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October 18, 1995

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Mr. Tom Hall
Division of Consumer Affairs
Occupational Safety and Health Administration
200 Constitution Avenue, N.W.
Room N3649
Washington, D.C. 20210

Re: OSHA Respiratory Protection Standards:
Docket No. H-049

Dear Mr. Hall:

Enclosed for filing in the above-referenced docket are the original and three copies of the "Post-Hearing Brief of American Iron and Steel Institute" (October 18, 1995). Please discard the version submitted to OSHA earlier this afternoon, which due to a computer failure was filed without final edits.

We appreciate your help in this matter.

Sincerely,



Eric G. Hostetler
Attorney for American Iron and
Steel Institute

Enclosure

UNITED STATES DEPARTMENT OF LABOR
OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

29 C.F.R. Parts 1910, 1915, and 1926)	
)	
RESPIRATORY PROTECTION STANDARD)	Docket No. H-049
)	
59 Fed. Reg. 58884 (November 15, 1994))	

POST-HEARING BRIEF OF
AMERICAN IRON AND STEEL INSTITUTE
1101 17th Street, N.W.
Suite 1300
Washington, D.C. 20036

October 18, 1995

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Introduction and Summary of Position

This Post-Hearing Brief is submitted by the American Iron and Steel Institute ("AISI"), a non-profit trade association whose member companies account for approximately 70 percent of domestic raw steel production. AISI has participated extensively in this proceeding. This Post-Hearing Brief will focus on the issues of greatest concern to us.

We are disappointed with the proposed respiratory protection standard, several provisions of which would circumvent the rulemaking requirements of the Occupational Safety and Health Act (OSH Act). AISI believes that the standard needs more than minor changes. It should be substantially revised to include only those requirements that are necessary and appropriate to reduce significant risks to employee health. The proposed standard includes requirements that are so detailed that the standard's broader objectives are undermined. It embodies the philosophy that favors hyper-detailed rules -- a philosophy that is contrary to the prevailing spirit of making government regulation less cumbersome and burdensome.

OSHA has not demonstrated that the *current* standard leaves a significant risk of material health impairment. Although OSHA suggested that the existing standard is "outdated" (59 Fed. Reg. 58891), the mere fact that it has not recently been amended does not make it inadequate. OSHA also claims that the current respirator standard needs to be revised because it is frequently violated. The reasonable response to noncompliance with the existing standard, however, is not to make it more complex.

This brief will focus on those aspects of the proposed standard that are of particular concern to the steel industry: the hierarchy of controls provision, the creation of new enforceable exposure levels, the annual fit testing, medical evaluation and training requirements, and the need to make substance-specific standards consistent with the general respirator standard.

This brief is intended to supplement -- not replace -- AISI's previous comments and testimony in this rulemaking. Our viewpoints on many important issues, including the appropriateness of using NIOSH assigned protection factors, appear in our detailed comments submitted on April 14, 1995.

In Part I of this brief, we discuss how the rule would unlawfully create new permissible exposure levels for numerous air contaminants without making individual findings on significant risk or feasibility, in contravention of the OSH Act and controlling court decisions.

In Part II, we discuss the inappropriateness of a methods of compliance provision in a respiratory protection standard and OSHA's unlawful failure to subject this provision to public comment.

In Part III, we discuss why the proposed requirements for annual medical evaluations, fit testing and training would impose an unjustified burden on employers.

In Part IV, we discuss the need to make substance-specific standards consistent with whatever requirements are finally included in the general respirator standard.

I. Requiring Compliance With "Hazardous Exposure Levels" Would Unlawfully Create New Legally Enforceable Exposure Limits

By requiring employers to comply with "hazardous exposure levels" for numerous substances for which OSHA has not established a significant risk, the proposed respirator standard would unlawfully create new legally enforceable exposure limits. It would also require employers to institute feasible engineering controls to meet these new exposure limits. Under the OSH Act, the creation of new legally enforceable exposure limits must be supported by substantial evidence. Using the "respirator standard" as the vehicle to adopt new exposure limits does not release OSHA from this OSH Act requirement.

A. The Proposed Standard Plainly Requires Employers to Comply With New Exposure Limits for Numerous Substances

The proposed standard would newly regulate many airborne contaminants; establish their exposure limits; and dictate how those limits would have to be met.

The standard's expansive definitions of "hazardous chemical" and "hazardous exposure level" are vehicles for establishing an unknown number of enforceable new exposure limits. A "hazardous chemical" is defined in Paragraph (b) of the standard as any substance which meets the definition of "health hazard" under the Hazard Communication Standard (29 C.F.R. 1910.1200(c)). A "hazardous exposure level" is then defined for each "hazardous chemical" as follows:

- (1) The permissible exposure limit (PEL) for the hazardous chemical in 29 C.F.R. Part 1910, Subpart Z, of OSHA's General Industry Standard; or

- (2) If there is no PEL for the hazardous chemical, the Threshold Limit Values (TLV) recommended by the American Conference of Governmental Industrial Hygienists (ACGIH) in the latest edition of Threshold Limit Values for Chemical Substances and Physical Agents in the Work Environment; or
- (3) If there is no PEL or TLV for the hazardous chemical, the NIOSH Recommended Exposure Limit (REL); or
- (4) If there is no PEL or TLV, or REL for the hazardous chemical, an exposure level based on available scientific information including material safety data sheets.

