SECRETARY OF LABOR, Complainant, v. WEIRTON STEEL CORP., Respondent. I.S.U Authorized Employee Representative.	OSHRC Docket No. 98-0701

DECISION

Before: RAILTON, Chairman; and STEPHENS, Commissioner.

BY THE COMMISSION:

Weirton Steel Corporation ("Weirton") operates several blast furnaces at its steel manufacturing facility in Weirton, West Virginia. Following an inspection, the Occupational Safety and Health Administration ("OSHA") issued Weirton a citation containing one willful item and one serious item. Under the willful item, the Secretary alleges that Weirton's employees were allowed to work without respiratory protection equipment where carbon monoxide ("CO") and other gases endangered them, in violation of 29 C.F.R. § 1910.134(a)(1). Under the serious item, the Secretary alleges that employees were not provided with appropriate protective equipment, such as fire-resistant coveralls, in violation of 29 C.F.R. § 1910.132(a). Weirton contested the citation. Following a hearing on these alleged violations, Administrative Law Judge Ann Z. Cook affirmed both items and assessed the penalties proposed by the Secretary – $50,000 for the willful item and $5,000 for the serious item.

Upon review, we reverse the judge's decision in part. For the reasons given below, we affirm the item alleging that Weirton failed to comply with section 1910.134(a)(1) and find that the violation was willful – although we conclude that a lower penalty of $20,000 is appropriate. However, we vacate the item alleging that Weirton failed to comply with

section 1910.132(a).[1]

I. BACKGROUND

On October 15, 1997, several of Weirton's employees were assigned to perform maintenance work on the bleeder deck of the Number 4 Blast Furnace. The level immediately atop the blast furnace, known as the charging deck, is where raw materials are charged or dumped into the furnace. Above the charging deck is the bleeder deck – the highest point on the furnace. On the bleeder deck of Weirton's furnace are two bleeder valves that allow for the release of excess pressure and steam created during the operation of the furnace. The excess pressure is usually released in the form of gas and steam but at times includes "burps" of flame and hot particles of dust or coke.[2]

For several months before the subject event, one of the bleeder valves did not close securely, presenting a persistent problem of the furnace not holding pressure and therefore not operating properly. Maintenance employees were frequently required to go up to the bleeder deck to reseat the valve with a "come-a-long" – a chain and hook device, one end of which would be secured to the valve and the other to any other part of the structure to pull the bleeder shut. In order to access the bleeder deck, employees had to ride an elevator to the charging deck, take a walkway across the charging deck, and climb five or six flights of stairs to the bleeder deck.

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[1]Because we have resolved these issues on the basis of the record and the submitted briefs before us, we deny Weirton's motion for oral argument.

[2]There are three operational states of the blast furnace: full wind; partial wind; and shut down. When the furnace is in full operation, it is referred to as "full wind" with high pressure potentially created at the bleeder valves. In this mode, there is an increased potential for "burps" of flame and particulate matter. Weirton does not assign employees to perform tasks at the bleeder deck when the furnace is under full wind. When the furnace is idling, it is said to be under "partial wind," and the instance of burps is much lower. Even when the furnace is "shut down," steam can still be emitted from the bleeders.

On the day in question, Weirton's turn supervisor notified the maintenance supervisor on two separate occasions that the bleeder valve required reseating. To successfully perform this task, employees were required to make two trips to the bleeder deck that day – one in the morning and one in the afternoon. On both trips that day, at some point during the ascent to the bleeder deck, Weirton's employees were exposed to levels of CO that caused the indicator on a company-issued CO monitoring device to audibly alarm, indicating that the CO level was 150 parts per million ("ppm") or higher. In terms of protective clothing, all the employees that went up to the bleeder deck that day wore jeans and fire retardant jackets.

On the morning trip, Weirton's maintenance supervisor, accompanied by another employee, climbed to the bleeder platform in order to pull the malfunctioning bleeder valve shut. Although self-contained breathing apparatus ("SCBA"), each holding a 20-30 minute supply of air, are stored both at the elevator to the charging deck and the charging deck itself, neither the maintenance supervisor nor the employee brought respirators with them as they began to ascend the furnace. As required by Weirton's safety rules, however, the employee carried a CO monitoring device. The monitor began registering CO as he and the maintenance supervisor walked from the elevator to the charging deck. As they started to climb the stairs, the monitor's alarm began to sound, indicating a CO level of at least 150 ppm.

Although it is standard company procedure to leave an area when a CO monitor indicates a level of 150 ppm, the employee who made the morning trip to the bleeder deck testified that whether this practice is enforced depends on the individual supervisor. In this employee's view, the maintenance supervisor and the employee could either: (1) go back down "and wait for the wind to shift"; (2) use SCBA; or (3) go up to "where the fresh air was" on top of the bleeder platform. Since the job was only expected to take 10 minutes, the maintenance supervisor and the employee decided to continue to the bleeder deck rather than return to the charging deck to procure SCBA. According to the employee, it was the general experience of Weirton's employees that CO levels subside as employees "get into the fresh

air" by ascending higher on the furnace. However, on this occasion, as the maintenance supervisor and the employee continued to ascend, the reading on the CO monitor continued to increase. On about the fourth or fifth flight of stairs, the monitor displayed the highest reading it was capable of measuring – 1999 ppm.

When the maintenance supervisor and the employee reached the top of the furnace, the bleeder platform was covered with steam. According to the maintenance supervisor, workers on the top of the furnace routinely rely on the appearance of visible steam as an indicator that CO is present. In conformity with the usual practice when steam is observed, the maintenance supervisor and the employee waited at the top of the stairs for the wind to shift, at which point the steam subsided and the monitor's CO reading dropped to 20-29 ppm. However, the maintenance supervisor and the employee were unable to close the valve completely because its rubber seal had deteriorated and therefore, they left the bleeder deck without completing the assigned task. Weirton did not discipline the maintenance supervisor or the employee who accompanied him to the bleeder deck for failing to evacuate the area when a concentration of 150 ppm was encountered despite the fact that Weirton's written safety procedures prohibit working in such concentrations without SCBA.

Later that day, the maintenance supervisor instructed two other employees to accompany him on a second attempt to close the bleeder valve. As they ascended the furnace, they were joined by two fuel department employees. Again, neither the maintenance supervisor nor the employees took respirators. As they started up the steps from the charging deck to the bleeder platform, a CO monitor's alarm sounded. One of the fuel department employees turned back because his monitor's readings were increasing, and he felt it was unsafe to continue. At one point, the monitor's reading was as high as 600 ppm. One of the employees who accompanied the maintenance supervisor on this trip to the bleeder deck testified, as did the employee who had made the earlier trip, that in their discretion they decided to continue to the bleeder platform. The CO reading returned within the normal range soon after reaching the bleeder deck. Although the group had to wait briefly for the

air to clear, they were able to successfully close the bleeder valve. Again, neither the maintenance supervisor nor the employees were disciplined by Weirton for their actions.

II. ALLEGED WILLFUL VIOLATION OF SECTION 1910.134(a)(1)

A. Applicability of the Cited Standard

The Secretary alleges that by allowing its employees to be exposed to CO without respiratory protection, Weirton failed to comply with section 1910.134(a)(1). At the time this case arose,[3] the standard provided in pertinent part as follows:

> [(a) *Permissible practice*. (1)] In the control of those occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors, the primary objective shall be to prevent atmospheric contamination. This shall be accomplished as far as feasible by accepted engineering control measures.... When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be used pursuant to the following requirements.
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> (2) Respirators shall be provided by the employer when such equipment is necessary to protect the health of the employee....
>
> (3) The employee shall use the provided respiratory protection in accordance with instructions and training received.

