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SECRETARY OF LABOR,

Complainant,

v.

OHIO CAST PRODUCTS, INC.,

Respondent.

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OSHRC Docket No. 96-0774

### DECISION

Before: ROGERS, Chairman; VISSCHER, Commissioner.

BY THE COMMISSION:

Ohio Cast Products, Inc. (Ohio Cast) manufactures iron auto products at its worksite in Canton, Ohio. OSHA Compliance Officer (CO) Marc Snitzer inspected Ohio Cast's worksite from March 7 through April 30, 1996 and, on May 9, 1996, the Secretary cited Ohio Cast for numerous alleged violations of various standards under the Occupational Safety and Health Act of 1970, 29 U.S.C. §§ 651-678 (OSH Act). The parties subsequently entered into a settlement agreement resolving most of the alleged violations. The dispute regarding the remaining 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.<sup>1</sup> Administrative Law Judge Michael H.

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<sup>1</sup>The remaining items are: Citation 1, Item 4(a) alleging a violation of 29 C.F.R. § 1910.134(a)(2) for Ohio Cast's failure to provide respirators when necessary; Item 4(b) alleging a violation of 29 C.F.R. § 1910.134(a)(2) for Ohio Cast's failure to establish a respiratory protection program; Item 6(a) alleging a violation of 29 C.F.R. § 1910.1000(c) for employee overexposure to respirable silica; and Item 6(b) alleging a violation of 29 C.F.R. § 1910.1000(e) for Ohio Cast's failure to implement administrative or engineering controls to reduce employee exposure to silica.

Schoenfeld granted the Secretary's motion, thereby affirming the violations and assessing the proposed penalties of \$8,000. 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 Snitzer and Ohio Cast consultant William Nixon sampled the respirable dust around employee Rick Hill during an operation that Ohio Cast knew involved the use of sand containing silica, and during which Hill used no respiratory protection. The parties calculated the silica PEL by dividing 10mg/m<sup>3</sup> by the sum of two plus the percent of respirable crystalline quartz silica contained in the dust samples (expressed as a whole number<sup>2</sup>).

Based on CO Snitzer's sample, the permissible exposure limit for Hill was 1.47mg/m<sup>3</sup>. Because Hill's 8-hour time weighted average (TWA) exposure to respirable dust was

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<sup>2</sup>See *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).

2.60mg/m<sup>3</sup>, which exceeded the PEL, the Secretary concluded that Hill was overexposed to silica.<sup>3</sup>

Although the parties do not dispute the accuracy of the underlying calculations, Ohio Cast contests the citation based on its contention that the PEL should have been compared to Hill's exposure to pure respirable silica, rather than his exposure to all respirable dust. Because Hill's exposure to pure silica did not exceed the calculated PEL from either OSHA's or Nixon's samples, Ohio Cast contends that the citations should be vacated.

## DISCUSSION

### History of the Standard

The Secretary adopted the silica component of the Air Contaminants Standard as an established Federal standard in 1971. The silica exposure limit derives from the Walsh-Healy Act, which required compliance with exposure levels developed by the American Conference of Governmental Industrial Hygienists (ACGIH). The Secretary adopted the standard under §6(a) of the OSH Act, 29 U.S.C. § 655(a), transforming the ACGIH's threshold limit values into PELs. *See Smith Steel Casting Co.*, 15 BNA OSHC 1001, 1003-04, 1007, 1991-93 CCH OSHD ¶29,314, pp. 39,361-62, 39,366 (No. 80-2069, 1991) (consolidated). The ACGIH's "Documentation of the Threshold Limit Values for Substances in Workroom Air" explains the basis of the formula in the same manner applied by the Secretary, stating that "[f]or many years the threshold limits for dust containing quartz have been based on the concept that the magnitude of the toxicity of the dust is proportional to the concentration of quartz in the dust." (Third Edition, 1971.)

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<sup>3</sup>According to Nixon's sample, which was based on a slightly larger volume of sampled air and respirable dust as well as a greater measured concentration of silica, the PEL for Hill was 1.23mg/m<sup>3</sup>. Ohio Cast's calculations showed exposure to an 8-hour TWA of respirable dust containing silica of 3.47mg/m<sup>3</sup>, and an 8-hour TWA of pure respirable silica of .213mg/m<sup>3</sup>. The Secretary's measurements also showed that Hill's 8-hour TWA exposure to pure respirable silica was 0.125mg/m<sup>3</sup>.