Hundreds (and perhaps thousands) of substances included in the broad definition of "health hazards" under the Hazard Communication Standard do not have a PEL. The proposed standard would assign "hazardous exposure levels" -- defined either as the Threshold Limit Value (TLV), the Recommended Exposure Limit (REL), or a limit based on available scientific information -- to all of those substances. The standard would require employers to ensure that "hazardous exposure levels" are not exceeded for those substances and that engineering controls are used to the extent feasible to achieve them. These requirements would be imposed through the operation of Paragraphs (a), (c), and (d) of the proposed standard.

Paragraph (a)(2) of the proposed standard would require that "respirators shall be provided by the employer when such equipment is necessary to protect the health of the employee" and requires employers to establish respiratory protection programs that comply with Paragraph (c). Paragraph (c) provides that employers shall ensure that respirators are properly selected "to protect the health of employees."

Accordingly, employers must both provide respirators and select respirators "to protect the health of employees."

Paragraph (d) governs the selection of respirators and defines exactly what is required "to protect the health of employees." Paragraph (d)(3)(iv) provides that the employer shall obtain and evaluate the "relevant hazardous exposure level" for each work situation and Paragraph (d)(4) provides that the employer shall "select appropriate respirators." As OSHA testified at the hearing on the proposed standard, Paragraph (d) requires employers to select respirators which will ensure that hazardous exposure levels are not exceeded. (See June 6 Tr. at 25-26, 65-66). The hazardous exposure level must not be exceeded whether it is based on a PEL, a TLV, a REL, or a level "based on available scientific information."

If employers must select respirators under Paragraph (d) to avoid exceeding hazardous exposure levels to "protect the health of employees," the inescapable corollary is that employers must also provide respirators under Paragraph (a)(2) under those same circumstances. What is necessary to "protect the health of employees" in either case is to reduce exposures below "hazardous exposure levels." In short, for any substance covered by OSHA's hazard communication standard, employers would be required to ensure that a "hazardous exposure level" is not exceeded.

In addition, Paragraph (a)(1) of the standard imposes a hierarchy of controls requirement for these substances. Paragraph (a)(1) provides that engineering controls shall be used to the extent feasible to control atmospheric contamination.

Thus, for any substance covered by OSHA's hazard communication standard, employers must ensure that its "hazardous exposure level" is not exceeded, and the employer must do so by using engineering controls to the extent feasible.

This problem is illustrated by a hypothetical workplace whose employees (a) are not exposed to any substances above an OSHA permissible exposure limit; (b) are not exposed to concentrations that would violate the General Duty Clause; but (c) are exposed to a substance at levels that exceed a TLV. Even though the TLV is not a "Permissible Exposure Limit," the employer would be required to comply with it. The employer would also be required to institute engineering controls to the extent feasible to reduce exposures to the substance.¹

B. The Creation of New PEL's Without Adequate Justification is Unlawful

By requiring that employers ensure that employee exposures do not exceed "hazardous exposure levels," the standard effectively would create new PELs. OSHA, however, has failed to demonstrate the need for new exposure limits, as required by the OSH Act. Thus the standard as proposed cannot withstand judicial scrutiny.²

¹ On behalf of AISI, three industrial hygienists (John Masaitis, William Koenig and Terence Civic), with a combined total of over seventy years of experience testified that they each had studied the standard and understood that it would have the effect of imposing new PELs and would require employers to institute feasible engineering controls for all substances which exceed a "hazardous exposure level." (June 9 Tr. at 630-636).

² OSHA does not have authority under the General Duty Clause to require employers to comply with TLVs, RELs or other limits based on "available scientific information." The General Duty Clause may be used to cite employers only where they fail to furnish to each employee a place of
(continued...)

The burden OSHA must meet under the OSH Act in establishing new exposure limits to hazardous substances has been thoroughly explicated by the United States Supreme Court in Industrial Union Dept., AFL-CIO v. American Petroleum Inst., 448 U.S. 607 (1980) ("Benzene") and more recently by the Eleventh Circuit United States Court of Appeals in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir. 1992). These decisions emphasize that new exposure limits cannot withstand judicial scrutiny unless OSHA establishes by substantial evidence that exposures to the substance present a significant risk of material health impairment and that the new limits eliminate or substantially lessen that risk.

Consequently, the proposed standard requires OSHA to quantify or explain, at least to some reasonable degree, the risk posed by each substance with a "hazardous exposure level." OSHA may not take short-cuts with statutory requirements simply because it chooses to combine multiple substances in a single rulemaking. AFL-CIO v. OSHA at 975. Nor may OSHA take short-cuts with statutory requirements simply because it chooses to regulate multiple substances within the framework of a respiratory protection standard.

In this rulemaking, OSHA did not even attempt to meet its burden of proof.³ OSHA did not quantify or explain the risk from individual substances for which new exposure limits would be imposed. OSHA did not assess the level at which any

²(...continued)

employment which is free from "recognized hazards that are causing or are likely to cause death or serious physical harm to his employees."

³ See "Comments of American Iron and Steel Institute," April 14, 1995 at 3.

significant risk of harm would be eliminated or substantially reduced. Because OSHA must provide some articulation of reasons for its choice of exposure limits (AFL-CIO v. OSHA, 965 F.2d, 962, 976 (11th Cir. 1992)), OSHA cannot simply set new exposure levels at TLVs, RELs, or some other limit based on "available scientific information," without justification.