Although the parties agree that the issue under the respiratory protection standard is whether the Secretary proved that the atmosphere surrounding the blast furnace contained harmful concentrations of CO,[4] they disagree as to whether this standard can properly be cited here in view of the standard regulating air contaminants, 29 C.F.R. § 1910.1000, which sets eight-hour time-weighted average exposure limits for numerous air contaminants, including CO. An eight-hour time-weighted average represents the cumulative exposure of an employee over the course of an eight-hour workday. 29 C.F.R. § 1910.1000(d). CO is

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[3]Approximately three months after the inspection in this case, the Secretary published an extensive revision of the respiratory protection standard. That revision took effect on April 8, 1998. 63 Fed. Reg. 1152 (1998).

[4]The employee representative did not file any briefs.

assigned an eight-hour time-weighted average limit of 50 ppm.

For many of the listed air contaminants, but not CO, section 1910.1000 also sets "ceiling concentration" limits and "peak" amounts above the ceiling concentration limits representing the maximum amounts permissible for specifically prescribed short periods of time during an employee's workday.[5] Weirton nevertheless contends that section 1910.1000 must be interpreted as addressing both eight-hour time weighted and short term exposure to CO since the standard prescribes ceiling limits for other air contaminants. According to Weirton, section 1910.1000 exclusively defines when a hazardous atmosphere exists, and section 1910.134 cannot be cited to require respirators in circumstances where section 1910.1000 does not impose an acceptable ceiling concentration or a maximum peak limit. The judge rejected Weirton's view, holding that the two standards are directed at different hazards – section 1910.1000 to "the danger of extended exposures to employee health" and section 1910.134 to "more acute exposure posing immediate health threats." The judge reasoned:

> [T]o agree with Respondent's interpretation would lead to the untenable conclusion that a fatal five-minute exposure to high concentrations of CO would violate no standard so long as the CO level did not exceed the total amount allowed by [section] 1910.1000 over eight hours.

We agree with the judge, but for the reason that the issue raised by Weirton was decided more than twenty years ago in *Snyder Well Servicing,* 10 BNA OSHC 1371, 1982 CCH OSHD ¶ 25,943 (No. 77-1334, 1982). In *Snyder Well*, the Commission held that

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[5]*See* 29 C.F.R. § 1910.1000(b)(2)-(3) (peak allowances from 5 to 30 minutes depending on specified contaminant except several for which no excursion above ceiling is allowed). Prior to the inspection here, the Secretary promulgated an extensive revision of section 1910.1000 that, among other things, reduced the eight-hour time-weighted average limit for CO to 35 ppm and added a ceiling limit of 200 ppm. 54 Fed. Reg. 2332 (1989). However, in response to a judicial challenge, the Secretary subsequently issued an administrative stay of some of the revised exposure limits, including the ceiling concentration for CO in blast furnace operations. 54 Fed. Reg. 36,765 (1989). Thereafter, the Court of Appeals for the Eleventh Circuit invalidated the entire revised standard. *AFL-CIO v. OSHA,* 965 F.2d 962 (11th Cir. 1992). The Secretary then issued a notice vacating the exposure limits in the invalidated standard and reinstating those in the original version. 58 Fed. Reg. 35,338-39 (1993).

section 1910.134 was not preempted by section 1910.1000 and further determined that section 1910.134 requires respiratory protection to be provided when its use is made necessary by the presence of a hazard.[6] *Id.*, 10 BNA at 1374-76, 1982 CCH OSHD at pp. 32,510-11. *See also Gulf Oil Corp.*, 11 BNA OSHC 1476, 1479-81 & n.7, 1983-84 CCH OSHD ¶ 26,529, pp. 33,818-20 & n.7 (No. 76-5014, 1983). Weirton's arguments in this case do not persuade us to overturn these longstanding precedents.[7] Accordingly, we find that section 1910.134, as cited here, is not preempted by section 1910.1000.[8]

[6]We note that in the preamble accompanying OSHA's revised respiratory protection standard, the Secretary acknowledges that a violation of section 1910.134 can occur even in the absence of an applicable PEL. 63 Fed. Reg. 1152, 1181 (1998).

[7]Weirton claims that the Secretary's directive interpreting section 1910.134, OSHA Instruction CPL 2-0.120 – *Inspection procedures for the Respiratory Protection Standard.* (Sept. 25, 1998) indicates that citations under that standard are to be issued "only where a definable over-exposure exists" and not when the Secretary has failed to establish a permissible exposure limit. Weirton's reliance on this directive is misplaced. The directive was issued in the context of the revised respiratory protection standard, not the version of the standard at issue here, and became effective on September 25, 1998, several months after the citation was issued in this case. In addition, we find that Weirton has misinterpreted the directive. Weirton correctly quotes, but misconstrues, a provision of the directive that explicitly applies only where "an overexposure to an OSHA [PEL]" exists. *Id.* at 7.2.2, *Citation Guidelines.* On its face, this language does not support Weirton's claim that the directive "anticipates that citations will be issued only where a definable over-exposure exists."

[8]We express no view concerning the inter-relationship of sections 1910.134 and 1910.1000, as they currently exist.

B. The Existence of a Hazard as Required by the Cited Standard

We turn now to whether the Secretary has made the requisite showing of the existence of a hazard within the meaning of section 1910.134(a)(1). Whether a hazard exists depends on whether there is a significant risk. *See, e.g., Anoplate Corp.*, 12 BNA OSHC 1678, 1681-82, 1986-87 CCH OSHD ¶ 27,519, pp. 35,679-80 (No. 80-4109, 1986) (proof of significant risk is part of Secretary's burden under standard requiring protective equipment where "danger" exists); *Kastalon, Inc., and Conap, Inc.*, 12 BNA OSHC 1928, 1935, 1986-87 CCH OSHD ¶ 27,643, pp. 35,977-78 (No. 79-3561, 1986) (to prove significant risk of harm from carcinogen exposure cited under general duty clause, requiring proof of recognized hazard, Secretary must show probability that employees will contract cancer under conditions present in particular workplace); *Pratt & Whitney Aircraft v. Donovan*, 715 F.2d 57, 63-67 (2d Cir. 1983) (Secretary must show that potential hazard presents significant risk of harm, which means that Secretary must offer evidence establishing that circumstances existing in workplace operation at issue are "likely to give rise to the alleged hazard"). Whether there exists a significant risk depends on both the severity of the potential harm and the likelihood of its occurrence, but there is an inverse relationship between these two elements. As the severity of the potential harm increases in a particular situation, its apparent likelihood of occurrence need not be as great. *Pratt & Whitney*, 715 F.2d at 64.

Here, we find that the severity of the potential harm is high. According to Weirton's Gas Rescue Manual ("safety manual"), CO makes up approximately 27.5 percent of blast furnace gas. Compliance Officer Orvie Nicholson testified that 20 percent CO equates to an airborne concentration of 200,000 ppm, which he described as "tremendously high." He described the possible effects of exposure to CO as ranging from fatigue and lost coordination to death. In addition, he stated that deaths have been documented from long-term CO exposure at concentrations as low as 35 ppm.