In the ensuing years, there have been numerous litigated cases involving alleged silica overexposure. Nonetheless, other than *Belden Brick*, which we also issue today, we could find no other case in which a respondent argued that the formula should be applied in the manner proposed by Ohio Cast. Moreover, the only case in which we were able to find an explanation of the specific operation of the Table Z-3 formula was *Bunge Corp.*, where the Commission articulated the Secretary's application of the formula, which makes clear that it is consistent with her position in this case. 12 BNA OSHC at 1794, 1986-87 CCH OSHD at p. 35,809.<sup>4</sup>

In 1989 OSHA issued a new Air Contaminants Standard, revising the PELs for 428 toxic substances, including silica. 54 Fed. Reg. 2332 (1989) (codified at 29 C.F.R. § 1910.1000). In the Federal Register publication of the new standards, the Secretary described the operation of the 1971 silica standard as a "limit for silica-containing dusts [for which there] is a respirable dust limit expressed as [the Table Z-3 formula]." 54 Fed. Reg. at 2521. The Federal Register notice further explained that "[i]f the former OSHA formula is used to calculate a limit for a dust containing 100 percent quartz, the limit would be 0.098 mg/m<sup>3</sup>. . . ." *Id.* Although the revised Air Contaminants Standard was ultimately vacated, *AFL-CIO v. OSHA*, 965 F.2d 962 (11th Cir. 1992), the Federal Register notice is evidence of the Secretary's consistency in applying the silica PEL formula.

### **Application of the Formula**

Section 1910.1000(c) sets exposure limits to respirable silica based on a formula that measures employee exposure to respirable dust and yields a variable PEL based on the concentration of silica the dust contains. As described by an OSHA compliance officer in

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<sup>4</sup>The Commission described the silica standard in *Bunge* as "virtually indecipherable" and concluded that the standard did not provide the cited employer with fair notice of its applicability. 12 BNA OSHC at 1790, 1794, 1986-87 CCH OSHD at pp. 35,805, 35,809. The Commission's description was in the context of whether a grain-handling facility would have fair notice that Table Z-3, including the silica standard, applied to soybean dust. Here, Ohio Cast does not contest the applicability of the silica standard, only its interpretation.

a prior case, the formula “create[s] a sliding scale of PEL’s depending on the percentage of the . . . total respirable fraction of the dust that is crystalline quartz silica. In this way, the PEL’s are lowered as the percentage of silica in the dust becomes higher. The upper limit of the sliding scale is the PEL for inert or nuisance dust (containing no quartz); the lower limit is the PEL for pure quartz dust.” *Bunge Corp.*, 12 BNA OSHC at 1792, 1986-87 CCH OSHD at p. 35,806. Thus, the PELs at both ends of the sliding scale, *i.e.*, those for respirable inert or nuisance dust and for pure respirable silica, do not vary. The PEL for inert or nuisance dust can be calculated by inserting “0%” into the denominator of the respirable silica formula to represent the complete absence of silica from the dust sample. This yields a PEL of 5mg/m<sup>3</sup>, which is the same PEL separately established for respirable inert or nuisance dust. Similarly, the PEL for pure respirable silica can be calculated by inserting “100%” in the denominator of the formula,<sup>5</sup> which results in a PEL of .098 mg/m<sup>3</sup>.

The Secretary evaluates overexposure by comparing the PEL to an employee’s exposure to all respirable silica-containing dust. Ohio Cast contends that overexposure should be measured, instead, by comparing the PEL to an employee’s exposure to only the pure silica component of the dust because the standard lists the “regulated substance” as silica. We reject Ohio Cast’s argument.

The computed silica PEL must be compared to employee exposure to the same substance from which it was calculated. Because the silica PEL is calculated based on a measurement of all respirable dust, we conclude that it can only be compared to that substance in assessing overexposure. The PEL formula operates to regulate silica exposure by determining its concentration in respirable dust and setting variable limits on exposure to *the respirable dust* depending on its silica concentration. The silica percentage in the divisor is the only variable in the formula. The standard, therefore, regulates pure respirable silica

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<sup>5</sup>See *Bunge Corp.*, 12 BNA OSHC at 1791 n.18, 1986-87 CCH OSHD at p. 35,806, n.18.