OSHA additionally has failed to meet its obligation to show that a new health standard is technologically and economically feasible. See AFL-CIO v. OSHA, 965 F.2d 962, 980 (11th Cir. 1992) (holding that the burden is on OSHA to show by substantial evidence that a standard is feasible).

C. **To Implement OSHA's Intention That Respirators be Required Only to Achieve a Permissible Exposure Limit (PEL) or Avoid a Recognized Hazard, OSHA Must Modify the Proposed Standard**

1. **OSHA Interprets the Standard to Apply Only to PELs or Recognized Hazards**

OSHA has announced its interpretation -- both in the preamble to the proposed standard and in hearing testimony -- that the standard does *not* necessarily require employers to provide respirators to meet "hazardous exposure levels." In the preamble, OSHA stated that it interpreted Paragraph (a)(2) as clearly requiring the use of respirators in the absence of engineering controls only in the event that employee exposures exceeded an OSHA permissible exposure limit (PEL) or warranted a Section 5(a)(1) citation under the Act. 59 Fed. Reg. 58895 (Nov. 15, 1994).

At the hearing OSHA again indicated that this is how it interprets the scope of the standard. Richard Schwartz, on behalf of AISI, asked whether the standard

would require an employer to provide respiratory protection if the employer's workplace had exposures to a substance that is not regulated by an OSHA PEL, but exposures exceeded a TLV or REL (and therefore exceeded the "Hazardous Exposure Level").⁴ Edith Nash of OSHA's Solicitor's Office responded that OSHA interpreted the standard as not requiring employers to provide respiratory protection under such circumstances. (June 6 Tr. at 26-27). Later (in response to questions by John Masaitis) Adam Finkel, Director of Health Standards for OSHA, explained that OSHA "does not have the authority except insofar as the general duty clause and the recognized hazard language is involved to require the use of respirators when the only exceedances in the workplace are TLV and REL exceedances." (June 6 Tr. at 66). Ms. Nash further stated that OSHA interpreted Paragraph (a)(1) as not requiring employers to use feasible engineering controls to limit exposures to substances without PELs, where TLVs or RELs are exceeded.⁵

⁴ A further assumption was made that OSHA could not cite the employer for exposing its employees to a recognized hazard under statutory authority of Section 5(a)(1) (The General Duty Clause).

⁵ See June 6 Tr. at 38 (Mr. Schwartz: "You've got the same workplace with exposure to both a PEL and a substance with an ACGIH TLV. Under Paragraph A1, is an employer required to use feasible engineering controls to control exposures to a substance without a PEL, but only an ACGIH TLV?"; Ms. Nash: "No.").

2. To Implement its Interpretation,
OSHA Must Modify the Proposal

For reasons explained above, to implement OSHA's understanding of the proposed standard (as not creating new exposure limits nor requiring feasible engineering controls to meet these limits) OSHA must modify the proposal's language. As proposed, Paragraph (a)(2) of the standard plainly requires that employers must provide respirators to protect the health of employees and establish a program which meets the requirements of Paragraph (c). Paragraph (c) provides that an employer must select respirators as necessary to protect the health of employees. Paragraph (d) provides that employers select respirators that will prevent exposures from exceeding "hazardous exposure levels." Finally, Paragraph (a)(1) requires use of engineering controls to meet exposure limits where feasible.

3. OSHA's Interpretation of the Proposed
Language Leads to Paradoxical Results

Under OSHA's interpretation, the term "hazardous exposure levels" can have no relationship whatever to the term "health of employees." In fact, OSHA took this precise position during the hearing. As stated by Edith Nash of OSHA:

You want to know, probably, is there a link between the hazardous exposure level and the health of the employee?
The answer is no.

(June 6 Tr. at 48-49).

Ms. Nash's paradoxical statement demonstrates in a nutshell why OSHA needs to modify the language of the proposed standard. Recognizing that it has no authority to require the use of respirators except when PELs are exceeded, or when

there is a General Duty Clause violation, OSHA had to testify that there is no link between "hazardous exposure levels" and employee health. Accordingly, the term "hazardous exposure levels" has no place in the standard. (In fact, OSHA is correct: the record is bereft of any evidence that there is any actual link between "hazardous exposure levels" and the health of the employee). The proposed standard must therefore be modified to remove the terms "hazardous chemical" and "hazardous exposure level."

D. Even if OSHA's Interpretation of the Standard
Were Accepted, the Standard Would Still be Unlawful

Even if, against all logic, OSHA's interpretation were accepted, the standard would still not withstand judicial scrutiny. OSHA admits that wherever a respirator program is in use (either voluntarily or for a substance with a permissible exposure limit), the standard will apply to all "hazardous chemicals" (defined under the Hazard Communication Standard) in the workplace, whether or not OSHA has established that they present a significant risk.

According to OSHA's preamble and testimony, the standard does require employers to take into account "hazardous exposure levels" for substances without PELs once a respiratory program is implemented, whether to comply with PELs, or because the employer decides to do so voluntarily.

OSHA explained in the preamble that once employee exposures exceed an OSHA PEL, the standard would require respirators to be provided by the employer and would require implementation of a respiratory protection program that meets the full requirements of the respirator standard. 59 Fed. Reg. 58895 (11/15/94). At the

hearing, OSHA clarified that such a respiratory program would have to comply with Paragraph (d) -- mandating selection of respirators to meet hazardous exposure levels -- even with respect to substances that did not have PELs. This is made clear in the following exchange between Mr. Schwartz and Ms. Nash:

MR. SCHWARTZ: Let's suppose you've got the same workplace, so we have a permissible exposure limit that's exceeded, so the standard must apply. Suppose in that same workplace there is another substance which does not have a permissible exposure limit, but is subject to an ACGIH TLV. Now I take you back to the question about selection of respirators. Must a respirator be selected which, in fact, limits exposures so they do not exceed the TLV for that substance?