On cross-examination, Nicholson was asked to read into the record the following language from a publication on hazardous substances, N. IRVING SAX, DANGEROUS PROPERTIES OF INDUSTRIAL CHEMICALS 643, which was not introduced into evidence:

> A [concentration] of 400 to 500 ppm in air can be inhaled without appreciable effect for 1 hour. An hour's exposure to 600 to 700 ppm will cause barely appreciable effects, and a similar exposure of to 1,000 to 1,200 ppm is dangerous; [concentrations] of 4,000 ppm and over are fatal in less than an hour.

Nicholson explained that 1200 ppm is the level at which exposure is immediately dangerous to life and health ("IDLH"); at this level, respiratory protection must be worn unless the exposure is terminated. He also stated that where the potential concentration is unknown, respiratory protection must be worn.

In analyzing the apparent likelihood of harm, the facts here show more than just a speculative possibility of exposure to a hazard and lead us to conclude that the relationship

between the severity of harm and the likelihood of occurrence is sufficient proof of a significant hazard. On the day in question, Weirton's employees encountered CO at the highest concentration their monitors were capable of registering – 1999 ppm – meaning that the maximum concentration encountered after the monitor's capacity was exceeded is unknown. Furthermore, we note that the concentrations detected were clearly above the IDLH level. Weirton's own safety rules recognize a CO ceiling limit of 150 ppm and make clear that CO is "immediately dangerous to life and health" when it exceeds 1200 ppm.[9]

In addition, Weirton's safety manual acknowledges that "[CO] can escape into the atmosphere during Blast Furnace Operations in such high concentrations that any exposure whatsoever to the gas can be immediately dangerous to your life." (Emphasis omitted.) The manual contains a chart showing that CO can have "perceptible effects" at an exposure of less than 30 minutes at a level of approximately 1000 ppm and that exposure for 90 minutes at that level can result in death.

We further note that Weirton requires any new employee, transferred employee, or employee temporarily assigned to work on the blast furnace to receive a safety orientation identifying the "inherent area hazards" of the furnace operations. As part of this orientation, employees are required to sign and acknowledge receipt of Weirton's "Primary Operations Safety Orientation Blast Furnace" ("Safety Orientation"), which identifies and describes the operating process hazards. The Safety Orientation expressly prohibits working in concentrations of CO above 150 ppm without certain equipment:

> CO CONSTANT DANGER – NOT PERMITTED TO WORK IN AN AREA WHEN CO LEVEL REACHES 150 PPM UNLESS USING AN AIR LINE WORK MASK OR A SELF-CONTAINED BREATHING APPARATUS (SCBA).

(Emphasis in original). According to the Safety Orientation, at least three employees must be assigned to a task performed on the "top of [an] operating furnace," and one of the three must remain at the elevator to serve as an emergency watch. The Safety Orientation also recognizes that OSHA's eight-hour time weighted average limit for CO is 50 ppm and sets forth the following requirements:

> When the CO level exceeds 500 ppm and is less than 1200 ppm[,] an air line unit is no longer permitted unless you also have an escape bottle attached. When the level of CO exceeds 1200 ppm, which is the IDLH (immediately dangerous to life and health) level, only a SCBA is permitted.

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[9]Weirton's safety rules are communicated to employees through its Gas Training Program, which is administered annually and in conjunction with weekly safety meetings.

(Emphasis omitted). Similarly, Weirton's "Job Safety Analysis," another company training document, provides that when maintenance work is performed on the furnace, employees must use the company-issued CO monitors and either wear respirators or "leave [the] area" if they detect CO in excess of 150 ppm.

All of these safety documents demonstrate that the potential for exposure to high levels of CO exists and poses a significant risk for employees working on Weirton's blast furnace.[10] *See Snyder Well Servicing*, 10 BNA OSHC at 1375-76, 1982 CCH OSHD at p. 32,511 (employees working in area known to produce potentially lethal concentrations of hydrogen sulfide gas; "risk of encountering toxic gas" at such levels made use of respirators necessary).

Weirton claims that the Secretary failed to prove the existence of a hazard as required by the cited standard because employees merely "passed through" the areas where they were exposed to high levels of CO and at the time that work was performed on the bleeder deck, the monitor had "cleared" – *i.e.*, there is no violation because the CO monitor was clear for the brief amount of time it took employees to actually perform the task of reseating the bleeder valve.[11]

However, for the purposes of determining the existence of a hazard, we place little significance on the fact that employees did not linger in the areas where their monitors alarmed. During their ascent to the bleeder deck, the employees were clearly exposed to

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[10]To avoid creating a disincentive to voluntary employer safety programs, the Commission has held that an employer's safety precautions do not necessarily demonstrate recognition by the employer that such measures are necessary to comply with section 1910.132(a). *General Motors Corp., GM Parts Div.*, 11 BNA OSHC 2062 2066, 1984-85 CCH OSHD ¶ 26,961, pp. 34,611-12 (No. 78-1443, 1984)(consolidated), *aff'd*, 764 F.2d 32 (1st Cir. 1985). However, while an employer's own safety precautions do not in themselves establish recognition of an alleged hazard, *Granite City*, 12 BNA OSHC 1741, 1747-48, 1986-87 CCH OSHD ¶ 27,547, pp. 35,776-77 (No. 83-882-S, 1986), precautions taken by an employer can establish hazard recognition when considered in conjunction with other evidence, *Waldon Healthcare Center*, 16 BNA OSHC 1052, 1061-62, 1993-95 CCH OSHD ¶ 30,021, pp. 41,154-55 (No. 89-2804, 1993) (consolidated) (and cases cited therein).

[11]Although Weirton suggests that its employees were not actually engaged in "work" during the time they were exposed to these CO levels, we neither read the citation nor the term "work" so narrowly. The citation does not limit the alleged exposure to the bleeder deck – "employees were exposed to unknown contamination" – and the Commission has previously held that "work" includes gaining access to the work area. *See, e.g., North Berry Concrete Corp.*, 13 BNA OSHD 2055, 1987-90 CCH OSHD ¶ 28,444 (No. 86-163, 1989) (work necessarily includes getting to and from work station); *Salah & Pecci Construction Co., Inc.*, 6 BNA OSHC 1688, 1978 CCH OSHD ¶ 22,807 (No. 15769, 1978) (working from aerial lift includes being transported to and from work level).

levels of CO that Weirton itself recognizes to be hazardous. Weirton's safety practices allowed the employees to proceed even though the CO levels were both increasing and reaching levels beyond the measuring capability of the monitors provided to them. As Nicholson testified, continuing on the same route once high concentrations of CO have been detected is hazardous because of the possibility that the concentration of gas could increase. Nicholson also described how atmospheric "inversions" could cause contaminated air to become trapped and stagnant in one location. According to the testimony of Nicholson and a second compliance officer involved in the inspection, it is unacceptable for employees to maintain the same direction of travel once they encounter a high concentration of CO for the simple reason that the concentration is just as likely to continue to increase, as it is to decrease. Indeed, it is undisputed that the bleeder platform was covered with steam – an indication that CO was present.

In sum, the preponderance of the record evidence supports the judge's finding that a hazard requiring the use of respirators existed here. Accordingly, we affirm a violation of section 1910.134(a)(1).

