



HEALTHIER WORKPLACES | A HEALTHIER WORLD

August 28, 2023

Douglas L. Parker  
Assistant Secretary of Labor for Occupational Safety and Health  
United States Department of Labor

## **AIHA's Recommendations on OSHA's Proposed Rule Personal Protective Equipment in Construction**

**Agency/Docket Numbers:** OSHA-2019-0003  
**RIN:** 1218-AD25

Dear Assistant Secretary Parker:

AIHA, the association for scientists and professionals committed to preserving and ensuring occupational and environmental health and safety (OEHS), appreciates the opportunity to provide feedback on the Occupational Safety and Health Administration's (OSHA) proposed rule on revising its personal protective equipment (PPE) standard in construction. We hope you find our feedback useful and are happy to answer any questions you may have.

### **OSHA requests comment on whether the inclusion of an explicit requirement in § 1926.95(c) would help clarify construction employers' obligations to provide properly fitting PPE to their employees.**

AIHA supports the inclusion of an explicit requirement in OSHA construction standard to help clarify the employer's legal obligation to provide proper fitted PPE for their employees.

Any worker's safety and health can be adversely impacted by PPE that does not fit properly. Smaller workers (both women and men) and workers who are extremely larger than average weight, height, physical dimensions are more likely to be impacted by improperly fitting PPE. For example, workers with excessively large head circumferences may struggle to find hard hats and those with excessively large pinnas may struggle to find earmuffs.

As documentation of the need, a web search showed the following organizations which have sent an alert or communicated concerns for properly fitted PPE:

- CDC/NIOSH: <https://blogs.cdc.gov/niosh-science-blog/2023/03/06/ppe-fit-construction/>
- International Safety Equipment Association (ISEA): <https://safetyequipment.org/isea-warns-poorly-fitting-personal-protective-equipment-is-a-safety-hazard/>

- Texas Department of Insurance: <https://www.tdi.texas.gov/tips/safety/personal-protective-equipment.html>
- International Labor Organization (ILO): <https://www.ilo.org/global/topics/labour-administration-inspection/resources-library/publications/guide-for-labour-inspectors/personal-protective-equipment/lang--en/index.htm>
- American Society of Safety Professionals (ASSP): <https://www.assp.org/news-and-articles/how-can-we-fix-the-fit-of-personal-protective-equipment>
- Laborers Health and Safety Fund (<https://www.lhsfna.org/ill-fitting-ppe-hurts-women-and-construction/>) described the following specific hazards for women in construction:
  - “A woman with a small face wears the goggles available in the shop. The gaps they leave at her temples allow flying debris from the machine to enter her eyes.
  - A female worker in a sawmill can only get small men’s-sized gloves; the fingers are too long and too wide, the palm area too large and the cuff allows sawdust to fill the fingers. She risks getting her fingers caught in machinery and pinched when she stacks or carries boards.
  - A woman who wears men’s sized work boots reports tripping while walking and climbing stairs or ladders. She also suffers from blisters and burning on the soles of her feet and because her boots are too large, her toes are not protected by the steel cap.”
- American Medical Association (AMA): <https://www.ama-assn.org/delivering-care/public-health/make-sure-ppe-designed-fit-everyone>, and <https://www.ama-assn.org/delivering-care/public-health/ill-fitting-ppe-contributes-added-stress-women-physicians>

A study for Women in the Construction Workplace from Advisory Committee on Construction Safety and Health (OSHA), June 1999 for “Providing Equitable Safety and Health Protection: Recommendations regarding Women in the Construction Workplace: Providing Equitable Safety and Health Protection”, which found that:

“Studies by NIOSH and the U.S. Department of the Army found that most tools, equipment, and clothing are not designed for a women's physique. When asked if they could easily find protective clothing to fit, 46% of women in the second NIOSH said ‘no’ with respect to work shoes and 41% with respect to finding work gloves. One survey of manufacturers of protective equipment, taken at a National Safety Council Annual meeting, found that only 14 percent offered ear, head, and face protection in women's sizes. The highest percentage, 59 percent, were manufacturers who offered foot protection in women’s sizes.”<sup>1</sup>