MS. NASH: There are a number of answers. You're talking about the way the provision is now written?

MR. SCHWARTZ: Right.

MS. NASH: That was OSHA's proposal, that if an employer decided to require respirator use in his workplace, he would have to properly select the respirator . . .

MR. SCHWARTZ: So again, the answer to my question is yes?

MS. NASH: As the proposal is written, this is what we had indicated, yes.

(June 6 Tr. at 25-26).

OSHA further explained in the preamble that "a respiratory protection program complying with the full provisions of this proposal would be required whenever an employer [voluntarily] requires any employee to wear a respirator, regardless of the exposure level and whether the substance is regulated." 59 Fed.

Reg. 58895 (11/15/94). At the hearing, Adam Finkel of OSHA provided additional clarification:

We do not have the authority except insofar as the general duty clause and the recognized hazard language is involved to require the use of respirators when the only exceedances in the workplace are TLV and REL exceedances . . . Except that [TLVs and RELs] are mandatory in the sense that if a respirator is going to be used for any variety of reasons -- whether it's voluntary, whether it's compliance with the PELs which are legally enforceable -- then the TLVs and the RELs become mandatory for selection purposes . . . If there is no PEL and respirators are being used for voluntary or general duty or PEL exceedance reasons for other substances in the workplace, then the hazardous exposure level is determined with reference to the TLVs and the RELs and it is a mandatory aspect of selection once the decision has been made to use respirators at all."

(June 6 Tr. at 65-66).

In fact, the "hazardous exposure level" concept is used in a number of places within the proposed rule to define employer obligations:

- Paragraph (d) generally requires that respirators be selected to meet hazardous exposure levels.
- Paragraph (d)(8) provides that air-purifying respirators may be used for a hazardous chemical with poor or inadequate warning properties only if the odor or irritation threshold is not in excess of three times the hazardous exposure level and there is no associated ceiling limit.
- Paragraph (f)(1) provides that the employer shall ensure that the respirator selected fits the employee well enough to reduce employee exposures inside the mask to below the hazardous exposure level.
- Paragraphs (f)(6)(i)(A) and (B) provide that employees may not wear tight fitting air-purifying respirators that have quarter and half-mask facepieces and that pass qualitative

or quantitative fit testing in atmospheres greater than ten times the hazardous exposure level.

- Paragraph (f)(6)(ii)(B) provides that employees may not wear tight fitting air-purifying respirators that have full facepieces and that pass quantitative fit-testing in concentrations greater than fifty (50) times the hazardous exposure level.

Under OSHA's interpretation, employers must take into account "hazardous exposure levels" for substances without PELs once a respiratory protection program is implemented for any reason. Thus the proposed standard would effectively create new enforceable requirements incorporating TLVs, RELs and limits based on "available scientific information." Such levels would become mandatory limits once the respiratory protection program was implemented. Consequently OSHA must first establish by substantial evidence that these limits are needed to eliminate or substantially lessen a significant risk of material health impairment -- a burden which OSHA has failed to meet.⁶

⁶ The "hazardous exposure level" definition is additionally unlawful because exposure levels could change at any time without providing employers an opportunity for notice and comment. If there is no PEL for a hazardous chemical, the hazardous exposure level for that chemical is defined as "the Threshold Limit Values (TLV) recommended by the American Conference of Governmental Industrial Hygienists (ACGIH) in the latest edition of Threshold Limit Values for Chemical Substances and Physical Agents in the Work Environment." At the hearing OSHA testified that the applicable TLV would be the latest TLV published at the time the employer applied the standard, not the latest TLV published at the time the standard was promulgated. (June 6 Tr. at 47). Because the ACGIH is a private body, this means that the applicable TLV could change at any time, without the regulated community being afforded an opportunity for notice and comment, in contravention of the Administrative Procedure Act and the OSH Act.

E. The Rulemaking Record Reflects Widespread Concern About the Creation of New Legally Enforceable Exposure Limits

Comments and testimony submitted during this rulemaking reflect widespread concern in the regulated community that OSHA does not have the regulatory authority to require employer compliance with the respirator standard for substances for which no PEL has been established. Trade associations expressing concern in submitted comments include the Chemical Manufacturers Association, the American Petroleum Institute, the National Mining Association, the National Association of Manufacturers, the Associated General Contractors of America, the Painting and Decorating Contractors of America, and the Workplace Health and Safety Council. Corporations expressing concern in submitted comments include Phillips Petroleum Company, Allied Signal, Motorola, Reynolds Metals, and Amoco. The consensus among these rulemaking participants is that rather than trying to set exposure limits which OSHA does not have the authority to require, OSHA should allow employers flexibility to determine based on professional experience what exposure limit is appropriate.

