposed loads. Such determination shall be based on compliance with one of the following: (i) The plans and specifications stipulate conditions for removal of forms and shores, and such conditions have been followed, or (ii) The concrete has been properly tested with an appropriate ASTM standard test method designed to indicate the concrete compressive strength, and the test results indicate that the concrete has gained sufficient strength to support its weight and superimposed loads.

There is no dispute that plans and specification did not stipulate conditions for the removal of forms and shores. Rather, the contract between Fabi and Keating merely paraphrased the OSHA standard and required that “Forms, shores, or reshores shall be removed only after the concrete has rendered sufficient strength to carry the dead weight of the concrete plus all applicable construction and external loads without causing damage, overstress, or excessive or permanent deflection.” (Ex. C-44, p. 9 ¶E). Therefore, the Secretary asserts that Fabi violated the requirement that the concrete pass a compressive strength test before the shores could be removed as required by paragraph (ii) of the standard. Specifically, the Secretary contends that the standard required Fabi to test the strength of the concrete prior to “cracking” the shores. “Cracking” the shores is a process whereby the shores are loosened and lowered a few inches to enable the slab to deflect downward and assume its “natural” position. After a few hours, the shores are retightened and the slab supported in its new position. These “reshores” remain in place until the shoring system is ready to be removed. (Tr. 1030-31, 1433-37, 1554). The evidence establishes Fabi did not test the compressive strength of the concrete until seven days after the pour, prior to the final removal of the shores. (Tr. 218, 1439-40, 1724-25, Ex. R-11). However, the shores on levels P5 to P7 were generally cracked on the fourth or fifth day after the concrete was poured. (Tr. 1428, 1558). (Secretary Brief at 38-41).

Fabi takes the position that the standard does not apply to “cracking” the shores, but only to the final removal of the shores. It argues that the “cracking” of shores is not addressed by the standard because “cracking” shores and removing shores are two independent operations. Fabi points out that McCarron testified that when “cracking” shores, the entire shore, including the shore head, its continuous aluminum beam support, and its braces, remained in place. As a result, the shore frames are still supported as if they are holding the wet load of concrete. (Tr. 1435). Therefore, according to Fabi, the Secretary’s attempt to apply the standard is at odds with the undisputed facts and plain language of the standard itself. (Fabi Brief at 55).

Finally, Fabi points out that it conducted tests of the concrete before finally removing the shores and that those tests demonstrated the concrete exceeded the minimum requirements for shore removal. (Tr. 1440-57, 1725, Ex. R-11). Thus, it argues it was in compliance with the standard.

The Commission must defer to the Secretary’s interpretation of an ambiguous standard if that interpretation is reasonable. *Martin v. OSHRC (C.F.&I. Steel Corp.)*, 499 U.S. 144 (1991). An interpretation is reasonable if it sensibly conforms to the purpose and wording of the regulation, taking into account whether the Secretary has consistently applied the interpretation embodied in the citation, the adequacy of notice to the parties, and the quality of the Secretary’s elaboration of pertinent policy considerations. *Superior Masonry Builders, Inc.*, 20 BNA OSHC 1182, 1184 n.2 (No. 96-1043, 2003).

I find that the Secretary’s interpretation is reasonable and conforms to the purpose and wording of the standard. Accordingly, the Commission must defer to the Secretary’s interpretation.

While Fabi correctly cites McCarron’s testimony for the proposition that when the shores are “cracked” they remain in place as if they were still holding the wet cement, it overstates the case by implying that, when cracked, they continue to bear the load of the wet concrete. However, it is clear from McCarron’s testimony that he was stating only that they were not moved from their location and remained in place for when they would be retightened and become reshores. The critical point is that during the “cracking” operation, the shore heads are lowered and are no longer supporting the slab. Whether “cracked” or permanently taken down, if the shores are lowered prematurely the slab can fail. As Ayub testified, “the slab does not know that the shores have been cracked 2 inches or it has been removed.” (Tr. 1201).