(the listed “substance”) because its concentration in the dust is *the* determinative factor in calculating the PEL.

If, as Ohio Cast contends, the standard required that the PEL be compared to only the pure silica component of respirable dust exposure, the PEL would also have to be calculated based on exposure to only the pure silica component of the dust. In those circumstances, the PEL would be calculated by inserting 100% in the denominator of the formula to represent the pure respirable silica exposure in the dust sample, which results in a constant PEL of .098mg/m<sup>3</sup>. Ohio Cast, however, has not acknowledged that its proposed application of the formula would require such an adjustment to the PEL computation. Moreover, the standard, as currently written,<sup>6</sup> operates to assess silica overexposure in the manner applied by the Secretary.

We, therefore, reject Ohio Cast’s contention that the Table Z-3 wording, which identifies the regulated substance as “Silica: Crystalline Quartz (Respirable)” compels an overexposure determination by comparing the PEL to pure silica exposure. Ohio Cast’s reading of the standard fails to construe the substance list in the context of the standard as a whole, and ignores the mathematical operation of the formula. *See Deering Milliken, Inc.*, 6 BNA OSHC 2143, 2146-47, 1978 CCH OSHD ¶ 32,191, pp. 28,039-40 (No. 12597, 1978), *enfd* 630 F.2d 1094 (5th Cir. 1980) (rejecting employer’s contention that standard reading “cotton dust (raw)” applied only to cotton portion of dust generated by cotton processing, Commission concluded that standard regulated both cotton and non-cotton dust particles). While the §1910.1000(c) reference to the regulated “substance,” as applied to silica, may be slightly less than direct, when read in conjunction with the PEL itself, the standard is not ambiguous and the Secretary’s application fits the standard’s plain meaning. Further, the

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<sup>6</sup>The Secretary’s 1989 attempt to revise the Air Contaminants Standard set a constant PEL of 0.1mg/m<sup>3</sup> for pure respirable silica. 54 Fed. Reg. 2521.

Secretary has consistently enforced it in keeping with its plain meaning. Accordingly, we conclude that Mr. Hill was overexposed to silica.

### **Fair Notice**

The Commission and courts have recognized the right of employers to fair notice of a standard's requirements. *See e.g., Bunge*, 12 BNA OHSC at 1790, 1986-87 CCH OSHD at p. 35,808-09; *General Electric Co. v. EPA*, 53 F.3d 1324, 1328-29 (D.C. Cir. 1995) (administrative regulations must articulate the conduct they require or prohibit in such a way that "a regulated party acting in good faith would be able to identify, with 'ascertainable certainty,' the standards with which the agency expects parties to conform . . ."). This determination, however, "is made with reference to what an employer familiar with the industry could reasonably be expected to know." *Martin v. American Cyanamid Co.*, 5 F.3d 140, 146 (6th Cir. 1993).

Here, in view of our conclusion that the standard's formula operates to regulate silica exposure in only one manner, we find that its plain meaning would be "ascertainably certain" to an employer who is aware that its operations generate silica dust exposure. Having stipulated to knowledge that its operations utilized sand containing silica, Ohio Cast is indisputably such an employer. Moreover, as discussed above, there is ample un rebutted evidence that the Secretary has enforced this standard in a consistent manner since its adoption in 1971. In these circumstances, we conclude that Ohio Cast had fair notice of the means by which the cited standard provides for determining silica overexposure.

### **Penalty**

Judge Schoenfeld assessed the proposed penalty of \$4,000 each for the two citation items at issue here. We note that neither party has addressed the appropriateness of the penalties, 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 serious violations for Citation 1, Items 4(a) & (b) and 6(a) & (b), and assess a total penalty of \$8,000.

/s/  
Thomasina V. Rogers  
Chairman

/s/  
Gary L. Visscher  
Commissioner

Dated: September 22, 1999

UNITED STATES OF AMERICA  
OCCUPATIONAL SAFETY AND HEALTH REVIEW COMMISSION

SECRETARY OF LABOR,

Complainant,

v.

OHIO CAST PRODUCTS, INC.,

Respondent.