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<sup>1</sup> <https://www.osha.gov/advisorycommittee/acsh/products/1999-06-01>

## **Will this proposal effectuate the purposes of the OSH Act better than the applicable national consensus standards?**

Consensus standards are continuously upgraded and revised. For example, ASTM International developed the ASTM F3407 *Standard Test Method for Respirator Fit Capability for Negative-Pressure Half-Facepiece Particulate Respirators*, which was published October 2020 to increase the probability that available respirators fit a general worker population.

While it is helpful to reference consensus standards, since many consensus standards, such as ANSI Z89.1, and Z87.1, do not have required fit language, AIHA supports stating fit requirements clearly in Construction regulations, as in General Industry. Regulatory language is helpful for employers to have a better understanding of what is required and thresholds for compliance. Fit information in consensus standards can be referenced to help employers understand the types of fit assessments that can be helpful, fit best practices and can also inform OSHA of useful language for guidance documents and frequently asked questions.

## **ACCSH recommended that OSHA consider developing additional guidance to explain what “proper fits” means for PPE used in construction. (ACCSH Meeting Transcript, July 17, 2019). Is existing OSHA guidance regarding PPE “proper fit” in construction adequate? If not, what type of additional guidance should OSHA provide?**

AIHA does not support specific guidance. PPE fit is largely subjective and will vary person-to-person. However, AIHA believes examples of “proper fit” are desirable. Furthermore, AIHA does not support specific guidance for all categories of PPE.

PPE fit has several components, including: a) choosing the proper size which can be measured objectively for respirators, hearing protection, eyewear, and footwear, b) compatibility with other PPE worn, and c) appropriateness for the task and duration of work, such as the impact on dexterity or productivity. Additional guidance could include well-established procedures for hearing protector fit testing, additional guidance on eyewear fit testing, and proper donning and doffing of fall protection harnesses. Additional guidance could also include allowing workers to try on various sizes of PPE. However, as stated earlier, AIHA believes examples of “proper fit” are desirable.

## **Is there confusion about what “properly fits” means for PPE used in the construction industry?**

Operational definition of “proper fit” is desirable so that employers know what is meant and for proper compliance documentation. Additional clarity should be provided to employers to help them understand what “proper fit” means for them and their workers. For some forms of PPE, “proper fit” has a direct impact on efficacy of the PPE item, e.g., the seal of a tight-

fitting respirator to the face, or the ability of an earplug to seal the ear canal effectively, or the lack of gaps between eyewear and the face. For other forms of PPE, “proper fit” primarily means ensuring workers are acceptably comfortable or not hindered by extra material or bulk. The standard should point employers to specific actions per PPE item that can be taken.

Employers should follow the manufacturer’s instructions for proper fit and selection of sizing.

Where standardized procedures and equipment exist for assessing fit, they should be used. For example, using a hearing protector fit testing equipment which is compliant with ASA/ANSI S12.71-2018.

For categories of PPE which have a wide degree of adjustability, proper donning procedures are necessary to obtain an adequate fit. For example, fall protection harnesses. Proper donning is also particularly important when using combinations of various types of PPE and protective clothing.

**How would the proposed revision impact the construction industry? Specifically, would revising the construction standard to mirror the language in the current general industry and maritime standards change how employers choose PPE for their employees? How?**

The construction standard should be common with general industry. Some considerations for construction include the transient nature of the work, the need for easy or mobile fit assessments, and the need to be able to source PPE of various sizes quickly as the jobs change. Special or less common sizes may have longer lead times.

**Are there differences between general industry and maritime, and the construction industry, that impact whether OSHA should include the phrase “properly fits” in the construction standard?**

AIHA knows of no difference between proper fit in general industry, maritime or construction.