Guedelhoefer testified that if the slab collapsed, it would be caught by the lowered shore head, thus preventing a collapse and protecting employees. (Tr. 1728-29) This, Fabi argues, demonstrates that the standard cannot be read to apply to the “cracking” of shores. However, Ayub testified that the shores are not designed for the type of impact that would occur in the event of a failure and that “once the shore begins to fail then there’s no end to it.” (Tr. 1285). Further, even if the slab fell a few inches, the shores could buckle, chunks of concrete could strike employees below, and employees on the collapsed slab would fall. (Tr. 1285). I find that regardless of which expert is correct, the pertinent point is that whether the shores are “cracked” or permanently removed, a failure of the slab is possible unless the contractor tests the concrete to ensure that it is capable of supporting its own weight. Accordingly, I find that the Secretary’s interpretation is consistent with the purpose of the standard. Finally, I note that section 1926.703(e)(2) states that:

Reshoring shall not be removed until the concrete being supported has attained adequate strength to support its weight and all loads in place upon it.

Where, as here, the same equipment is used for both shoring and reshoring, Fabi’s interpretation of the cited standard would render section 1926.703(e)(2) redundant because the removal of the reshores would be considered the first time the shoring is removed and therefore covered under section 1926.703(e)(1). Thus, there would be no purpose to section 1926.703(e)(2). I conclude, therefore, that the Secretary’s interpretation of the cited standard is both reasonable and consistent with the regulatory scheme set forth in section 1926.703(e).

I also find the violation to be serious. Under section 17(k) of the Act, 29 U.S.C. § 666(k), a violation is serious “if there is a substantial probability that death or serious physical harm could result.” That provision does not mean that the occurrence of an accident must be a substantially probable result of the violative condition, but, rather, that a serious injury is the likely result should an accident occur. *Miniature Nut and Screw Corp.*, 17 BNA OSHC 1557, 1558 (No. 93-2535, 1996). Guedelhoefer’s opinion was that the loosened shores would catch any collapsing slab and protect any employees below. That opinion, however, overlooks the fact that even a collapse of the slabs caught by the shore heads could result in employees on the slab being subjected to injuries from falls as well as injuries from falling or moving equipment. Moreover, even if the slabs might be caught by the shore heads, I am swayed by Ayub’s concern that there also is a likelihood of a complete or partial collapse of the slab, which would drop employees standing upon it as well as fall onto employees

below. The degree of the collapse would largely depend upon the strength of the slab, and, without testing, the strength of the slab is unknown.

Based on the foregoing, Item 5 of Serious Citation 1 is affirmed as a serious violation.

Citation 2, Item 1: Willful Violation of 29 C.F.R. § 1926.703(a)(1)

Finally, the Secretary alleges Fabi willfully failed to adequately support level P8, as required by 29 C.F.R. § 1926.703(a)(1),¹¹ making the formwork incapable of supporting the loads imposed by level P8. The Secretary argues that the failure to properly place reinforcing steel, as set forth in Citation 1, Item 1, resulted in the slabs being in distress. As a result, those slabs which were intended to support the weight of level P8 were incapable of supporting the reasonably anticipated load.

The Secretary further contends that Fabi knew or should have known of the distressed condition because of warnings provided by several employees regarding an unusual pattern of cracks that developed in the slabs, in conjunction with its knowledge that it failed to properly install the reinforcing steel. Moreover, the Secretary asserts that the violation was willful because Fabi ignored warning signs the floor slabs were in distress and placed its employees at risk by proceeding to pour concrete before qualified individuals had evaluated the conditions. (Secretary Brief at pp. 17-28)

Fabi contends it did not violate the standard. It first argues that the standard does not apply as it applies only to temporary structures. Because the slabs are permanent structures, they cannot be formwork and, therefore, are not covered by the standard. It also argues that even if the standard does apply, this item must be vacated because it lacked knowledge of the violation. Fabi contends that the steel reinforcement was placed in conformance with the shop drawings and that, in any event, the cracks in the slabs that developed were typical of shrinkage cracks and did not provide any warning that the slabs were in distress. Fabi next argues that a violation of the standard cannot stand because abatement was not feasible. It contends that the record demonstrates that there was no way to

¹¹ The cited standard provides as follows:

Formwork shall be designed, fabricated, erected, supported, braced and maintained so that it will be capable of supporting without failure all vertical and lateral loads that may reasonably be anticipated to be applied to the formwork. Formwork which is designed, fabricated, erected, supported, braced and maintained in conformance with the Appendix to this section will be deemed to meet the requirements of this paragraph.

calculate the number of shore levels needed to adequately support level P8. (Fabi Brief at 36-42). Finally, Fabi argues that, even if the standard was violated, the violation was not willful. Fabi urges that it fulfilled its obligation by reporting the cracks to the General Contractor and that it lacked a “heightened awareness” that there was a violation. (Fabi Brief at 43-50).