II. **The Methods Of Compliance Provision Is Inappropriate In A Respiratory Protection Standard, But If It Is To Be Included, It Must Be Subjected To Public Comment**

A. **OSHA has a Legal Obligation to Provide Interested Persons With an Opportunity to Comment On the Methods of Compliance Provision**

In the preamble to the proposed standard, OSHA wrote that the methods of compliance provision, 29 C.F.R. § 1910.134(a)(1), which mandates that control of air contaminants be accomplished as far as feasible by engineering control measures, is not a subject of this rulemaking. AISI respectfully submits that an engineering controls requirement is not appropriate in a respirator standard at all, but if this provision is to be included, then OSHA has a legal obligation under Section 6(b)(2) of the Occupational Safety and Health Act (the "OSH Act"), 29 U.S.C. § 655(b)(2), and the Administrative Procedure Act, 5 U.S.C. § 553, to provide interested persons with an opportunity to comment on it.⁷

Notice and comment procedures are designed to "assure fairness and mature consideration of rules." NLRB v. Wyman-Gordon Co., 394 U.S. 759, 764 (1969). They encourage "openness, explanation, and participatory democracy" in the rulemaking

⁷ The OSH Act provides that "The Secretary shall publish a proposed rule promulgating, modifying, or revoking an occupational safety or health standard in the Federal Register and shall afford interested persons a period . . . after publication to submit written data or comments." 29 U.S.C. § 655(b)(2). The Administrative Procedure Act provides that "the agency shall give interested persons an opportunity to participate in the rule making through submission of written data, views, or arguments . . ." 5 U.S.C. § 553(c). Administrative rules which are not promulgated in accordance with these provisions are void. See City of New York v. Diamond, 379 F. Supp. 503 (D.C.N.Y. 1974).

process, and ensure that "unelected administrators, who are not directly accountable to the population, are forced to justify their quasi-legislative rule-making before an informed and skeptical public." Air Transport Assn. v. Department of Transp., 900 F.2d 369, 375 (D.C. Cir. 1990); New Jersey v. Department of HHS, 670 F.2d 1262, 1281 (3d Cir. 1981).

The Administrative Procedure Act and Section 6(b)(2) of the OSH Act require that OSHA provide interested persons an opportunity to submit written data and comments on a proposed *rule*, not just on selected parts of it. OSHA cannot include a provision on engineering controls within the proposed respiratory rule and then prohibit interested persons from commenting on it. This is particularly true for this paragraph, which was originally adopted as part of a national consensus standard pursuant to Section 6(a)(1) of the Act without public comment. Section 6(a)(1) allowed OSHA to promulgate occupational safety or health standards, without subjecting the standard to comment, for a period of two years beginning with the effective date of the Act. Now that this two year period is over, OSHA cannot propose to include the methods of compliance provision as part of a new rulemaking without complying with Section 6(b) of the OSH Act and the Administrative Procedure Act.

In the preamble OSHA tries to justify forbidding comment on the methods of compliance provision on the ground that OSHA is dealing with this subject in another rule. 59 Fed. Reg. 58895 (1994). If so, then the provision should be removed from this rule. Otherwise, OSHA must allow comment on this provision and evaluate the associated costs.

At the hearing OSHA indicated that the methods of compliance (engineering controls) provision in Section (a)(1) need not be opened to comment because the respirator standard is not intended by OSHA to impose engineering controls. OSHA attorney Edith Nash explained:

It's a limited standard. To the extent it repeats and recites what OSHA is convinced is the proper role of engineering controls versus respirators, it is an appropriate statement of regulatory policy, and that's what it is here for.

(June 6 Tr. at 37). In fact, however, the provision does more than just repeat and recite regulatory policy. The provision has a substantive impact. When combined with other provisions creating new enforceable exposure limits, it would require employers to institute feasible engineering controls for many substances.⁸

⁸ Other participants in the rulemaking in addition to AISI expressed significant concern with the inclusion of the hierarchy of controls provision. The National Association of Manufacturers (NAM), for example, commented:

NAM has significant concerns about the continued inclusion of this provision, coupled with the proposed definition of the term "hazardous exposure level." NAM is concerned that the respiratory protection provisions could be used to create an enforceable standard out of employer-established voluntary exposure criteria. Implicit in this provision is the requirement that engineering controls would have to be used to reduce airborne concentrations of substances which do not now have Permissible Exposure Limits (PELs). This provision should be deleted from the respiratory protection standard unless interested parties have the opportunity to comment on it and OSHA demonstrates that it should be retained by satisfying the applicable legal criteria under Sections 3(8) and 6(b) of the OSH Act.

Comments of National Association of Manufacturers on Proposed Respirator Standard, April 14, 1995.

B. OSHA Failed to Provide a Technological and Economic Feasibility Analysis on the Methods of Compliance Provision

If OSHA intends to include the methods of compliance provision within the standard, it must include an analysis of the economic and technological feasibility of engineering controls. OSHA has presented no such analysis. This omission is particularly egregious because the engineering controls requirement imposes a greater economic burden on employers -- at least those in the steel industry -- than all other requirements of the standard combined. As representatives of AISI testified at the hearing, the cost of instituting, operating, and maintaining engineering controls in the steel industry would be monumental.

AISI testified that tens of millions of dollars would be required periodically to install or upgrade engineering controls in a single steel facility. As Peter Hernandez explained:

Engineering controls that are typically used for atmospheric contaminants consist of local exhaust ventilation and exhaust air cleaning systems. The recent cost to provide local exhaust ventilation in a steel industry meltshop was approximately \$70 per standard cubic foot of air per minute. Due to the enormous amounts of raw materials utilized in the steelmaking process (thousands of tons daily), large volumes of air are exhaust ventilated. Exhaust ventilation systems for typical steelmaking vessels require air movement volumes of 200,000 to 300,000 standard cubic feet per minute ("SCFM"). Some vessels require two systems, each with capacities in this range. Whole shop ventilation systems for meltshops can require four to five times these amounts, exceeding 1,000,000 SCFM.