DOCKET NO. 96-0774

APPEARANCES: Janice L. Thompson, Esq.  
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For Complainant

Keith A. Ashmus, Esq.  
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Cleveland, Ohio  
For Respondent

BEFORE: MICHAEL H. SCHOENFELD,  
Administrative Law Judge

**ORDER GRANTING SECRETARY'S MOTION FOR SUMMARY JUDGMENT**

This case arises under the Occupational Safety and Health Act of 1970, 29 U.S.C. § § 651 - 678 (1970) ("the Act").

Having had its worksite inspected by a compliance officer of the Occupational Safety and Health Administration, Ohio Cast Products, Inc., ("Respondent") was issued one citation alleging seven serious violations of the Act (Citation No. 1), one citation alleging a single repeat violation of the Act (Citation No. 2) and one citation alleging a single, other-than-serious violation of the Act (Citation No.3). Penalties totaling \$23,200 were proposed by the Secretary. Respondent timely contested. Following the filing of a complaint and answer the parties entered into a settlement

agreement disposing of many of the contested items.<sup>7</sup>

The parties have cross motioned for summary judgment with respect to the remaining unresolved parts of Citation No. 1, namely Items 4a, 4b, 6a and 6b.

In the absence of a specific Commission Rule as to summary judgment, Rule 56 of the Federal Rules of Civil Procedure applies by virtue of Commission Rule 2, 29 C.F.R. § 2200.2. The Federal Rule provides in pertinent part;

[t]he judgment sought shall be rendered forthwith if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law.

The inquiry is whether a fair minded jury could return a verdict for the [movant] on the evidence presented. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242 (1986) citing *Brady v. Southern Ry. Co.*, 320 U.S. 476, 479-480 (1943). The Commission has long recognized that summary judgment is not appropriate where material facts are in dispute. *Van Buren-Madawaska Corp.*, 13 BNA OSHC 2157 (No. 87-214, 1989). In this case, each party maintains that it is entitled to a judgment as a matter of law. The parties have filed a joint stipulation of fact, each has filed supporting affidavits and both agree that material facts are not in dispute. The matter is thus appropriate for determination by summary judgment.

All of the remaining items in contest are dependent upon whether Respondent's employees were exposed to respirable silica dust in amounts exceeding the permissible exposure limit ("PEL").

The parties have stipulated that "[a]t issue is whether overexposure is determined by comparing the OSHA PEL to the amount of respirable silica or to the respirable dust sample containing silica." (Stip. ¶ 13.). Each of the parties urges that there is only one legally correct way to measure silica dust exposure. They differ as to which is the one correct way, however.

Under either scenario dust samples are collected and weighed. The Secretary's method of calculating the exposure of employees to respirable silica is to divide 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 time period. Respondent, on the other hand,

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<sup>7</sup> Items 1, 2a, 2b, 3, 5a, 5b and 7 of Citation No. 1, Citation No. 2 and Citation No. 3 are the subject of the Stipulation and Partial Settlement Agreement. The terms of that agreement are approved and incorporated herein by reference.

calculates the employee exposure by dividing the **weight in micrograms of respirable silica dust which constitutes a part of the entire respirable dust sample** by the number of cubic meters of air which flowed across the sampling device during the sampling time period. The sole question is whether the weight to be considered is that of the total amount of dust containing some respirable silica (OSHA position) or only the amount of respirable silica which is a fraction of the total dust (Respondent's position).

For the reasons which follow, it is held that for a determination as to whether the PEL for exposure to respirable silica has been exceeded is determined by comparing the OSHA PEL for crystalline quartz silica to the total amount of respirable dust collected in the sample. Thus, Complainant's motion will be granted.

The applicable standard, 29 C.F.R. § 1910.1000(c) states that 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 given for that substance in the table.

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

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

(Footnote omitted.)

The unambiguous reference in Table Z-3 to the substance regulated by specific inclusion in the Table is to "crystalline quartz silica (respirable)." While it is respirable quartz silica not any other dust that is regulated by this part of the standard, the fact that respirable silica may constitute only a portion of the total respirable dust collected is taken into account by the very formula required to calculate the PEL. That is, the "%SiO<sub>2</sub>" 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 be 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.