Applicability of the standard

“Formwork” is defined at section 1926.700(b)(2) as “the total system of support for freshly placed or partially cured concrete, including the mold or sheeting (form) that is in contact with the concrete as well as all supporting members including shores, reshores, hardware, braces and related hardware.” The Secretary asserts that because the weight of the slab being poured is distributed by the shoring to the slabs below, those slabs must be part considered part of the total system of support covered by the standard.

Fabi asserts that under industry custom and practice, the definition of “formwork” includes only temporary structures. It points out that ACI SP4, entitled *Formwork for Concrete*, defines “formwork” as a “temporary structure that supports its own weight and that of the freshly placed concrete as well as construction line loads including materials, equipment and workmen.” (Guedelhoefer, Tr. 1740-41, Ex. R-17, pp. 57-58, 71-72, Appendix 13).

As noted *supra*, the Commission must defer to the Secretary’s interpretation of an ambiguous standard if that interpretation is reasonable. *Martin v. OSHRC (C.F.&I. Steel Corp.)*, 499 U.S. 144 (1991). An interpretation is reasonable if it sensibly conforms to the purpose and wording of the regulation, taking into account whether the Secretary has consistently applied the interpretation embodied in the citation, the adequacy of notice to the parties, and the quality of the Secretary’s elaboration of pertinent policy considerations. *Superior Masonry Builders, Inc.*, 20 BNA OSHC 1182, 1184 n.2 (No. 96-1043, 2003).

While I am sympathetic to Fabi’s objection to the Secretary’s strained interpretation of the standard, I cannot conclude that her interpretation is unreasonable. Fabi properly argues that “formwork” is usually thought of as temporary structures. However, the definition as set out by the Secretary broadly defines the term as the “total system of support for freshly placed or partially cured concrete.” While the definition goes on to list structures that are generally temporary in nature, there is nothing in the definition to suggest that the list is exclusive or limited to temporary structures.

Moreover, it is not disputed that the purpose of the shores and reshores is to distribute the weight of the slab being poured onto the slabs below. Thus, like a chain that is no stronger than its weakest link, if those slabs are incapable of supporting the anticipated weight of the load, the capacity of the shoring is irrelevant. So viewed, it is reasonable to consider the slabs as part of the formwork when they are being used to support the weight of the upper levels. Unless these slabs are able to absorb the weight distributed by the shores and reshores, the entire system of support will fail. Here, the slabs at levels P5 to P7, which ultimately had to bear the weight of the freshly poured concrete on level P8, were part of the overall support system and the Secretary could reasonably consider them “formwork.” Accordingly, I conclude that the Secretary’s interpretation reasonably conforms to the purpose and wording of the standard and that the Commission must defer to that interpretation.

Did Fabi have knowledge of the violation?

To establish a violation of a standard, the Secretary must establish by a preponderance of the evidence that the employer knew, or with the exercise of reasonable diligence should have known, of the violation. *American Wrecking Corp. v. Secretary*, 351 F.3d 1254, 1261 (D.C. Cir. 2003).

There is no dispute that the anticipated load on level P8 was 175 pounds per square foot, which consisted of 125 pounds per square foot for the wet concrete and an additional 50 pounds per square foot for the weight of the people and equipment on the deck. (Ayub, Tr. 1046-47). While the shoring system was designed to support that load, (Guedelhoefer, Tr. 1753-54), the collapse demonstrates that, in practice, something went wrong and the entire system of support was not capable of supporting the load. (Ayub, Tr. 1195-96).¹² Here, the issue of knowledge depends on whether the pattern of cracks that formed in the concrete put Fabi on notice that the slabs were in distress and that the “total system of support” was incapable of supporting the anticipated loads.

