



54-6

Over 50 Years of Service

December 31, 1994

Docket Office  
Docket Number H - 049  
Room N2625  
U.S. Department of Labor  
200 Constitution Avenue NW  
Washington, D.C. 20210

OSHA  
DOCKET OFFICER  
DATE DEC 29 1994  
TIME \_\_\_\_\_

Dear Sir of Madam:

Pursuant to Article 6 b (2) of the Occupational Safety and Health Act, I am submitting four copies of comments to the proposed changes to 29 CFR 1910.134, Respiratory Protection.

Comments will be addressed in the order presented in the proposed changes to the section.

1910.134, (b), Definitions

Hazardous Exposure Level

Hazardous Exposure Level (HEL) defined as either the Permissible Exposure Limit (PEL), Threshold Limit Value (TLV), Recommended Exposure Limit (REL) and or the manufacturer's recommended exposure information contained on the Material Safety Data Sheet.

The 1989 Permissible Exposure Limits were stayed from the Title as a result of a court decision. The Department can not incorporate Threshold Limit Values originally intended to be contained within 29 CFR 1910.1000 (Subpart Z) by inserting it into proposed changes to the Respiratory Protection Standard.

Allowing the selection of a "Hazardous Exposure Level (HEL) of a contaminant based on the process of elimination opens the door to liability for both the Department and the employer. PELs represent the law, the legally enforceable requirement. By identifying TLVs, RELs and manufacturer's recommendations, OSHA mandating that "recommended exposure levels" carry the full force of the law. By incorporating HELs, an established PEL of a chemical substance will now come into question. Litigation involving overexposure will undoubtedly reference that OSHA recognizes "recommended" values (TLVs, RELs) as the law. OSHA should only concern itself with PELs only. Once the stayed PELs are reinstated, the older TLVs will carry the full weight of the law.

Page #2  
H-049  
12/31/94

It is recommended the concept of HELs and its definition be eliminated from the proposed regulation.

#### Oxygen Deficient IDLH Atmospheres

Oxygen Deficient IDLH atmospheres are defined by a table based on altitude. Below altitudes of 3000 feet, less than sixteen percent oxygen would be considered IDLH.

Industry has accepted 19.5 % oxygen as the minimal oxygen level; reducing it to 16 % would cause confusion. Additionally, transient workers employed throughout the country would have to be reeducated on safe oxygen levels based on altitude. Maintaining a constant level is acceptable to industry. It is strongly recommended that the safe oxygen level be maintained at 19.5 %.

#### Continuous Flow Respirators

This definition was not included. Continuous flow respirators are still used in general industry and their definition should be included in the standard.

#### Supplied Air Respirators

Type A and B supplied air respirators were not included in the definition. Although not widely used in general industry, employers should be afforded the opportunity to select appropriate respirator protection when necessary. Additionally, standardized criteria for Type C supplied air respirators should be discussed in the proposed regulation, i.e., no more than 300 feet of air hose or non adaptable hose connections.

#### 1910.134 (d) (2) Selection of Respirators

The proposed standard requires the employer to provide three sizes of elastomeric face pieces from two different manufacturers. Although selecting a respirator from three different sizes is acceptable, mandating the use of two different manufacturers would undoubtedly add to the cost of procurement, storage and distribution, maintenance and testing. When given the opportunity, some workers will attempt to substitute one manufacturer's cartridges, valves, head bands from another manufacturer if spare parts are not immediately available, violating the respirator's NIOSH approval.

It is recommended that the requirement for two different manufacturers be stricken from this proposed regulation.

1910.134 (d) (5) Selection of Respirators

The proposed standard requires the employers to utilize the decision tree logic and assigned protection factors established by NIOSH.

Employers should be allowed to utilize protection factor data from respiratory equipment manufacturers. Manufacturers of respiratory protection seek NIOSH approval for their product; requiring employers to utilize protection factors established by NIOSH is duplicative and unnecessary. Mandating the use of manufacturer's recommendations and specifications ensures that adequate respiratory protection is afforded.

1910.134 (d) (8) (ii) Selection of Respirators

The proposed sub section states air purifying respirators shall not be used for a hazardous chemical with poor or inadequate warning unless the odor threshold is not in excess of three times the hazardous exposure level.

Air purifying respirators should not be used with hazardous chemicals with poor or inadequate warning properties regardless of the airborne concentration. Without performing real time (direct reading) monitoring, employers would be unable to determine the airborne concentration of an air contaminant. Where real time monitoring is not available, relying on the individual's olfactory senses to detect a contaminant with poor warning properties is not acceptable. Employers and equipment manufacturers will not accept the liability associated with this concept.