Resort to outside aids in interpreting a standard is not appropriate where, as here, the regulation is abundantly clear on its face. Moreover, even if considered to be less than clear, the Commission and its administrative law judges are required to defer to the Secretary's interpretation of a standard where the interpretation is not unreasonable. *Martin v. OSHRC* (C.F. & I. Steel), 499 U.S. 144 (1991). See also, *Secretary v. General Motors Corporation, Delco Chassis Division*, 89 F3d 313, 314 (6th Cir., 1996), in which the court said:

This court accords substantial deference to the Secretary's construction of an OSHA standard if it is [un]ambiguous and the Secretary's interpretation of it is reasonable....However, we need not defer to the Secretary's interpretation where an "alternative reading is compelled by the regulation's plain language or by other indications of the Secretary's intent at the time of the regulation's promulgation.

The formula for determining the PEL for respirable silica is unambiguous and the Secretary's interpretation is reasonable.

Further, despite Respondent's argument regarding nuisance dusts, the language of the standard does not compel an "alternative reading." Nor does its history show any other intent on the part of the Secretary at the time of its promulgation. Respondent looks to footnote "d" of Table Z-3 which explains the table listing for a limit of exposure to "Inert or Nuisance Dust." The note states that "[a]ll inert or nuisance dusts...not listed specifically by substance name are covered by this limit...." Respondent's claim amounts to an argument that the separate PEL for respirable "Inert or Nuisance Dusts" must be the one applicable where, as here, the respirable dust to which the employees were exposed was composed of some combination of a mineral dust specifically identified in Table Z-3 and other respirable matter. Again, because the silica proportion of the dust to which employees are exposed is part of the calculation of the silica PEL, that portion of the dust to which the employees were exposed which was not silica, is disregarded by the calculation's inclusion of "%SiO<sub>2</sub>".

Respondent's reliance on *Bunge Corporation*, 12 BNA OSHC 1785, 1794-95 (Nos. 77-1622, 78-0838 and 78-2213, 1986), is misplaced. There, the Commission rejected OSHA's contention that the dust standards give sufficient notice that the standard applies to grain dust. It then went on to reject, on fair notice grounds, the application of the silica PEL to situations where the respirable dust was composed of both organic and inorganic matter. The Commission held that;

a reasonable employer in the grain-handling industry would not understand from reading the crystalline quartz silica provision of the mineral dust standard that it is to be interpreted and applied in the manner described by the Secretary's witnesses....The provision as applied to the facts of this case does not give fair notice of its requirements.

*Bunge*, supra. 12 BNA at 1794. In sum, the Commission's holdings in *Bunge* are inapposite here. The Secretary need not rely on the predecessor standard in interpreting the cited standard. It is noted, however, that the source of the present OSHA standard, 29 C.F.R. § 1910.1000 is identified by 29 C.F.R. § 1910.1499 as an established federal (Walsh-Healey) standard, 41 C.F.R. § 50-204.50. The crystalline quartz silica provision under Walsh-Healey was, in turn, adopted from a consensus

standard developed by the American Conference of Governmental Industrial Hygienists (“ACGIH”) which is a private, non-governmental body. The ACGIH did not view its limits as “permissible exposure limits,” however. Its “Threshold Limit Values” (“TLV”) are based on industrial hygiene principles, not upon desirable or necessary legal requirements. OSHA’s PELs and ACGIH’s TLVs were not intended for the same purpose and had different meanings to the bodies which developed each. *Bunge Corporation*, supra, 12 BNA at 1788, n.10. The difference between the intent of ACGIH in establishing its TLVs and that of the Secretary in converting them to PELs does not, however, amount to a showing that the Secretary’s intent at the time of promulgating the OSHA standard compels any other reading of the regulation.

Based upon the above, in answer to the issue as posed by the parties (Stip. ¶ 13), I hold that overexposure to respirable silica dust is determined by comparing the OSHA PEL to the amount of the respirable dust sample containing silica.

Accordingly, Complainant’s Motion for Summary Judgment is GRANTED.<sup>8</sup>

Citation No. 1, Items 4a, 4b, 6a and 6b are AFFIRMED.

Inasmuch as the proposed penalties are unchallenged and appear to be in conformance with all of the provisions of § 17(j) of the Act, 29 U.S.C. § 666(j), penalties of \$4,000 each for items 4 and 6 are assessed.

Dated:

Washington, D.C.

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Michael H. Schoenfeld  
Judge, OSHRC

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<sup>8</sup> Concomitantly, Respondent’s Motion for Partial Summary Judgment is DENIED.