It is not disputed that it is common for shrinkage cracks to develop in newly-cured concrete. These cracks are expected and are not a matter of concern. (Campano, Tr. 437, Cagley, Tr. 625-27,

¹² I note that, in its brief, Fabi cites to Tr. 1195-96 as support for its assertion that Ayub testified that the shoring was capable of supporting the loads. However, my reading of the transcript shows the opposite:

Q And wasn’t the shoring in place as of the time of the collapse more than capable of supporting those imposed loads?

A It was not, because those shores were placed on the slab which was already distressed.

676-77).¹³ However, several employees testified they observed cracks developing along Column Line 1 that were of a pattern and size that raised concerns regarding the stability of the slabs. (Brooks, Tr. 405-08, Campano, Tr. 427-35, Roberts, Tr. 469-75, 747-48). For example, John Campano, a Fabi carpenter, testified that one crack was wide enough to insert a credit card (Tr. 446) and that others went all the way through the concrete and were as much as 1/8 inch wide. (Tr. 432). Some of these employees communicated their concerns to Hugh McCarron (McCarron, Tr. 239-240, Campano, Tr. 435-36, Roberts, Tr. 475, Cincotti, Tr. 765-66).

McCarron examined the cracks to determine whether they were just on the surface or went entirely through the concrete. (Tr. 241-42). He found that the cracks did not extend through the panels and noted that they did not change over time. He did not see any cracks large enough to insert a credit card and considered the cracks merely hairline cracks. Moreover, he failed to detect any discernable pattern in the cracks or note any open cracks. McCarron was not alarmed by these cracks and concluded that they were the results of deflection caused when the shores were cracked and the slabs allowed to assume their natural position. (Tr. 239-47). Accordingly, McCarron never brought these cracks to anybody's attention. (Tr. 239-47).

I find that the preponderance of the evidence establishes that the cracks went through the concrete and were wide enough to insert a credit card (criteria which McCarron agreed would indicate a problem) and therefore were of sufficient size to constitute a warning that the slabs were in distress. Although McCarron testified that he did not see any cracks penetrating through the concrete or wide enough to insert a credit card, his testimony was contradicted by at least four employees, many with considerable experience in the field. These employees understood the natural hairline cracking which was to be expected on this type of construction, and yet they were concerned by the size and degree of the cracking that they witnessed.

I would also note that the cracking had to be considered in the context of the problems with the steel reinforcement. As discussed in Citation 1, Item 1, Fabi knew or should have known that neither the steel mesh nor the longitudinal steel was properly embedded into the columns. Given this

¹³ I note that after the rebuild following the collapse, cracks again appeared in the rebuilt slabs. (Tr. 247, 439, 769-70).

knowledge, McCarron should have taken the concerns of these employees more seriously and ensured that the matter was brought to the attention of the structural engineer.

Accordingly, I find that Fabi knew or should have known that the cracks observed in the concrete constituted a warning that the formwork was incapable of supporting the anticipated load.

Feasibility of Abatement

Fabi argues it was not feasible to abate because the record fails to disclose how many levels of shoring would have been necessary to support level P8. Moreover, if contacting the structural engineer would have abated the hazard, Fabi contends it fulfilled its duty. (Fabi Brief at 41-42)

To establish the affirmative defense of infeasibility of abatement, an employer must prove that (1) the means of compliance prescribed by the applicable standard would have been infeasible under the circumstances in that (a) its implementation would have been technologically or economically infeasible, or (b) necessary work operations would have been technologically or economically infeasible after its implementation, and (2) either (a) an alternative method of protection was used, or (b) there was no feasible alternative means of abatement. *A.J. McNulty & Co., Inc.*, 19 BNA OSHC 1121, 1129 (No. 94-1758, 2000).