C. Willfulness

A willful violation is characterized by an intentional or knowing disregard for the requirements of the Act or a "plain indifference" to employee safety, in which the employer manifests a "heightened awareness" that its conduct violates the Act or that the conditions at its workplace present a hazard. *MJP Constr. Co.*, 19 BNA OSHC 1638, 1647, 2001 CCH OSHD ¶ 32,484, p. 50,306 (No. 98-0502, 2001), *aff'd*, 56 Fed. Appx. 1 (D.C. Cir. 2003)(unpublished). The judge determined that the section 1910.134(a)(1) violation was willful because Weirton's supervisors and employees demonstrated a general disregard for the company's safety rule requiring the use of respirators if a CO monitor detects a level of 150 ppm or higher. The judge also determined that Weirton demonstrated a disregard for employee safety by allowing its employees to continue to move through areas where the CO concentrations exceeded this level. Weirton claims not only that it did not disregard its safety rules but also that its practice of allowing employees to continue toward the bleeder platform was reasonable inasmuch as Weirton's experience had been that lower CO levels would exist at that location.

We note, however, that Weirton's safety rules required the use of respirators when CO concentrations reached 150 ppm during employee ascents and descents of the furnace as well as during the performance of the work on the bleeder platform itself.[12] For the purposes

[12]Weirton asserts that to support the willful allegation, the Secretary impermissibly seeks to use Weirton's safety rules "against it." However, an employer's knowledge of a standard's requirement can be an important aspect of willfulness, inasmuch as a willful classification is differentiated from other classifications of violations by the employer's state of mind toward the safety or health duty imposed by the standard. *Morrison-Knudsen Co./Yonkers Contrac. Co.*, 16 BNA OSHC 1105, 1123, 1993-95 CCH OSHD ¶ 30,048, pp. 41,280-81 (No. 88-572, 1993). Therefore, an employer's safety program constitutes evidence that the Commission may consider in conjunction with other evidence demonstrating that the

of determining Weirton's state of mind, it is irrelevant whether Weirton's employees did, with the knowledge and acquiescence of supervisors, routinely disregard this rule – as the judge found – or whether, as Weirton argues, they were acting in accordance with the company's interpretation of the rule to permit employees to move through the area of excessive concentration. In either case, Weirton knowingly allowed its employees to be exposed to levels of CO which Weirton itself recognizes to be hazardous and knowingly allowed the employees to proceed even though the CO levels were both increasing and attaining levels beyond the measuring capability of the CO monitor.

While it may be Weirton's experience that employees customarily will encounter acceptable levels of CO at the bleeder platform, the evidence here demonstrates that the bleeder platform is not an area that is necessarily free of CO or at which the CO levels are acceptably low at all times.[13] The testimony here is that employees had to wait at that location while the gas cleared before they could begin work. We therefore conclude that Weirton could not have reasonably thought itself to be in compliance with the respiratory protection standard when, as a practice, employees did not wear respirators while continuing to move through areas of high CO concentration.

It is well-settled that willfulness can be found where an employer has notice of the requirements of a standard and is aware of a condition that violates the standard but fails to correct or eliminate employee exposure. *Sal Masonry Contrac., Inc.*, 15 BNA OSHC 1609, 1613, 1991-93 CCH OSHD ¶ 29,673, p. 40,210 (No. 87-2007, 1992). *See also Tampa Shipyards, Inc.*, 15 BNA OSHC 1533, 1541, 1991-93 CCH OSHD ¶ 29,617, pp. 40,103-04 (No. 86-360, 1992) (consolidated) (failure to implement procedures known to be required constitutes willfulness). Here, Weirton understood not only that concentrations of CO generated by the furnace were at a hazardous level for which respiratory protection was warranted but also that the concentrations were increasing to an indeterminate level as employees continued their ascent without protection.

To negate willfulness an employer can establish that "it demonstrated good faith by attempting to comply with the standard." *Aviation Constructors, Inc.*, 18 BNA OSHC 1917, 1921, 1999 CCH OSHD ¶ 31,933, pp. 47,377-78 (No. 96-593, 1999). Here, Weirton provided respirators, and the Secretary does not contend that those respirators were inadequate. Weirton also provided CO monitors with alarms set at the 150 ppm level and instructed its employees that the 150 ppm level is the threshold level for the wearing of

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employer was aware of the hazard at issue or the cited requirement. *Id.* at 1127, 1993-95 CCH OSHD at pp. 41,280-81. Just as a safety rule is not necessarily dispositive of whether a hazard exists, see note 9 *supra*, it is not necessarily dispositive of an employer's state of mind for purposes of the willful characterization.

[13]As Nicholson testified, continuing on the same route once high concentrations of CO have been detected is hazardous because of the possibility that the concentration of gas could increase due to an atmospheric inversion.

respirators. The record indicates that employees routinely carried the monitors and observed the readings on them. Weirton's concern for employee health is also illustrated by the fact that the exposure limit set for its blast furnace is less than the 200 ppm ceiling limit the Secretary sought to implement for CO. *See* note 5 *supra.* In addition, employees were aware of Weirton's safety rules, and there is no contention by the Secretary that these rules were not adequately communicated to employees. Nonetheless, based on the fact that Weirton knowingly allowed its employees to be exposed to hazardous concentrations of CO, we find that these safety measures are insufficient to negate willfulness. We therefore affirm a willful violation.[14]

D. Penalty

Section 17(j) of the Act requires the Commission in assessing penalties to give due consideration not only to the cited employer's status and overall approach to employee safety and health, *i.e.*, size plus good faith and prior history of violation, but also to the violation's gravity, which the Commission has held to be the main consideration in penalty assessment. *See, e.g., J. A. Jones Constr. Co.*, 15 BNA OSHC 2201, 2214, 1991-93 CCH OSHD ¶ 29,964, p. 41,033 (No. 87-2059, 1993). Gravity includes the number of employees exposed, the duration of the exposure, the precautions taken against injury, and the overall likelihood of injury. *Id.*

Here, the judge assessed the Secretary's proposed penalty of $50,000 upon finding that Weirton's violation of section 1910.134(a)(1) could have resulted in death. For the following reasons, however, we conclude that a lower penalty is appropriate. First, we find that the gravity is significantly less than the judge found it to be.[15] There is no evidence that a large number of employees were exposed to the cited conditions. In addition, there is no evidence regarding the specific duration of exposure at any particular CO level. The most

[14]We note, however, that the judge erred in basing her willful finding on the fact that Weirton allowed employees who are required to use respirators to have facial hair. The compliance officers' testimony is at best equivocal as to whether facial hair absolutely prevents an effective seal with respiratory equipment such as SCBA. As Weirton correctly points out, the respiratory protection standard itself does not explicitly prohibit facial hair but rather provides that "[t]he employer shall not permit respirators with tight-fitting facepieces to be worn by employees who have: (A) Facial hair *that comes between the sealing surface of the facepiece and the face or that interferes with valve function*…." Section 1910.134(g)(1)(i)(A)(emphasis added). This is essentially the same requirement set forth in Weirton's own safety rule.

[15]This finding is distinguishable from our separate finding that the severity of the potential harm of the hazard is high. While the severity of the potential harm presented by the existence of CO is indeed high – here, the possibility of death – we find the likelihood of that actually occurring under the circumstances of this case, as discussed herein, to be lower.

that can be said is that the exposure existed for a relatively short period of time, *i.e.*, the time necessary to ascend the furnace, complete the work of securing the valves, and then descend. Nor is there direct evidence of the frequency of reseating the bleeder valve. The judge correctly found that death could have been one possible outcome of CO exposures at the magnitude encountered by Weirton's employees on the day in question, but the likelihood of a fatality cannot be determined with any reasonable precision from this evidentiary record.

