
SECRETARY OF LABOR,

Complainant,

v.

BELDEN BRICK CO. ,

Respondent.

OSHRC Docket No. 97-2102

DECISION

Before: ROGERS, Chairman, VISSCHER, Commissioner.

BY THE COMMISSION:

Belden Brick Co. (Belden Brick) manufactures bricks at its facility in Sugarcreek, Ohio. OSHA Compliance Officer (CO) Scott Feil inspected Belden Brick's facility from September 17 through October 17, 1997 and, on November 18, 1997, the Secretary cited Belden Brick for alleged serious violations of the air contaminants standards under the Occupational Safety and Health Act of 1970, 29 U.S.C. §§ 651-678 (OSH Act). Belden Brick contested Citation 3, Items 1(a), (b), and (c).¹ The dispute regarding these items pertains solely to the method of calculating overexposure to respirable crystalline quartz silica (silica), for which the parties submitted cross motions for summary judgment on a stipulated record. Administrative Law Judge Nancy J. Spies granted the Secretary's motion,

¹Citation 3, Item 1(a) alleges a violation of 29 C.F.R. § 1910.134(a)(2) for Belden Brick's failure to establish a respiratory protection program; Item 1(b) alleges a violation of 29 C.F.R. § 1910.1000(c) for employee overexposure to respirable silica; and Item 1(c) alleges a violation of 29 C.F.R. § 1910.1000(e) for Belden Brick's failure to implement administrative or engineering controls to comply with the respirable silica PEL.

thereby affirming the violations and assessing the proposed penalty of \$4,500. We affirm the judge's decision.

BACKGROUND

Workplace exposure to silica is regulated by 29 C.F.R. §1910.1000(c), which provides as follows:

An employee's exposure to any substance listed in Table Z-3, in any 8-hour work shift of a 40-hour work week, shall not exceed the 8-hour time weighted average limit given for that substance in the table.

Table Z-3, entitled "Mineral Dusts," contains the mathematical formula for calculating the permissible exposure limit (PEL) to various "substances," including "Silica: Crystalline Quartz (Respirable)." The PEL formula for respirable silica is:
$$\frac{10\text{mg}/\text{m}^3}{\% \text{SiO}_2 + 2}$$

During the OSHA inspection, CO Feil sampled the respirable dust containing silica to which six Belden Brick employees were exposed. Belden Brick knew, prior to the inspection, that its employees were exposed to silica. The parties calculated the silica PELs by dividing 10mg/m³ by the sum of two plus the percent of respirable crystalline quartz silica contained in the dust samples (expressed as a whole number²). The data resulted in the following calculations:³

SAMPLE NUMBER

	1	2	3	4	5	6
PEL (mg/m ³)	0.714	0.858	1.17	0.926	1.09	0.81
8-hour TWA exposure to respirable dust containing silica (mg/m ³)	3.76	5.97	1.39	2.03	4.63	0.95
8-hour TWA exposure to pure respirable silica (mg/m ³)	0.45	0.58	0.09	0.18	0.33	0.10

²See *Bunge Corp.*, 12 BNA OSHC 1785, 1792 n.20, 1986-87 CCH OSHD ¶27,565, p. 35,807, n.20 (No. 77-1622, 1986) (consolidated).

³Exposures are calculated based on an 8-hour time weighted average (TWA). We also note that there were small variations between the parties' calculations, which would have no effect on assessing overexposure.

Based on this data, the Secretary concluded that each of the tested employees was overexposed to silica by comparing the calculated PELs to the 8-hour TWA exposures to respirable dust containing silica. Belden Brick contests the citation based on its contention that the PELs should have been compared to the 8-hour TWA exposures to only that portion of the respirable dust that is pure respirable silica, and that doing so resulted in no overexposures.