Fabi has not established its asserted affirmative defense. Here, the standard does not set forth a particular method of abatement. However, the Secretary does not assert that Fabi could have abated by adding additional levels of shoring. Indeed, the record indicates that Fabi did not have the authority to add levels of shoring without first consulting the structural engineer. Thus, the Secretary asserts that Fabi should have consulted the structural engineer to allow that individual to determine if there was a problem that needed addressing. Fabi does not assert that such consultation was infeasible. Rather, it asserts that it fulfilled that duty because an employee, Campano, informed Keating, the general contractor, about his concerns. (Tr. 435-36).

The problem with Fabi's defense is that there is nothing in the record to suggest that Campano, a carpenter for Fabi, was a management official with authority to bring potential structural problems to the attention of the general contractor. Indeed, Campano's testimony demonstrates that his statement to Ken Lang, the Keating official at the site, was at best informal and made during a work break:

Q Did you have any other discussions with any members of management at the site about these cracks?

A Only Kenny Lang from Keating.

Q And what did you say to Kenny Lang?

A Well we were sitting with my guys having a break, we asked Kenny if he saw the cracks over on one line. He says I've seen cracks all over this place.

Q Do you know if Mr. Lang went over to investigate?

A I don't believe so, no.

Q Did you at any point discuss the cracks with anyone else?

A Just our men. (Tr. 436).

It is not reasonable to expect that the general contractor will investigate every concern informally made by a subcontractor's employees. Rather, the proper procedure would have been for McCarron, having been alerted to the potential problem by his employees, to make an official request to Keating or directly to the structural engineer, to have the matter investigated. Having failed to do this, Fabi failed to do what was feasible to abate the violation.

Willfulness

A violation is willful if committed with intentional, knowing or voluntary disregard for the requirements of the Act or with plain indifference to employee safety. *L.E. Myers Co.*, 16 BNA OSHC 1037, 1046 (No. 90-945, 1993). A willful violation is differentiated from a nonwillful violation by a heightened awareness, a conscious disregard or plain indifference to employee safety. *General Motors Corp., Electro-Motive Div.*, 14 BNA OSHC 2064, 2068 (No. 82-630, 1991) (consolidated). A willful charge is not justified if an employer has made a good faith effort to comply with a standard or to eliminate a hazard even though the employer's efforts are not entirely effective or complete. *Keco Indus., Inc.*, 13 BNA OSHC 1161, 1169 (No. 81-263, 1987).

The Secretary asserts that Fabi willfully violated the cited standard by ignoring signs of distress and placing its employees at risk by proceeding to pour concrete before the conditions had been evaluated. She analogizes this case to *Arcadian Corp.*, 20 BNA OSHC 2001 (No. 93-0628, 2004). In that case, management knew that "weep hole leaks" in the liner of a urea reactor indicated that the liner was breached and in danger of exploding. Nonetheless, it allowed the reactor to continue in operation. Finding the violation willful, the Commission held that:

Absent any evidence that Arcadian had a good faith basis for concluding that the leaks were caused by anything other than a breach, its failure to shut down the reactor demonstrates a reckless disregard of employee safety....Their decision to treat weep hole leaks as something other than warnings of a hazardous breach without any

reasonable basis in fact and, essentially, ignore them was the equivalent of gambling with employee safety and was, indeed, reckless.

20 BNA OSHC at 2019.

I find the Secretary's reliance on *Arcadian* to be misplaced. In *Arcadian*, the only purpose of the "weep holes" was to warn of a liner breach. Here, the record establishes that cracks in the concrete are a standard occurrence and can have several benign causes, including shrinkage and deflection. Thus, the mere fact that there were cracks is not sufficient to conclude that McCarron had a heightened awareness that the slabs were in distress. Indeed, McCarron testified that he concluded that the cracks were caused by a normal deflection of the slabs which occurred when the shoring was cracked. (Tr. 246). Moreover, there is nothing in the record to contradict McCarron's testimony that he investigated the cracks and found nothing sinister about them. While he might not have taken his employees concerns seriously enough, and should have made a more thorough investigation, the record fails to establish that he either had a heightened awareness of the problem or exhibited intentional disregard to employee safety. In particular, I note that McCarron had several relatives on site, including his brother, brother-in-law, and son. (Tr. 240, 360) Each of these people was exposed to the risk of death or serious physical harm should the slabs collapse. Under these circumstances, I cannot conclude that Fabi willfully failed to comply with the standard.