For example, \$45 million was recently spent to upgrade the exhaust ventilation in a large meltshop. Upgrades of this

magnitude would be required to comply with the proposed rule because, as I will explain in a moment, the rule effectively creates new PELs for hundreds of substances, by incorporating undocumented and unnecessarily restrictive exposure limits.

(June 9 Tr. at 622).

C. The Methods of Compliance Requirement Imposing Engineering Controls Should be Removed from the Respirator Standard

The methods of compliance provision imposing engineering controls should be removed entirely from the respirator standard. A provision requiring engineering controls is clearly incongruous in a standard about respirators. Moreover, OSHA should not dictate a particular method of control. Section 6(b)(5) of the OSH Act requires that "whenever practicable, the standard promulgated shall be expressed in terms of objective criteria and of the performance desired." 29 U.S.C. § 655(b)(5).

This methods of compliance provision would force employers to make expensive capital investments in engineering controls, even if respirators would protect employee health just as effectively without them. In the steel industry, for example, employers in many instances can effectively reduce air contaminant exposures to acceptable levels using respirators on an as-needed basis, whereas engineering control costs can be overwhelming. Imposing a methods of compliance standard serves only to require an inefficient allocation of resources. OSHA should adopt a more flexible, performance-oriented approach that allows employers to comply with PELs by using any combination of engineering controls, work practices, and/or respiratory protection.

III. Annual Medical Evaluation, Fit Testing And Training Requirements Are Unjustified

Needless regulatory requirements hinder rather than help employer efforts to protect employee health. In general, the proposed respirator standard would impose such detailed and burdensome requirements that the objectives it seeks to achieve would be undermined. Of particular concern to AISI are the proposed requirements for annual fit testing, medical evaluations and training. These requirements will impose a substantial burden on employers, without a commensurate benefit to employees. Fit testing, medical evaluation and training requirements should be performance-based.

A. The Costs of Compliance with Annual Requirements Are Significant and Have Been Underestimated by OSHA

Annual medical evaluation, fit testing and training requirements would impose a significant economic burden on employers. For example, AISI testified that in the steel industry the cumulative cost of compliance with the proposed annual fit testing, medical evaluation and training requirements would be approximately \$334 per employee per year. (June 9 Tr. at 628). OSHA has failed to properly assess the costs of proposed annual requirements.

1. Medical Examinations Are Expensive

The proposed standard would require employers to obtain a written opinion annually from a licensed physician as to fitness to wear a respirator for every employee who wears a respirator more than five hours during any work week. OSHA

estimates that the proposed standard will not impose any additional costs on employers, but currently annual medical examinations are not required.

In comments and hearing testimony, AISI explained that the cost of compliance with the annual medical evaluation requirement in the steel industry would be approximately \$195 per employee per year. This estimate reflects estimated costs of \$150 per employee for the examination itself and \$45 for lost employee work time. This cost estimate for the examination is consistent with that of the Nuclear Regulatory Commission⁹ and is also consistent with the testimony of the United Steelworkers of America.¹⁰

2. Fit Testing is Expensive

OSHA also has underestimated costs associated with annual fit testing requirements. Costs for quantitative fit testing are completely ignored in the Preliminary Regulatory Impact and Regulatory Flexibility Analysis, even though there are circumstances where quantitative fit-testing is the only kind of fit-testing which is permissible (i.e., where full facepiece respirators are used in atmospheres with concentrations greater than ten times the "hazardous exposure level"). The

⁹ See 60 Fed. Reg. 7901 (Nuclear Regulatory Commission estimates the cost of a respiratory medical examination to be \$150 per examination in its final rule on frequency of medical examinations for users of respiratory protection equipment).

¹⁰ See Testimony of David Parkinson ("We just . . . submitted a proposal to do this sort of examination on one of our unions, and we charged between \$100 and \$120 for the full package for the medical history, the physical examination and the pulmonary function test. I think we're very cheap really.") (emphasis added) (June 13 Tr. at 1089).

unnecessary requirement for three successful fit tests significantly increases the cost quantitative fit-testing.

Costs associated with qualitative fit testing have also been underestimated by OSHA, particularly costs associated with lost employee time. OSHA's Preliminary Regulatory Impact and Regulatory Flexibility Analysis estimates that the hourly compensation of a production worker is \$12.56. AISI introduced evidence in its comments, however, that average hourly compensation in the steel industry, as of January 1995, was \$22.88 and average total employment cost per hour for wage employees was \$33.91. OSHA's analysis also estimates that qualitative fit testing would take about only one-half hour for each tested employee. In reality, fit testing of an employee may require that employee to be away from a work for a much larger period. AISI commented that fit testing of a steel industry employee may require that employee to be away from work for two to three hours, including transportation time.

AISI testified at the hearing that in the steel industry the estimated cost for fit testing was approximately \$70 per employee, reflecting an estimated cost of \$26 for the fit testing examiner and an estimated cost of \$45 for lost employee work time. (June 9 Tr. at 628).

3. Annual Training is Expensive

OSHA additionally has underestimated the costs of annual training. The proposed standard would require employees to receive annual training that would include instruction as to the nature of respiratory hazards, procedures for inspection,

the donning and removal of respirators, the maintenance and care of respirators, the use of respirators in emergency situations, the content of the respirator standard, and the contents of the employer's written respirator protection program.