It is strongly recommended that this section be modified to read " Air purifying respirators shall not be used for any hazardous chemical possessing poor or no warning properties unless the respiratory equipment manufacturer receives NIOSH approval for service life indicator devices, modifications to equipment configurations, and/or has established and communicated required work practices (the buddy system) to the employer."

1910.134 (d) (9) (ii) Selection of Respirators

The proposed regulation requires the employer to implement a cartridge change schedule to assure air purifying cartridges are replaced before 80 percent of their service life is reached.

Most employers are currently following the manufacturer's recommendation when establishing service life and applicability of a cartridge. Mandating a percentage of service life is not a practical and viable method for airborne contaminants with warning properties. This requirement should be removed from the proposed regulation. Employers should follow the manufacturer's recommendation for cartridge replacement.

#### 1910.134 (d) (10) Selection of Respirators

The proposed standard designates oxygen deficient atmospheres based on altitudes.

It was previously recommended the definition of oxygen deficiency remain at less than 19.5 % oxygen in the atmosphere. Many other OSHA standards reference oxygen deficiency as less than 19.5 %; varying the percentage on altitude would be conflicting and confusing to employers. These standards include 29 CFR 1910.94 (Ventilation), 1910.120 (HAZWOPER) and 1910.146 (Permit Required Confined Spaces).

Employers and equipment manufacturers have accepted 19.5% as being the minimal acceptable level of oxygen in the atmosphere. Changing the concentration based on altitude would cause confusion and increase the costs of an employer's operation due to reinstruction, recalibration or repurchase of atmospheric testing equipment.

It is recommended oxygen deficiency remain at less than 19.5% oxygen in the atmosphere at any altitude.

#### 1910.134 (e) (1) Medical Evaluation

The proposed regulation would require medical evaluations for employees who wear respirators more than five hours during any work week per day. The employer is to obtain a written opinion from a licensed physician indicating respirator compatibility.

Many OSHA standards for specific compounds require medical evaluation of workers prior to respirator use. Workers should be medically evaluated prior to respirator use regardless of the time frame respirators are worn throughout the work week. Other environmental factors such as heat can have an immediate and serious effect on a respirator's users physiological status. It is recommended the time frame be deleted and the phrase "whenever a worker dons a NIOSH approved respirator" be inserted.

This section should also provide the minimal medical criteria for respiratory evaluation. As a minimum, respirator use should be based on:

- \* Medical and Work History
- \* Physical Examination (Performed under the direction of a physician.)
- \* Pulmonary Function
- \* Chest Radiograph (Every two years or annually based on history)
- \* Electrocardiogram (Every two years or annually based on age and history)

Establishing standardized medical criteria will ensure all workers are properly evaluated.

#### 1910.134 (f) (1) Fit Testing

It is agreed that the employer ensure the worker is fit tested annually.

The proposed regulation should highlight the prohibition of facial hair prior to a fit test for respirator use. Many times, employers are faced with a personnel issue which effects work place safety. OSHA should incorporate the requirement for the prohibition of facial hair prior to a fit test and ensure it is enforced.

#### 1910.134 (f) (6) (ii) (B) Fit Testing

The full face respirator may not be worn in airborne concentrations greater than fifty times the hazardous exposure level.

Many respiratory equipment manufacturers establish maximum permissible concentrations for air purifying cartridges. Although a protection factor of 50 is acceptable for a full face air purifying respirator and HEPA cartridges, a protection factor of 50 for the same respirator using organic vapor cartridges may not be acceptable. Most organic vapor cartridges can not be used in concentrations greater than 1000 ppm. Methyl Isobutyl Ketone possesses a PEL of 100 ppm. By allowing a protection factor of 50 for a full face respirator with organic vapor cartridges; the resulting maximum use concentration would be 5000 ppm, 4000 ppm greater than the manufacturer's limit on the cartridge. Respiratory equipment has limitations and the proposed standard should not imply an employer can exceed those limitations.

If the Department wishes to include protection factors, then protection factors for all respirators and associated cartridge limitations must be stated within the proposed standard. A viable alternative would be the incorporation of the manufacturer's recommendation into the standard.

1910.134 (f) (8) Fit Testing

The proposed standard states that once fitted, the employee can wear the respirator for two weeks and if uncomfortable, can exchange the respirator for another size and brand and be refitted.