We turn now to the element of good faith. The judge held that Weirton was not entitled to any credit for good faith inasmuch as the violation was willful in nature.[16] We disagree. The Commission has held that good faith credit is not necessarily inconsistent with a willful finding. *See Aviation Constructors*, 18 BNA OSHC at 1922-23, 1999 CCH OSHD at pp. 47,379. Given Weirton's efforts to protect its employees by establishing a safety rule that required respirators when a monitor detects a level of CO at 150 ppm and instructing its employees that the 150 ppm level is the threshold level for the wearing of respirators, we believe some credit for good faith is warranted. Under these circumstances, we assess a penalty of $20,000.

III. ALLEGED SERIOUS VIOLATION OF SECTION 1910.132(a)

During normal operations, Weirton's blast furnaces build up pressure that is then released allowing gas, steam, and sometimes flame and hot particles of dust or coke to escape from the furnace. The Secretary claims that Weirton's employees were therefore exposed to a burn hazard and alleges a violation of 29 C.F.R. § 1910.132(a), the general protective equipment standard for general industry. This standard provides as follows:

> (a) *Application.* Protective equipment, including personal protective equipment for eyes, face, head, and extremities, protective clothing, respiratory devices, and protective shields and barriers, shall be provided, used, and maintained in a sanitary and reliable condition wherever it is necessary by reason of hazards of processes or environment, chemical hazards, radiological hazards, or mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact.

The Secretary specifically alleges in the citation:

Employees working on top of # 4 furnace area were not provided with appropriate protective equipment such as fire resistant coveralls/tyvex[17] suits to protect employees from a potential

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[16]Regarding the other two penalty factors, the judge found that Weirton was of large size and had a prior history of violations. The record confirms that Weirton has over 4,900 employees and was inspected twice in three years. Weirton settled the resulting citations and paid the associated penalties.

[17]One of the compliance officers testified that he meant to use "nomex" instead of "tyvex" in the citation.

furnace upset causing the furnace contents of heat and iron bearing materials to exit the bleeder valves while the furnace is under full or partial wind or at shut down.

Because the cited standard is a broadly-worded standard of general application governing numerous possible hazardous conditions and types of injury, the Secretary must establish, in order to afford fair notice to the employer, either that the employer had actual notice of a need for protective equipment or that a reasonable person familiar with the circumstances surrounding the hazardous condition would recognize that such a hazard exists. Accordingly, external, objective criteria, such as the knowledge and perceptions of a reasonable person, may define the requirements of the standard in a given situation. *McLean Trucking Co. v. OSHRC*, 503 F.2d 8, 10 (4th Cir. 1974); *Peavey Co.*, 16 BNA OSHC 2022, 2024, 1993-95 CCH OSHD ¶ 30,572, p. 42,321 (No. 89-2836, 1994); *J.A. Jones Constr. Co.*, 15 BNA OSHC at 2205-06, 1991-93 CCH OSHD at pp. 41,024-25. Evidence of industry custom and practice will aid in determining whether a reasonable person familiar with the circumstances would perceive a hazard but is not necessarily dispositive. *Bristol Steel & Iron Works v. OSHRC*, 601 F.2d 717, 723 (4th Cir. 1979); *Cleveland Electric Illuminating Co.*, 16 BNA OSHC 2091, 2093, 1993-95 CCH OSHD ¶ 30,590, p. 42,363 (No. 91-2198, 1994); *General Motors Corp., GM Parts Div.*, 11 BNA OSHC 2062, 2065, 1984-85 CCH OSHD ¶ 26,961, p. 34,611 (No. 78-1443, 1984) (consolidated), *aff'd*, 764 F.2d 32 (1st Cir. 1985).

There is no dispute that a burn hazard is present at Weirton's blast furnace facility. Weirton's own safety rules require employees to wear "fire retardant clothing," specifically pants and jackets. Those rules also prohibit employees from wearing "items of synthetic fabric" and generally provide that all clothing must be made of "cotton or wool fabric." The Secretary presented no evidence of any instances in which employees failed to wear both their jackets made of "indura" – a material which Weirton's safety manager identified as that traditionally used in the steel industry for fire-resistant clothing – and cotton clothing as required by Weirton's safety rules. Rather, the Secretary alleges that the protective clothing Weirton required was inadequate to protect employees against the burn hazard.

We find that the Secretary has failed to provide substantial evidence showing a burn hazard related to any alleged deficiency in the protective clothing utilized by Weirton. With respect to the indura jackets, the judge found that they were the type widely used in the steel-making industry at that time. The judge further concluded that the evidence did not show that Weirton was aware of any deficiencies with respect to the jackets. We have found no reason to take exceptions to these findings. While the Secretary's case is premised on the occurrence of burn injuries, both as allegedly reported in Weirton's injury and illness records and as testified to by employees, the only specific evidence relating to deficiencies in the jackets involved the testimony of two Weirton employees.[18] One employee stated that his jacket had "caught on fire" on numerous occasions, but he did not indicate that he had actually been burned during those occurrences. He also stated that other employees had been burned or scalded when closing bleeder valves. However, he was equivocal as to whether those employees had actually been injured during these instances, as he stated at one point in his testimony that no one had ever been "hurt" when closing bleeder valves. Another employee stated that he had been burned even while wearing his jacket, but he was not asked to describe the severity of those burns. Other than the first employee's reference to bleeder valves, neither he nor the second employee described what employees were doing when they were burned or what parts of their bodies suffered burns.

[18] The Secretary did not seek to introduce into evidence the injury and illness records that Weirton is required to maintain and make available pursuant to 29 C.F.R. §§ 1904.2 and 1904.4. Absent those records, the record contains no data from which we may ascertain the number, type, frequency, or severity of the burn injuries experienced by Weirton's employees; the proportion of burn injuries in relation to the number of occurrences in which employees were exposed to material that could cause burns; or any other information from which we could conclude that a reasonable person familiar with the circumstances would have viewed the clothing worn by Weirton's employees as providing insufficient protection. *See General Motors*, 11 BNA OSHC at 2065, 1984-85 CCH OSHD at p. 34,611.

We find this testimony to be generalized and lacking the specificity necessary to draw any nexus between these incidents and any alleged deficiency in the jackets.[19] Indeed, without Weirton's injury and illness records, we do not even know whether the second employee required any medical treatment for the burns about which he testified. *See The Great Atlantic & Pacific Tea Co.*, 3 BNA OSHC 2018, 1975-76 CCH OSHD ¶ 20,430 (No. 10667, 1976) (violation of section 1910.132(a) not shown where injuries were mostly of a type requiring only first-aid). As the court stated in *Department of Labor v. OSHRC (Goltra Castings, Inc.)*, 938 F.2d 1116 (10th Cir. 1991), "[a]lthough the goal of the Occupational Safety and Health Act is to prevent the first injury, 'a very low injury rate has a definite bearing on whether an employer has notice that personal protective equipment is necessary….'" *Id.* at 1118 (quoting *Owens-Corning Fiberglass Corp. v. Donovan*, 659 F.2d 1285, 1290 (5th Cir. 1981)).