AISI testified that in the steel industry, the cost of compliance with annual training requirements is approximately \$70 per employee per year, reflecting an estimated cost associated with lost employee work time of \$45 per employee, and an estimated cost of \$26 for the training examiner.

B. The Evidence Demonstrates that Annual Requirements Are not Needed to Protect Employee Health

Annual medical evaluation, fit testing and training requirements will impose a significant economic burden on employers, but the only hard evidence in the record demonstrates that the actual benefits to be realized from such requirements are minimal.

1. Annual Medical Examinations Are Unnecessary

When John Martonik of OSHA was asked by AISI at the hearing what information OSHA had relied on in arriving at the proposed annual medical evaluation requirement, he could point to no quantitative data. (June 3 Tr. at 53). Compelling evidence, however, was presented by AISI and other rulemaking participants that annual medical evaluations are excessive.

AISI introduced the results of a study of respirator medical examinations conducted over a six year period at a major integrated steel plant. In that study 4,011 medical examinations performed from 1989 to 1995 of 1816 employees were reviewed. Thirty-four employees were identified during their initial medical

examination as not capable of wearing a respirator. In 2 195 subsequent medical examinations, however, only fourteen additional employees were deemed incapable of wearing a respirator. Of these fourteen employees, eleven were restricted based on conditions identified by their personal physicians.¹¹ Of the other three, one (1) was overweight, a condition that could be discovered without a medical examination, one (1) was determined to be claustrophobic; and one (1) had reduced pulmonary function and an abnormal chest x-ray.

The results of the study demonstrate that while initial medical examinations are beneficial in identifying persons who may have difficulty wearing a respirator, subsequent examinations are not. For only two out of 1 816 employees did a subsequent medical examination reveal any condition which was not already known by the employee.¹²

Instead of mandatory annual medical evaluations, medical evaluations should occur prior to the initial wearing of respirators, and thereafter at a frequency determined by a licensed medical provider or to verify a suspected functional disability that might affect the ability to wear a respirator. The rule should allow employers to use a screening questionnaire administered by a health professional or

¹¹ Seven (7) had asthma diagnosed by their personal physician, one (1) had an aneurysm and was restricted by a personal physician, one (1) had a heart condition diagnosed by a personal physician, one (1) had a reduced pulmonary function and was diagnosed by a personal physician as having emphysema, one (1) had a pulmonary embolism and was restricted by a personal physician.

¹² The personal physician of the person with the abnormal chest x-ray, however, subsequently read the x-ray as being normal.

a trained person to identify those respirator wearers who require physical examinations on the basis of their medical history or condition.

Not requiring mandatory annual medical evaluations is consistent with the rule recently adopted by the Nuclear Regulatory Commission (NRC), which amended its respirator regulations to eliminate mandatory annual evaluations. 60 Fed. Reg. 7900 (1995). As the NRC concluded, eliminating mandatory annual evaluations "constitutes a reduction of regulatory burden . . . without any significant reduction in worker health or safety." 60 Fed. Reg. 7901.

Many other participants in the rulemaking agreed that annual medical exams were excessive, including the Chemical Manufacturers Association, the Workplace and Safety Council, the Industrial Safety Equipment Association and the Florida Department of Labor and Employment Security.

2. Annual Fit Testing is Unnecessary

When asked by AISI what data OSHA had relied on to determine that annual fit testing was appropriate, OSHA could not point to any quantitative data indicating that annual fit testing is needed. (June 6 Tr. at 52). Fit testing results submitted by AISI, however, provide compelling evidence of the minimal value of annual fit testing.

In a study presented by AISI, a total of 3,216 fit tests were performed at a steel plant between 1989 and 1995. Employees were fit tested using the TSI Portacount Fit Test device using a standardized fit test procedure. Except for those employees who reported for the examination with facial hair and consequently were not tested,

all employees were successfully fitted. Of the at least 1,600 employees who were successfully fit tested, only fifty-two of them, or less than 3% changed sizes within a particular respirator model subsequent to their initial fitting. The primary reasons for these changes were a desire to change facepiece size for comfort, severe weight gain or loss, and a change in safety glasses style. These results suggest that, instead of annual testing, employees should be fit tested on an as-needed basis; for example, prior to the initial use of a respirator, and when an employee has a change in personal or facial condition that may affect respirator fit.

Other participants in the rulemaking also challenged the wisdom of requiring annual fit tests. For example, the Associated General Contractors of America (AGC) in comments noted that the requirement "would add unnecessary costs and additional burdens to an already expensive and burdensome regulatory process." AGC agreed fit testing should be conducted only prior to initial use, whenever a different make or size respirator is used, and whenever the respirator user's facial structure changes from facial scarring, cosmetic surgery, significant changes in body weight, dental work, etc.

Richard Olson of Dow Chemical Company also questioned the need for annual testing. Olson noted that his company used a two-year test interval, but added that it was "possible that the interval between testing could be longer than two years and still provide adequate protection." (June 20 Tr. at 2171-73) Olson testified:

The regulations should allow some flexibility in the manner of ensuring employee protection. Many companies have outstanding injury and illness data which provides at least

anecdotal evidence that practices other than annual fit testing have been effective.

(June 20 Tr. at 2178).