If a worker meets the criteria outlined in the fit testing protocol, and is properly fitted and trained, then there is no reason to exchange the respirator. Comfort is one aspect of fitting, and improper fitting will usually result in a failed fit test. Many manufacturers now offer face pieces of different material construction, i.e., Hycar or Silicone rubber, allowing different facial fits.

Any reference discussing the exchange of respiratory protection two weeks following fitting should be deleted.

1910.134 (g) (2) (i) Use of Respirators

The proposed standard requires employers to develop and implement procedures for the use of respirators in oxygen deficient and IDLH environments.

This section states that only full face SCBAs or air line respirators with escape cylinders are to be used. Additional requirements should be added to this subsection. All atmosphere supplying respirators should be operated in the pressure demand mode and all face pieces are to meet NFPA requirements for fire service use. Auxiliary self contained air supply (escape cylinders) for air line respirators should have a minimal breathing air capacity of five minutes. These requirements would provide an added measure of safety when working in IDLH and flammable atmospheres.

1910.134 (g) (2) (ii) Use of Respirators

This proposed sub section requires an additional stand by person to remain outside, in communication with the employees entering the IDLH area, and to provide effective emergency assistance.

The proposed sub section should clarify "communication". It should include visual hand signals or communication devices. Additionally, equivalent provisions for rescue require clarification as well. The stand by person should have a telephone or radio in possession for summoning aid and not be expected to enter the IDLH area for rescue until additional assistance and equipment arrives. It is inappropriate to place the emphasis of "providing" emergency assistance on just the stand by person. The employer is responsible to ensure emergency medical and rescue services are contacted. Mandating the stand by person to provide emergency assistance without

clearly defining the role of the standby person will lead to more injuries.

#### 1910.134 (g) (2) (iii) Use of Respirators

The proposed regulation requires employees entering an IDLH area to don retrieval equipment for rescue purposes; and equivalent provisions for rescue must also be made.

This subsection applies more to permit required confined spaces than respiratory protection. There are many instances where IDLH environments can occur outside confined spaces; ranging from events at petrochemical plants involving hazardous and flammable materials to major metropolitan cities containing steam distribution systems insulated with asbestos.

It is not practical to use retrieval equipment where it is not necessary, i.e., performing work activities on a public street during an asbestos release resulting from a steam distribution system. Additionally, use of retrieval equipment in areas such as petrochemical plants during an emergency can be a greater safety hazard, i.e., the retrieval line may get hung up on piping, valves or pipe racks, not allowing the worker to escape imminent danger.

This sub section should be eliminated. Other standards such as 29 CFR 1910.146, Permit Required Confined Spaces, sets forth the requirements for retrieval equipment and rescue services.

#### 1910.134 (g) (3) Use of Respirators

The proposed regulation would require employers ensure facial hair, scars, dentures and headgear does not interfere with the face piece seal.

The standard should prohibit headgear such as skull caps from being worn under a respirator's suspension. Because of custom and practice, some industries have been requiring skull caps to be worn under respirator straps or head bands. The sub section should address this issue and others like it which may affect face piece seal.

#### 1910.134 (g) (5) Use of Respirators

The proposed sub section would allow employees to leave the respirator use area for the purpose of washing their face and face pieces as necessary to prevent skin irritation.

Allowing the employee to leave the work area when he or she believes they need to wash their face or respirator does not serve any purpose and is counter productive. Employees are instructed in the care of respiratory protection, including their proper cleaning and sanitizing. Allowing frequent breaks increases the probability of a worker inhaling the contaminant during donning and doffing procedures.

Respiratory use is not always the cause of skin irritation. Further, frequency and length of breaks may be dependent on collective bargaining agreements. It is recommended this sub section be deleted from the proposed standard.

#### 1910.134 (h) (3) (i) (C) Maintenance and Care of Respirators

The proposed regulation states Self Contained Breathing Apparatus (SCBA) cylinders are to be routinely recharged when the pressure falls below ninety percent of the manufacturer's recommended capacity.

Many manufacturers already specify when to recharge a breathing air cylinder. As a matter of inspection, the regulator must be charged therefore, air pressure in the cylinder is reduced. Due to monthly inspection requirements, most manufacturers recommend recharging the cylinder at 80 percent of its full capacity. It is unclear whether the sub section is requiring recharging at 90 percent of full capacity or 90 percent of the manufacturers recommendation, i.e., 90 percent of 80 or 72 percent. It is recommended that the sub section be modified, eliminating the 90 percent criteria and substituting a statement relying on the manufacturer's specification.

#### 1910.134 (i) (4) (i) Supplied Air Quality and Use

The proposed sub section states breathing air cylinders are to be tested and maintained as prescribed by DOT.