With respect to the pants worn by Weirton's employees, the evidence is even thinner. One compliance officer simply suggested that employees should have been wearing "coveralls" made of "nomex," which he described as a "flame-resistant/flame retardant type material." Beyond the compliance officer's opinion, there is no specific evidence suggesting how the pants worn by employees were inadequate to protect against the burn hazard. In affirming the violation with respect to the pants, the judge seemed to rely in part on the fact that there was "no direct evidence establishing that the jeans worn were all-cotton." But the judge also found no evidence of noncompliance with Weirton's safety rules requiring employees to wear cotton or wool – a finding of greater significance since the burden is on the Secretary to show any deficiencies. While the judge concluded that, "more than first-level protection was needed," she did not cite any evidence to

[19]On the record here the Secretary also did not establish that the jackets provide inadequate protection due to loss of fire retardant capacity through repeated laundering. The Secretary not only presented insufficient evidence to establish that a reasonable person familiar with the circumstances would have recognized a loss of fire retardant capability, but presented no evidence tending to show that any Weirton employee had ever been provided with a jacket that had lost its ability to provide protection against burn injuries.

support this finding. Under these circumstances, we cannot find a violation of section 1910.132(a).[20] *The Great Atlantic & Pacific Tea Co.*, 4 BNA OSHC 1025, 1975-76 CCH OSHD ¶ 20,543 (No. 6499, 1976)(consolidated).

ORDER

Accordingly, we affirm the citation alleging that Weirton failed to comply with section 1910.134(a)(1), find the violation willful, and assess a penalty of $ 20,000, but we vacate the citation alleging that Weirton failed to comply with section 1910.132(a).

/s/
W. Scott Railton
Chairman

/s/
James M. Stephens
Commissioner

Dated: July 31, 2003

[20]The Secretary points out that after the inspection at issue here, Weirton made a superior type of protective clothing available to employees. However, an employer's voluntary safety measures do not in themselves establish recognition or awareness of the existence of a hazardous condition. *General Motors*, 11 BNA OSHC at 2066, 1984-85 CCH OSHD at p. 34,611-12. The union steward from Weirton's facility testified that the company was concerned because its injury and illness records indicated that burns were the primary type of injury at the blast furnace, and the upgraded protective clothing was provided in an effort to reduce the number of such injuries. However, in light of conflicting testimony from Weirton's safety officer and the absence of Weirton's injury and illness records to corroborate the steward's opinion, we cannot give any dispositive weight to the steward's testimony.

SECRETARY OF LABOR, Complainant, v. WEIRTON STEEL CORPORATION, Respondent, I.S.U., Authorized Employee Representative.	OSHRC DOCKET No. 98-0701

APPEARANCES:

For the Complainant:
John M. Strawn, Esquire,, U.S. Department of Labor, Office of the Solicitor, Philadelphia, Pennsylvania

For the Respondent:
Charles R. Volk, Esquire, Jane Lewis Volk, Esquire, Volk, Hellerstedt & Connolly, Pittsburgh, Pennsylvania

For the Authorized Employee Representative:
Robert J. D'Anniballe, Jr., Esquire, Alpert, D'Anniballe & Visnic, Weirton, West Virginia

Before: Administrative Law Judge Ann Z. Cook

DECISION AND ORDER

This proceeding is before the Occupational Safety and Health Review Commission ("the Commission") pursuant to section 10 of the Occupational Safety and Health Act of 1970, 29 U.S.C. § 651 *et seq.* ("the Act"). Weirton Steel Corporation ("Respondent"), a steel producer, operates several blast furnaces at its Weirton, West Virginia work site, where it has approximately 4,980 employees. Respondent acknowledges that it is an employer engaged in a business affecting interstate commerce and that it is subject to the requirements of the Act. (Answer ¶ 4).

The Occupational Safety and Health Administration ("OSHA") issued Respondent one serious and one willful citation following an inspection on October 22-November 2, 1997. The serious citation alleges that employees were not provided with appropriate protective equipment, such as fire-resistant coveralls, in violation of 29 CFR 1910.132(a). The willful citation alleges that employees were allowed to work without respiratory protection equipment where carbon monoxide and other gases endangered them, in violation of 29 CFR 19l0.134(a)(l). A hearing was held in Pittsburgh, Pennsylvania on December 1-2, 1998. Both parties submitted post-hearing briefs.

BACKGROUND

The events at issue occurred on October 15, 1997, when Respondent sent employees on top of blast furnace number 4. The walkway immediately on top of the furnace is the charging deck where coke, ore and other raw material is charged or dumped into the furnace. The furnace itself is about 100 feet high. Six stair flights above the charging deck is the bleeder deck, where there are two bleeders, north and south. The bleeders release excess pressure from the furnace, usually in the form of gas and steam, which are visible from below as clouds of steam. At times, pressure is released in "burps" of flame and particulate matter. Burps occur under very high pressure and without warning. In full operation, the furnace is said to be at "full wind." In this mode, very high pressure (24-28 psi) is created at the bleeder, and there is an increased potential for burps. When idling, the furnace is said to be at "partial wind," and at such times the pressure is only 3-5 psi and the instance of burps is much lower. (Tr. 17-20, 27-28, 33, 46, 8 1-82, 95-96, 107-08, 226,257; JX-1-3).

Blast furnace gas is 27-45% carbon monoxide ("CO"), 11-45% carbon dioxide, and approximately 60 % nitrogen and 1 % hydrogen. This composition is the same whether the furnace is at full wind or partial wind. Respondent's Gas Rescue Manual warns that CO can escape into the atmosphere during blast furnace operations in such high concentrations that any exposure whatsoever can be immediately dangerous to life. OSHA compliance officer Orvie Nicholson, an experienced hazardous waste and emergency response specialist, described how CO reduces the body's ability to utilize oxygen, with severe consequences for cognitive processes and the cardiovascular system. He explained that its effects vary from individual to individual and also are influenced by environmental

factors, such as high temperatures, and the work being done. As exposure increases, its effects progress from fatigue and loss of coordination to reduced response time, dizziness, headache, nausea, unconsciousness and death. Because it is invisible, odorless and rapidly reaches lethal concentrations in the body, it is the most common killer of all poisonous gases. (Tr. 83-84, 140-44, 171; GX-3 pp. 1-6).

Respondent has adopted specific safety rules and procedures to address the dangers of CO, as well as falls and burns, when workers go on top of the furnace. These require that at least three people go up together and that one of them be equipped with a CO monitor set to alarm at 150 ppm. When CO levels reach 150 ppm at the top, employees are to leave the area, or, if they must work there, they must use respirators and air tanks. These same rules apply to maintenance employees. However, in practice, when CO levels reach 150 ppm at or near the charging deck, employees often continue upward to areas of clean air without respirators. To protect against burns, employees working in the blast furnace area must wear "fire retardant clothing (pants and jackets)." They must also wear cotton or wool clothing and never any synthetic clothing. (Tr. 42,70, 87-89, 100-0 1, 218, 241; GX-3; GX-4; *GX-5* pp. 1, *5;* GX-6 ¶¶ VI, VII).

For several months before the subject event, one of the bleeder valves had not been reseating properly, which required maintenance employees to go up frequently to the bleeder deck to reseat the valve. To do so, employees rode the elevator to the charging deck, took the walkway across the tops of two stoves to the charging deck, and climbed six flights of stairs to the bleeder deck. Respirators and air tanks were stored near the elevator on the charging deck. Shortly after the events at issue, cables were run from the bleeders down to the blast furnace floor so that employees could reseat the valve from below, and a short time later the faulty valve was replaced. (Tr. 17-18, 28-32, 39, 7 1-76, 105-07, 2 16-17, 236, *256;* GX-2; JX-1-JX-3).).