Another rulemaking participant, Exxon, which expressed support in principle for annual fit testing at the hearing, acknowledged that its experience was that annual fit testing was of little practical utility. Stephen Killiany of Exxon observed:

Our experience indicates that most of our respirator users are satisfied with their respirators from year to year and don't typically change sizes or ask for fit tests beyond their annual scheduled fit test. Furthermore, experience indicates that when employees have their respirator size changed, it is typically for personal preference reasons of comfort and not necessarily for a failure to pass a fit test.

(June 9 Tr. at 515).

Frank Nitsch of Amoco testified:

[T]here's nothing magic about one year . . . or any other number . . . [1 year is] a very subjective number. I mean the first thing I would ask people that throw out those numbers is what's the basis for that, you know? Why a year?

(June 16 Tr. at 1798).

The bottom line is that there is not substantial evidence in the record to support annual fit testing. This burdensome mandatory requirement should be replaced with a flexible performance-based standard. A performance-based standard should require that the employer fit test the employee prior to initial use of the respirator, prior to use of a different make or size of respirator, when notified by an employee of a change in personal or facial condition that may affect respirator fit, or when the need for a fit test is indicated by a medical evaluation or other reasons.

3. Annual Training is Unnecessary

With respect to the proposed annual training requirement, OSHA once again could not point to any data indicating that such a requirement is justified.¹³ When asked by Richard Schwartz on behalf of AISI what data supported training, John Martonik of OSHA suggested annual training is justified principally because annual training has heretofore been included in almost every OSHA health standard. Simply because OSHA has often favored annual requirements in the past, however, does not mean that annual requirements are justified here.

Many participants presented evidence at the hearing indicating that a performance-based standard would be preferable to mandatory annual training. On behalf of AISI, Terence Civic testified that the steel industry's experience has been that annual training sessions, addressing the same required subject matter, are "overkill" and "a waste of valuable training time." (June 9 Tr. at 636). Other participants echoed this theme. Pamela Murcell of The Hazardous Waste Coalition, for example, testified that "conducting the same respirator training year after year would be an ineffective and tedious exercise for both the employer and the employee." (June 14 Tr. at 1310). Richard Holmes of Union Carbide Corporation testified on behalf of the Chemical Manufacturers Association that employees at his company are "frequently complaining that the same training over and over again gets pretty old." (June 16 Tr. at 1722). Richard Olson of Dow Chemical Company testified:

¹³ Likewise, Thomas J. Nelson of the ANSI Z88.2 Committee testified that he was unaware of any studies which found that annual training was necessary. (June 14 Tr. at 1222).

[A]fter a while, [annual] training gets to be a good nap time for the employees . . . These are not uneducated people. They are smart, and they are very knowledgeable and after they have been through training once or twice or three times, they get very bored if they know it. And it just turns them off.

(June 20 Tr. at 2204).

Those parties who expressed support for annual training requirements appear to assume, without any evidence, that employees are incapable of retaining what they have learned from year to year, and that outside of official training sessions employees are incapable of seeking assistance and guidance on an as-needed basis. In reality, employers have supervisors, professional industrial hygienists and safety teams in the workplace every day to observe that employees are properly equipped and trained, and are working safely. John Masaitis testified as to the experience of U.S. Steel:

It may be your impression that the employer position or the person doing the respirator training sees this person initially, does his training, does the medical evaluation and then the employee disappears in a dark hole somewhere and that no one sees him again until he comes out of this hole.

There are industrial hygienists, there are safety people, there are safety teams, there are supervisors that are in the workplace every day. In many of the facilities, the industrial hygiene people know most of the workers by their first name. If a person has a facial disfigurement or something or if he has a radical gain in weight or loss, they see this. They're out in the workplace doing studies and training, observing people. It's not like we don't see these people. It's part of their job to observe daily so we know

these things, we see them, it's apparent. They talk to them. They know their families. They know them personally.

(June 9 Tr. at 650).

In short, training is more effective when given on an as-needed basis, rather than on a rigid schedule. As an alternative to mandatory repetitive training, the standard should permit employers to administer periodic screening tests to respirator wearers, at reasonable intervals, to determine whether further training is needed. Such a screening test could be administered either as a written questionnaire or in the form of recorded visual observations. If the screening test revealed that an employee's knowledge was deficient in certain areas, then the employee would have to be retrained in those areas. An employee would not have to be retrained in areas he or she already knew.

IV. Substantive Requirements For Respirators Should Be Consistent

The proposed standard would leave in place many inconsistencies between substance specific standards and the general respirator standard. For example, under the proposed standard, employers would have to perform semi-annual fit testing for lead, benzene and asbestos under substance-specific standards, but annual fit testing for substances under the general respiratory standard. As Frank Nitsch of Amoco testified at the hearing, there is "a problem with specifying certain materials require more frequent fit testing than others . . . A fit is a fit." (June 16 Tr. at 1798).

Requirements for respirators should be consistent and uniform. Requiring employers to comply with substance-specific standards in addition to the general respirator standard makes compliance with the respirator standard unnecessarily burdensome. Rather than maintaining a cumbersome thicket of duplicative and possibly conflicting regulations, OSHA should simply incorporate by reference into all substance-specific standards the general respiratory standard at § 1910.134.¹⁴

CONCLUSION

For the reasons stated above, OSHA should withdraw the proposed rule and submit a simpler one which includes only those requirements that are necessary and appropriate to identify and reduce significant risks to employee health.

Respectfully submitted,

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¹⁴ Many rulemaking participants stressed the need for consistency between standards, including the Chemical Manufacturers Association, the National Mining Association and Motorola.