**Are there types of PPE that are not available in varying sizes? If yes, please give specific examples of the PPE and how you address this in the workplace.**

AIHA believes all reliable manufacturers of PPE know that one-size-fits all is incorrect and a misnomer. While reliable manufacturers strive to make PPE that fits a wide ranges of sizes, there may be some individuals which require a different style or type of PPE to get adequate protection, or individuals which are extremely larger or smaller than average which may

need to purchase special order sizes. For example, a person may need to wear an earmuff, if they cannot find an ear plug which fits. A person who cannot get an adequate seal with a tight-fitting respirator may need to consider a loose-fitting PAPR.

### **Finally, what, if any, burden will the proposed change to section 1926.95(c) impose on employers in the construction industry?**

Little burden is anticipated since many PPE manufacturers already understand the breadth of the problem and offer several sizes of various PPE including respirators.

Little burden is anticipated for employers. For many types of PPE, manufacturers already offer several sizes and options to help fit a diverse workforce.

AIHA encourages OSHA to also consider correcting the assumptions in the table. OSHA should consider additional parameters other than height and weight, such as head circumference, girth, chest measurements, torso, etc. and sources of this data. For example, in respiratory protection, NIOSH bivariate data is helpful for manufacturers in designing products. This concept could be replicated to other types of PPE such as body protection. OSHA could propose future research to help provide this type of data. This data would need to cover a wide range to account for the diversity in the workforce, such as both extremely small and large workers. Consider tables for protective clothing, i.e., ANSI 101-2014. Some workers on the extremes may have more difficulty finding PPE or experience longer lead times as manufacturers work to create these sizes.

### **Given the necessity of estimating these parameters, OSHA seeks comment on what characteristics, and what data sources, should be considered when estimating the proportion of employees that might require non-standard sizes of PPE in the construction industries.**

OSHA should also consider clarifications to Table 1 used to determine the impact.

The register states that the PPE in Table 1—PPE Used in the Construction Industries of “universal fit are those that are completely adjustable and capable of fitting any person.” No PPE is universal fit, even the most adjustable PPE may not fit workers on the extremes of anthropometric data. Suggest removing the “Universal Fit” column and move the items in that column to the other two columns as appropriate.

The Federal Register notice for this proposed rule states that “PPE items purchased by the employee and then reimbursed by the employer should already fit properly since the employee should have selected the size that fits them best.”<sup>2</sup> PPE items purchased by employees may or may not be the size that actually fits, but may be what the employee was

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<sup>2</sup> <https://www.federalregister.gov/documents/2023/07/20/2023-15285/personal-protective-equipment-in-construction>

able to find. Fit assessments should still be completed at the time of purchase or by the employer.

AIHA also notes that body harnesses are not universal fit but are available in sizes and wearers should be trained appropriately on proper donning to ensure proper fit. Furthermore, ear inserts are not universal fit and should be fit tested. Earmuffs are more likely to fit a wide range of people, except for those with excessively large pinnas. Additionally, hardhats and welding helmets are generally adjustable; however, extra-large sizes may be needed for some workers.

## Conclusion

AIHA urges OSHA to revise the construction standard to match or exceed that for general industry.

If you have any questions about AIHA's comments on this proposed rulemaking or other matters, please contact me at [mames@aiha.org](mailto:mames@aiha.org) or (703) 846-0730. Thank you for your time and consideration.

Sincerely,

A handwritten signature in black ink, appearing to read 'Mark Ames', with a horizontal line underneath.

Mark Ames  
Director, Government Relations  
AIHA

## About AIHA

AIHA is the association for scientists and professionals committed to preserving and ensuring occupational and environmental health and safety in the workplace and community. Founded in 1939, we support our members with our expertise, networks, comprehensive education programs, and other products and services that help them maintain the highest professional and competency standards. More than half of AIHA's nearly 8,500 members are Certified Industrial Hygienists, and many hold other professional designations. AIHA serves as a resource for those employed across the public and private sectors as well as to the communities in which they work. For more information, please visit [www.aiha.org](http://www.aiha.org).