On October 15, 1997, on two separate occasions, Ron Anderson, the turn supervisor, notified William McCarthy, the maintenance supervisor, that the bleeder deck required maintenance work. Employees therefore made two trips to the bleeder deck that day, one in the morning and one in the afternoon. The testimony Anderson and McCarthy differed from that of Fred Kulow, Larry McNeely and Larry Douglas, the three employees who accompanied McCarthy to the deck. The differences involve primarily the order of the trips and the number of employees on each trip. Where the accounts differ, I have credited the testimony of Kulow, McNeely and Douglas over that of Anderson and McCarthy because it was consistent, detailed and believable. McCarthy, on the other hand, was ill at ease as he testified, and he admitted he had difficulty separating the October 15 trips from others made

around that time. (Tr. 246, 248, 258-59). Further, Anderson's knowledge was limited to what he saw from over 100 feet below. (Tr. 217, 221-23, 236, 257).

On the morning of October 15, 1997, McCarthy directed McNeely and Douglas to accompany him to the top to reseat the bleeder valve. Both refused because the furnace was on partial wind and they considered it unsafe to go up; however, as McCarthy prepared to go alone, Kulow volunteered to go with him. At the charging deck, the monitor Kulow carried alarmed, indicating that the CO level was 150 ppm or higher. Instead of retreating or putting on respirators, McCarthy and Kulow continued along the charging deck and up the stairs toward the bleeder deck. The monitor registered increasingly higher CO readings, reaching and exceeding the monitor's maximum on the fourth or fifth flight of stairs. At the bleeder deck, McCarthy and Kulow walked north out of the cloud of furnace gas and waited until the wind cleared the area around the south bleeder. They then attempted to close the south bleeder valve with the "come along" they had carried up with them from the charging deck. On the second try they partially reseated the valve and left. Anderson watched their ascent and descent from the "high line," which was some 100 feet below the bleeder deck. (Tr. 34-39, 48-49, *63-65*, 217, 222-23, 244).

In the afternoon, Anderson again directed McCarthy to go on top of the furnace and reseat the bleeder valve, and McCarthy again instructed McNeely and Douglas to go with him. At first they refused because the furnace was still on partial wind; however, after being told that the safety director had cleared the area at the top as safe, they went with him rather than risk being sent home without pay. They were joined on the way up by two employees from the fuel department. On the stairs from the charging deck to the bleeder deck, the CO monitor alanns sounded. Gary Hawkins, one of the fuel department employees, turned back because his monitor readings were increasing and he felt it was unsafe to continue. McNeely's monitor at one point had a reading of 600 ppm, and McCarthy, who was in the lead, was aware that the alarms were sounding. At the bleeder deck, the group waited briefly for the monitors to clear and then closed the bleeder valve with a come along. Anderson again observed the group from below. (Tr. 64-69, 86-87, 217, 240, 244).

THE SECRETARY'S BURDEN OF PROOF

To establish a violation of a standard, the Secretary has the burden of proving, by a preponderance of the evidence:

> (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).

ALLEGED VIOLATION OF 29 CFR 1910.132(a)

Citation 1, Item 1 alleges:

> Employees working on top of #4 furnace area were not provided with appropriate protective equipment such as fire resistant coveralls / tyvex[1] suits, to protect employees from a potential furnace upset causing the furnace contents of heat and iron bearing materials to exit the bleeder valves while the furnace is under full or partial wind or at shut down.

Section 1910.132(a) provides:

> (A) *Application.* Protective equipment, including personal protective equipment for eyes, face, head and extremities, protective clothing, respiratory devices, and protective shields and barriers, shall be provided, used, and maintained in a sanitary and reliable condition wherever it is necessary by reason of hazards of processes or environment, chemical hazards, radiological hazards, or mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact.

The cited standard requires that protective clothing be provided, used and maintained in a reliable condition when necessary to protect employees from bum injuries. The Secretary maintains that Respondent violated this provision by sending employees to work on the bleeder valve without appropriate clothing to protect against burns from steam, gas, flames and particulate matter. Respondent, on the other hand, contends that the clothing worn provided adequate protection.

[1] OSHA Compliance officer John Johnson testified that by mistake he used the word "tyvex" instead of "nomex" when writing the citation.

The record shows that the blast furnace is extremely hot whether on full or partial wind, and that even in the latter mode there is pressure in the furnace and it expels gas and steam and can burp flames and particulate matter. Maintenance is normally done when the furnace is shut down; however, the work space in the bleeder area is small, employees working there would be in close proximity to the bleeder valves, and, if the furnace were operating, the danger of burns would be great. (Tr. 64, 96-98, 111, 246, 256). The record also shows that the employees who went up to the bleeder deck on October 15, 1997, wore jeans and fire-retardant jackets made of indura. This type of jacket was widely used in the steel-making industry then, but it afforded protection primarily against burns from embers. Employees testified that the jackets lost most of their fire-retardant properties after a few washings and that they had been burned by fire or steam while wearing the jackets. (Tr. 40-41, 50, 72, 89, 269-7 1). Respondent at that time provided blast furnace employees with one indura jacket per year, but no protective pants, even though its safety rules required the use of fire-retardant pants and jackets when going on top of the bleeder deck. (Tr. 50-5 1, 96, GX-5 p. 5). Respondent now provides blast furnace employees with full-torso Ban-Wear clothing, which is considered to be the "top of the line" in flame-resistant clothing. (Tr. 271-72, 275-76).

The evidence does not show that Respondent was aware of the indura jackets' deficiencies, and Respondent urges that cotton jeans are "the first level of flame resistant clothing." (R. Brief p. 9). However, there is no direct evidence establishing that the jeans worn were all cotton, and more than first-level protection was needed.[2] Further, both fire-resistant pants and jackets were required, and Respondent's own safety rules so specified. (GX-5 p. *5).* The evidence clearly demonstrates a violation of the cited standard, and the violation exposed employees to the risk of severe burns or even death. This citation item is therefore affirmed as a serious violation.

The Secretary has proposed a penalty of $5,000.00 for this item. In determining appropriate penalties for violations, due consideration is to be given to the gravity of the violation as well as the employer's size, history and good faith. The gravity of the violation is generally "the primary element in the penalty assessment." *J.A. **Jones** Constr. **Co.,*** 15 BNA OSHC 2201,2214 (No. 87-2059, 1993). Given that employees wore some protective clothing and that the exposure was of short duration,

[2] As noted above, Respondent's safety rules require employees to wear cotton or wool and to never wear any synthetic clothing. There is no evidence of noncompliance with this requirement.

I find the gravity to be moderate to severe. Respondent is a large company, with close to 5,000 employees. It has been cited by OSHA twice in the last four years. (OX 7).Considering all of these factors, I conclude that the proposed penalty of $5,000.00 is appropriate.

ALLEGED WILLFUL VIOLATION OF 29 CFR 1910.134(a~(1)

Citation 2, Item 1 alleges:

> On top of number 4 furnace in the bleeder valve area, employees not wearing respiratory protection equipment, were permitted to work in the area while the furnace was under partial wind with CO readings up to and possibly exceeding 999 PPM (the meter capacity), employees were exposed to unknown concentrations, possibly Immediately Dangerous to Life and Health Atmosphere, of Blast Furnace Gas Composition of Carbon Monoxide (CO), Carbon Dioxide (C02), Nitrogen (N2) and Hydrogen (H2), from the normal operation of the furnace and a potential upset in the furnace that could cause the furnace contents of iron - bearing materials to exit the bleeder valves.