Despite the foregoing, there is no dispute that a collapse of the slabs caused by improperly installed or maintained shoring could lead to death or serious physical harm. Accordingly, I find that the Secretary has established a serious violation of 29 C.F.R. § 1926.703(a)(1). Citation 2, Item 1 is therefore affirmed as a serious violation.

Penalties

The Secretary proposed a penalty of \$70,000.00 for the alleged willful violation set forth in Citation 2, Item 1, and \$7,000.00 for each of the serious violations of Citation 1. These represent the maximum penalties allowed under the Act. *See* 29 U.S.C. §§ 666(a) and (b).

When calculating an appropriate penalty, the Act requires that the Commission consider the gravity of the violation, the employer's size and history, and its good faith. 29 U.S.C. § 666(j). The

primary consideration when determining an appropriate penalty is the gravity of the violation. *Trinity Indus.*, 15 BNA OSHC 1481, 1483 (No. 88-2691, 1992). The gravity of a particular violation depends upon such matters as the number of employees exposed, the duration of exposure, the precautions taken against injury, and the likelihood that an injury would result. *Valdak Corp.*, 17 BNA OSHC 1135, 1138 (No. 93-0239, 1995), *aff'd*, 73 F.3d 1466 (8th Cir. 1996). The record amply demonstrates the likelihood of death or serious physical harm should a slab collapse. Moreover, there were many employees working in or around the area, each of whom was exposed to the hazard. Therefore, I find each of the affirmed violations to be of high gravity.

The record also demonstrates that, with over 240 employees, Fabi is a large employer. Also, Fabi has a history of prior violations. (Tr. 1417). Finally, the record demonstrates a pliant approach to safety that does not warrant credit for good faith. Fabi failed to follow shop drawings when it was not convenient to do so, yet slavishly followed them when it was convenient to do so, even though Fabi knew it was installing rebars in a manner contrary to industry custom and practice. Fabi failed to take with sufficient seriousness employee concerns about signs of distress in the slab, even though it knew or should have known that reinforcing steel was not placed properly. Moreover, Fabi assumed that it was safe to “crack” the shores based on extrapolations of concrete tests made days after the “cracking” operations. Based on this record, I find that the Secretary properly considered the statutory factors in its penalty proposals. The penalties for the affirmed items in Citation 1 are therefore assessed as proposed, as set out below in the Order. With respect to Citation 2, Item 1, because that item has been affirmed as serious instead of willful, the penalty for that violation has been assessed in accordance with the other serious violations.

Findings of Fact and Conclusions of Law

All findings of fact and conclusions of law relevant and necessary to a determination of the contested issues have been found specially and appear in the decision above. *See* Rule 52(a) of the Federal Rules of Civil Procedure.

ORDER

Based on the foregoing findings of fact and conclusions of law, it is ORDERED that:

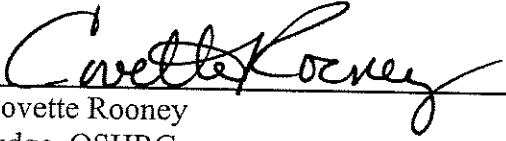
1. Citation 1, Item 1, Instances (a) and (b), alleging serious violations of section 5(a)(1) of the Act, are AFFIRMED, and a total penalty of \$7,000.00 is assessed for these two instances.

2. Citation 1, Item 1, Instance (c), alleging a serious violation of section 5(a)(1) of the Act, is VACATED.

3. Citation 1, Item 2, alleging a serious violation of 29 C.F.R. § 1926.703(a)(2), is VACATED.

4. Citation 1, Item 5, alleging a serious violation of 29 C.F.R. § 1926.703(e)(1), is AFFIRMED, and a penalty of \$7,000.00 is assessed for this item.

5. Citation 2, Item 1, alleging a willful violation of 29 C.F.R. § 1926.703(a)(1), is AFFIRMED as a serious violation, and a penalty of \$7,000.00 is assessed for this item.


Covette Rooney
Judge, OSHRC

Dated:
Washington, D.C.