It is recommended that hydrostatic testing, useful cylinder life and inspection schedules for both aluminum and composite wrapped cylinders be outlined in the sub section of the standard.

#### 1910.134 (l) (2) Respiratory Protection Program Evaluation

The proposed sub section states employers are to periodically assess wearer acceptance by consultation with employees.

Respirators are burdensome and uncomfortable to wear. Most workers will consider them uncomfortable. Those workers who do not accept using a respirator for the purposes of protecting their own health will undoubtedly indicate the respirator is uncomfortable to wear. The proposed standard should require immediate disciplinary action to those employees who refuse to protect themselves through the use of respiratory protection.

Employers should periodically assess the effectiveness of any safety and health program, however, consultation with the employee may not provide an objective evaluation of respirator fitness. This sub section should be modified to indicate periodic assessment is to be performed by the employer only.

1910.134 (m) (1) (ii) (A) Recordkeeping and Access to Records

The proposed standard would require medical records to include name, social security number and description of employee duties.

The employee's job title should be added to the above requirements for medical records. Recording job titles will illustrate changes in the employee's duties, and will serve as a check on the description of the assigned duties.

1910.134 (m) (2) (ii) Recordkeeping and Access to Records

The proposed sub section indicates that medical records would be made available to "anyone" authorized by the employee.

Allowing "anyone" authorized by the employee is too broad. Narrowing the scope to the employee's labor representative, physician, occupational health nurse or industrial hygienist ensures that the confidentiality of the employee's medical record is maintained.

1910.134 Appendix A, A, II, 1 Current Fit Test Protocols

The proposed Appendix requires employees to select respirators from different sizes and manufacturers.

Delete different manufacturers from the sentence for reasons expressed in those comments regarding section 1910.134 (d) (2), Selection of Respirators.

1910.134 Appendix A, A, II, 2 Current Fit Test Protocols

The proposed Appendix requires a mirror be available for the purpose of evaluating fit and positioning of the respirator.

Mirrors do not assist in evaluating fit. Assessments described in the preceding sections of this Appendix accurately evaluate the fit of a respirator. The sentence requiring the use of a mirror should be deleted from the Appendix.

1910.134 Appendix A, A, II, 11 Current Fit Testing Protocols

The proposed Appendix requires the employer to provide a different respirator to the worker if the current respirator becomes uncomfortable within the first two weeks.

This requirement should be deleted for those reasons stated in 1910.134 (f) (8).

1910.134 Appendix A, B, 1, (b) General Requirements for Qualitative Fit Testing

The sub section of the proposed Appendix states that "equipment" is to be calibrated.

I am currently unaware of any equipment which must be calibrated for a qualitative fit. If it is incorrect, please delete it from the sentence.

1910.134 Appendix A, C, Quantitative Fit Testing Protocol

This section of the proposed Appendix does not include the use of a Portacount or similar quantitative fit testing device. A Portacount compares the ambient concentration of airborne particulate with the concentration within the respirator face piece. OSHA has accepted the Portacount as being an accurate method to determine quantitative fit therefore, it should be included in the Appendix as an option.

There are numerous OSHA standards, i.e., 1910.1001 (Asbestos) and 1910.1025 (Lead) requiring quantitative fit testing for full face respirators. Many small employers rely on outside companies using Portacounts to perform quantitative fit testing. Forcing these companies to submit data on an accepted method will be burdensome for the Department, and on the entire review process while forcing employers to be out of compliance. Many small employers required to perform quantitative fit testing would be unable to gain access to a fit test chamber.

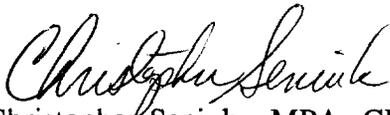
Page #11  
H - 049  
12/31/94

If Portacounts are not included as an accepted method, many employers will be unable to comply with the standard.

It is strongly recommended that the Portacount and other similar approved devices be included in the quantitative fit testing protocol section of this Appendix. Through OSHA, the Department possesses enough data and letters of interpretation to illustrate a Portacount is an acceptable form of fit testing.

On behalf of the clients we service, I would like to thank you for allowing these comments to be submitted into the proposed rule making process. Simple and cost effective regulations will help ensure compliance. Making recommendations so burdensome and cost prohibitive will only create an unwillingness to comply. Please contact me if you require additional information.

Sincerely,

A handwritten signature in cursive script that reads "Christopher Seniuk".

Christopher Seniuk MPA CIH CSP  
Assistant Vice President  
Director of Safety and Health