Section 134(a) provides, in pertinent part:

> (a) Permissible practice. (1) In the control of those occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors, the primary objective shall be to prevent atmospheric contamination. This shall be accomplished as far as feasible by accepted engineering control measures (for example, enclosure or confinement of the operation, general and local ventilation, and substitution of less toxic materials). When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be used pursuant to this section. (2) Respirators shall be provided by the employer when such equipment is necessary to protect the health of the employee.

As a preliminary matter, Respondent asserts that there was no dangerous exposure to CO or other gases because there is no evidence that exposure exceeded the limits for air contaminants set out in 29 CFR 1910.1000. (R. Brief pp. 10-14). However, that provision sets permissible exposure levels over an eight-hour workday and addresses the danger of extended exposures to employee health. The cited standard, on the other hand, addresses more acute exposures posing immediate health threats. Thus, the hazards contemplated in these two standards, and the means of addressing those hazards, are different. In addition, to agree with Respondent's interpretation would lead to the untenable conclusion that a fatal five-minute exposure to high concentrations of CO would violate no standard so long as the CO level did not exceed the total amount allowed by 29 CFR 1910.1000 over eight hours. The alleged violation here pertains to exposures at levels that can immediately endanger employee health. The cited standard therefore applies to the circumstances at issue.

As set out above, 29 CFR 1910.134(a)(1) requires employees to use respirators when necessary to protect their health when engineering controls are inadequate to control atmospheric contamination. I find that respirators were necessary to protect the health of the employees who went on top of the blast furnace on October *15,* 1997. The undisputed evidence of record shows that on two occasions that day, employees and their supervisor encountered CO concentrations at levels far exceeding the 150 ppm level to which Respondent's own safety policies presumed that exposure was potentially dangerous. Employees carrying monitors reported levels of 600, 750, and 1200. (Tr. 69, 202,205). The supervisor conceded that on both trips the CO monitors began alarming in the vicinity of the charging deck and that he continued on without checking the meter readings to ascertain the CO level. Moreover, instead of returning to the area of clean air from which they came, the supervisor led the employees on into areas of increasingly higher readings, anticipating that clear air would be found before the effects of CO were felt. He had done this before without consequence, and he assumed that he could do so again. (Tr. 241,244,262). While the monitors were sounding, the group climbed up several flights of stairs and on top of a hot blast furnace, circumstances that increase the body's absorption of CO. (Tr. 142). The sudden and extreme consequences of CO poisoning, including impaired coordination and judgment, dizziness, nausea and unconsciousness, together with the danger of falling a great distance and the substantial time before any rescuers could arrive, posed a very serious threat of permanent injury or death. (Tr. 218-19, 237-38). Respondent, through its supervisor, knew of the hazard and could easily have avoided it by retreating or by using the respirators stored near the charging deck. Respondent was accordingly in violation of the standard.

The Secretary has characterized the violation as willful and has proposed a penalty of $50,000.00. 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." *Williams Enter., Inc.,* 13 BNA OSHC 1249, 1226 (No. 85-355, 1987). "A willful violation is differentiated [from a nonwillful violation] by a heightened awareness -- of the illegality of the conduct or conditions -- and by a state of mind -- conscious disregard or plain indifference." ***Id.*** at 1256-57.

The Secretary contends that willfulness is demonstrated by Respondent's violation of its own safety rules, as well as its decision to send employees to the top to reseat themalfunctioning bleeder valve rather than replace it or devise alternative means to reseal it. Respondent contends that it had and followed a safety program that exceeded OSHA requirements and that it cannot be said to have acted with "intentional disregard" or "plain indifference."

The evidence does not support Respondent's contention. The written safety directive most relevant to the events at issue is the company's Job Safety Analysis covering maintenance work on top of an operating blast furnace. This analysis directs the use of a respirator and air tank when ascending to or descending from the top of a furnace when CO levels exceed 150 ppm. (GX-6 ¶¶ VI, VIII). However, this directive was not followed in practice, and there is no evidence in the record of any safety rules relating to CO exposure that were enforced by disciplinary actions or other means. (Tr. 42,46-48,71,73,260). Respondent's position at trial, and its employees' understanding of the relevant safety rules, was that whenever CO levels reached 150 ppm, employees were to leave the area unless they were performing a task that had to be completed, in which case they were to use respirators. (Tr. 70, 87, 100,218,247). In its brief, Respondent interprets "leaving the area" to mean getting to clean air, even if it means going through higher CO concentrations to get there. (R. Brief p. 22-24). This position consigns respiratory protection to luck and wind conditions. It also ignores the effect high temperatures and strenuous work activity have on the body's absorption of CO. Based on the high CO content (20% to 25%) of the gas coming out of the bleeder, compliance officer Nicholson judged that nothing short of respirators and air tanks were adequate to protect those working on the bleeder deck.[3] (Tr. 140-44).

In addition to the above, the record shows that going up to the bleeder deck when the furnace is on partial wind is more dangerous than doing so when it is shut down. (Tr. 45-46, 65, 81, 246). Going up when the furnace was on partial wind was done more frequently in the months prior to October 1997 due to the need to reseat the bleeder valve manually. (R. Brief p. 22). Although this activity called for heightened observance of good safety practices, the facts show that this was not the case. Employees with beards and other facial hair went up to the bleeder deck, which not only could have kept the respirator masks from sealing properly but also appear to violate OSHA regulations and Respondent's safety rules. (Tr. 40, 72, 89, 13 1-32, 172-74 ; GX-4, Appendix A ¶ VIII). McCarthy, the maintenance supervisor, was unfamiliar with the Job Safety Analysis for working on top of the blast furnace. He also showed his intent to violate the safety rules by preparing to go up on top alone, he never checked the level of CO when the monitors alarmed, and he acknowledged no misjudgment or misconduct at the hearing. (Fr. 34, 197, 199-200, 205-08, 250, 260,262; GX-5 p. 1).

[3] Specifically, Johnson testified that self-contained breathing apparatus respirators were required. (Tr. 144).

Based on the foregoing, I find that Respondent acted with plain indifference to employee safety, and this citation item is affinned as a willful violation. I further find that the proposed penalty is appropriate under the circumstances of this case, including the number of employees at risk and the serious injuries, including death, that might have resulted. As noted in the preceding discussion, Respondent is a large company with a history of prior violations, and no reductions for size or history are appropriate. A reduction for good will is likewise inappropriate, in view of the willful characterization of the violation, and the proposed penalty of $50,000.00 is assessed.

FINDINGS OF FACT

The foregoing constitutes my findings of fact in accordance with Federal Rule of Civil Procedure 52(a). Any proposed findings of fact inconsistent with this decision are hereby denied.

CONCLUSIONS OF LAW

1. The Commission has jurisdiction of this matter pursuant to section 10(c) of the Act.

2. Respondent was in serious violation of 29 CFR § 1910.132(a), and a penalty of $5,000.00 is appropriate.

3. Respondent was in willful violation of 29 CFR § 19l0.134(a)(l), and a penalty of $50,000.00 is appropriate.

ORDER

On the basis of the foregoing Findings of Fact and Conclusions of Law, it is ordered that:

1. Item 1 of citation 1 is affirmed, and a penalty of $5,000 is assessed.

2. Item 2 of citation 1 is affirmed, and a penalty of $50,000 is assessed..

/s/
Ann . Cook
Judge, OSHRC

Dated: **19 A PR 1999**
Washington, D.C.