DISCUSSION

In *Ohio Cast Products, Inc.*, OSHRC Docket No. 96-0774, which we also issue on this date, we considered the identical issue presented here concerning the determination of silica overexposure pursuant to the Table Z-3 formula. In *Ohio Cast*, for the reasons there articulated, we upheld the Secretary's application of the formula, concluding that "the standard is not ambiguous" and "the Secretary has consistently enforced it in keeping with its plain meaning." Slip op. at 6-7. Here, it is undisputed that the six Belden Brick employees were exposed to an 8-hour TWA of silica-containing respirable dust exceeding the calculated PELs. Accordingly, applying the standard as upheld in *Ohio Cast*, we conclude that the six employees were overexposed to silica.

We also found in *Ohio Cast* that enforcement of the standard against the cited employer, who stipulated to knowledge that its operations utilized sand containing silica, did not offend due process. Acknowledging the "ample unrebutted evidence" of twenty-eight years of consistent application, we concluded that the standard's "plain meaning would be 'ascertainably certain' to an employer who is aware that its operations generate silica dust exposure." *Id.* at 7. Belden Brick also stipulated that it knew prior to the OSHA inspection that its employees were exposed to silica dust. Consequently, we conclude that Belden Brick had fair notice of the "means by which the cited standard provides for determining silica overexposure." *Id.*

Judge Spies assessed the proposed penalty of \$4,500 for these violations. We note that neither party has addressed the appropriateness of the penalty, and that the parties have

consistently characterized review before the Commission as presenting only the substantive issue of the method of calculating overexposure to silica. In these circumstances, we see no reason to disturb the judge's assessment. Accordingly, we affirm a serious violation for Citation 3, Items 1(a), (b) and (c), and assess a total penalty of \$4,500.

/s/

Thomasina V. Rogers
Chairman

/s/

Gary L. Visscher
Commissioner

Dated: September 22, 1999

Secretary of Labor,
Complainant,

v.

Belden Brick Co.,
Respondent.

OSHRC Docket No. **97-2102**

Appearances:

Mary Anne Garvey, Esquire
Office of the Solicitor
U. S. Department of Labor
Cleveland, Ohio
For Complainant

James P. Friedt, Esquire
Vorys, Sater, Seymour and Pease, LLP
Columbus, Ohio
For Respondent

Before: Administrative Law Judge Nancy J. Spies

**DECISION AND ORDER GRANTING THE
SECRETARY'S MOTION FOR SUMMARY JUDGMENT**

Occupational Safety and Health Administration (OSHA) compliance officer Scott Feil inspected a brick manufacturing facility owned and operated by Belden Brick Company (Belden) on September 17, 1997. As a result of his inspection, the Secretary issued several citations to Belden on November 18, 1997. Belden contested Citation No. 3, which contains three subitems. Item 1a alleges a serious violation of § 1910.134(a)(2) for failure to develop a respiratory program containing the required elements. Item 1b alleges a serious violation of § 1910.1000(c) and cites six instances where employees were allegedly exposed to respirable crystalline quartz silica in excess of the calculated permissible exposure limit (PEL). Item 3c alleges a serious violation of § 1910.1000(c) for failure to implement administrative and/or engineering controls to comply with the PEL of respirable crystalline quartz crystal.

The parties agreed that the case could be resolved without a hearing. They filed stipulated facts and cross-motions for summary judgment, and replies to the motions for summary judgment.

The dispositive issue is whether employee exposure to silica is determined by: (1) dividing the total weight in micrograms of the entire respirable dust sample by the number of cubic meters of air which flowed across the sampling device during the sampling period (which the Secretary advocates); or (2) dividing the weight in micrograms of the silica dust, which constitutes only a part of the entire dust sample, by the number of cubic meters of air which flowed across the sampling device (as Belden contends).

For the reasons stated below, the Secretary's position prevails.

Background

On August 12, 1998, the parties filed stipulated facts. The facts, which are pertinent to the time in question, are as follows:

1. Belden owned and operated a workplace at State Route 39, Sugarcreek, Ohio, where it was engaged in manufacturing bricks.
2. Belden was an employer engaged in a business affecting commerce within the meaning of § 3(5) of the Occupational Safety and Health Act of 1970 (OSHA), 29 U.S.C. §§ 651-678 (1970).
3. Belden was subject to the requirements of the Act and the standards thereunder.
4. The Occupational Safety and Health Review Commission has jurisdiction over the parties and the subject matter.
5. Between September 17, 1997, and October 17, 1997, OSHA compliance officer Scott Feil conducted an inspection of Belden's Sugarcreek, Ohio, facility.
6. The following individuals were employed by Belden at the time of Feil's inspection: Wilson May, Tom Taylor, Chuck Barger, Terry Burkhart, Memo Miller, and Aden Troyer.
7. Chuck Barger, Meno Miller, Aden Troyer, Terry Burkhart, Wilson May, and Tom Taylor are the employees described in items 1(b)(a), (b)(b), (b)(c), (b)(d), (b)(e), and (b)(f) respectively.
8. On or about October 7, 1998, Messrs. Barger, Miller, Troyer, and May wore respirators from which the lower straps had been removed.

9. Prior to September 17, 1997, Belden did not establish and maintain a respiratory protection program, which included all elements for the proper use of respirators as outlined in 29 C.F.R. § 1910.134(b), for the employees previously identified in Paragraph 8.

10. Prior to September 17, 1997, Belden knew that employees at its Sugarcreek, Ohio, facility were exposed to silica.

11. The OSHA PEL for respirable silica is calculated pursuant to 29 C.F.R. § 1910.1000 by employing the following formula:

$$\frac{10 \text{ mg/m}^3}{\% \text{SiO}_2 + 2}$$

12. The sole issue in this proceeding is whether overexposure to respirable silica is determined by comparing the OSHA PEL for respirable silica to the amount of silica in the sample as opposed to the total amount of dust containing silica in the sample.

13. OSHA used the following method to determine employee exposure to silica: the total weight in micrograms of the entire amount of respirable dust in the sample, divided by the number of cubic meters of air which flowed across the sampling device.

14. Belden used the weight of respirable silica to determine employee exposure rather than the weight of the (total) respirable dust containing silica. By dividing the weight of respirable silica by the cubic meters of air, the actual exposure for each of the six employees identified in Paragraph 6 was determined to be significantly below the OSHA PEL for respirable silica exposure. Application of Belden's method of calculation to OSHA's actual sampling results shows no over-exposure to respirable silica.

15. Application of OSHA's method of calculation to the samples of Belden's employees identified in Paragraph 6 yields an exposure level for each employee which is in excess of the OSHA PEL.

16. Overexposure to silica can cause silicosis resulting in permanent lung damage and disability.

17. Feasible administrative and engineering controls could have been implemented at Belden's facility to reduce employee exposure to silica.

18. Because Belden did not find that its employees were overexposed to silica, it did not determine and implement feasible administrative or engineering controls to reduce the silica exposure of the employees identified in Paragraph 6.

Section 1910.1000(c)

Respirable silica is a "substance" listed in Table Z-3. The standard governing the allowable level of respirable silica dust in the workplace is § 1910.1000(c), which provides:

An employee's exposure to any substance listed in Table Z-3, in any 8-hour work shift of a 40-hour work week, shall not exceed the 8-hour time weighted average limit given for that substance in the table.

Table Z-3, entitled "Mineral Dusts," sets forth the mathematical formula for calculating the PEL for "Silica: Crystalline Quartz (Respirable)" as follows:

$$\frac{10 \text{ mg/m}^3}{\% \text{SiO}_2 + 2}^4$$

The source standard of § 1910.1000, including Table Z-3, was 41 C.F.R. § 50-204.50. This standard was originally issued under the Walsh-Healy Act and later adopted as an established federal standard under § 6(a) of the Act. The Walsh-Healy standard was principally based on a non-governmental consensus standard developed by the American Conference of Governmental Industrial Hygienists (ACGIH). The mineral dust PELs established under 41 C.F.R. § 50-204.50 and later established in Table Z-3 of § 1910.1000 were derived from the ACGIH's Threshold Limit Values (TLV). When the Secretary incorporated the ACGIH TLVs into occupational health standards, the TLVs were transformed into legally enforceable PELs.

Section 50-204.276 of the Walsh-Healy standards set forth limits for exposure to mineral dusts that contained various amounts of silica. In 1971, the ACGIH published its "Documentation of the Threshold Limit Values for Substances in Workroom Air" (ACGIH, 3rd Ed., 1971), in which it stated that the TLV for silica quartz is to be measured relative to exposure of respirable dust containing quartz.

⁴ The formula provides:

10 milligrams per cubic meter of air

percentage silicon dioxide (here, respirable quartz silica) +2

OSHA's method of sampling for silica exposure is to measure the total amount of respirable particulate on a sampling filter and use it to calculate the 8-hour TWA exposure to respirable dust. OSHA also analyzes the sample to determine the amount of silica on the sampling filter. Using the amount of silica as expressed in terms of the percent of silica in the entire sample, OSHA then calculates the PEL according to the formula in Table Z-3. The calculated PEL is then compared to the 8-hour TWA respirable dust exposure. Overexposure to respirable silica exists where the 8-hour TWA respirable dust exposure exceeds the calculated PEL.

Belden contends that the 8-hour TWA exposure to airborne silica should be calculated by measuring only the respirable silica on the sampling filter, not the total amount of respirable particulate. Belden argues that OSHA's method allows the inclusion of inert or nuisance dust in the equation, which skews the actual TWA exposure to silica.

Discussion

Review Commission Judge Michael Schoenfeld decided this same issue in *Ohio Cast Products*, 1997 WL 235630 (No. 96-774, 1997). While Judge Schoenfeld's order has no precedential value in this proceeding, his reasoning is persuasive. In his order, Judge Schoenfeld granted the Secretary's motion for summary judgment, holding that

the fact that respirable silica may constitute only a portion of the total respirable dust is taken into account by the very formula required to calculate the PEL. That is, the "SiO₂" of the formula requires that the proportion of silica in the total respirable dust be accounted for. Thus, applying the formula correctly does not, as respondent claims, consider all respirable dust to which the employee is exposed to silica. Respondent's position amounts to a request that the PEL be calculated by twice dividing the amount of respirable dust by the proportion of that dust which is silica.

Id. at p.2 of ALJ's Decision. Judge Schoenfeld found the language of the standard unambiguous, but concluded that even if it were not, the Secretary's interpretation of the standard was reasonable and entitled to deference. *Martin v. OSHRC (CF & I Steel)*, 499 U.S. 144 (1991). The undersigned agrees.

Belden argues that the Secretary's interpretation of § 1910.1000(c) denies Belden its right of due process to fair notice of the law, citing *Bunge Corporation*, 12 BNA OSHA 1785

(Nos. 77-1622, 78-838 & 78-2213, 1986). In that case, the Commission considered whether Table Z-3 was applicable to grain dust. The Commission concluded that, since the table only makes reference to mineral dusts, it did not regulate grain dust exposure. The Commission also rejected, on fair notice grounds, the application of the PEL for silica to situations where the respirable dust was composed of both organic and inorganic matter.

As Judge Schoenfeld noted in *Ohio Cast Products*, *Bunge* is inapplicable to the issue of how exposure to respirable silica (a mineral dust) is to be calculated. The issue presented in *Ohio Cast Products* and the instant case was not an issue in *Bunge*. Belden had fair notice of OSHA's requirements under § 1910.1000(c).

Having considered the parties' arguments and the facts presented, the Secretary's motion for summary judgment is GRANTED, and Belden's motion for summary judgment is DENIED. Items 1a (§ 1910.134(a)(2)), 1b (§ 1910.1000(c)), and 1c (§ 1910.1000(e)) of Citation No. 3 are affirmed.

As the parties stipulated, OSHA's method of calculation yields an exposure level in excess of the PEL for each of the six employees named in item 1b. Overexposure to silica can cause silicosis resulting in permanent lung damage and disability. The violations are serious. Based upon the gravity of the violations, including the number of employees exposed and the duration of the exposure, a total penalty of \$4,500.00 for items 1a, 1b, and 1c of Citation No. 3 is assessed.

NANCY J. SPIES
Judge

Date: November 16, 1998