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54-175

March 24, 1995

Docket Office
Docket H-049
U.S. D.O.L., OSHA
Room N2625
200 Constitution Ave., NW
Washington, DC 20210

OSHA
DOCKET OFFICER
DATE MAR 24 1995

Dear Sir or Madam:

AlliedSignal welcomes the opportunity to submit comments on OSHA's proposed rulemaking for Respiratory Protection (59 FR 58884). AlliedSignal has approximately 85,000 employees at some 250 locations in the United States, and therefore, this proposed regulation would have a significant impact on our operations.

AlliedSignal supports a revision of the current respirator standard which was adopted in 1971. We applaud OSHA's stated intention of rewriting the standard to allow for *changes in methodology, technology and approach related to respiratory protection* (Preamble, first paragraph). However, we believe that OSHA has failed to do that in the proposed revision. A brief summary of our major points is set forth below, followed by detailed remarks.

Summary of AlliedSignal comments

1. Compliance with respirator standard should be recommended but not mandatory for voluntary respirator use situations.
2. OSHA should not require the use of ACGIH TLVs and NIOSH RELs, instead allowing for professional judgement based on all available hazard information.
3. OSHA should not require employers to establish their own exposure limits; instead, OSHA should continue their PEL Revision project.
4. OSHA should adopt the IDLH definition used by ANSI, eliminating "delayed adverse health effects" from current language.
5. OSHA should not require specific minimum training for respirator program administrators.
6. OSHA should not require employers to provide a choice of respirators from at least two different manufacturers.
7. NIOSH approved respirators should be required only "when available".

8. Fit-testing should not be an annual requirement. We recommend "periodic" or "every two years".
9. OSHA should include the TSI Portacount as an approved QNFT method prior to issuance of the final rule.
10. OSHA should revise the QNFT methodology to eliminate language which already restricts the use of new technology.
11. OSHA should require only a single QNFT, not three, for an acceptable QNFT.
12. OSHA should eliminate the requirement for a "grimace" exercise as part of the fit-testing protocol.
13. OSHA should select "Alternative 1", the Physician's Written Opinion, as the appropriate medical evaluation.

Discussion

Ref. (a) Scope and Application

Paragraph (2)

Respirators shall be provided by the employer when such equipment is necessary to protect the health of the employee. The employer shall provide the respirators which are applicable and suitable for the purpose intended. The employer shall be responsible for the establishment and maintenance of a respiratory protective program which shall include the requirements outline in paragraph (c) of this section.

AlliedSignal believes OSHA should be more clear in the actual standard about the triggers for a respiratory protection program. Preamble language (FR 58895) states three important triggers which are not at all apparent in the standard language. They are:

1. Compliance with the respirator standard is necessary when *"engineering controls are absent"* or insufficient and *"employee exposure would exceed an OSHA PEL"*.
2. Compliance with the respirator standard is necessary *"when an employer requires any employee to wear a respirator, regardless of exposure level and whether the substance is regulated."*
3. Compliance with the standard is *"recommended"* but *"not mandatory"* for voluntary respirator use situations.

AlliedSignal agrees with these Scope principles, and in particular, we support OSHA's allowance for voluntary respirator use. Without this, employers would be discouraged from allowing voluntary use of respirators in the workplace.

Ref. (b) Definitions

Hazardous Exposure Level

(1) The PEL for the hazardous chemical in 29 CFR Part 1910, Subpart Z...or, (2) If there is no PEL...the TLV recommended by the ACGIH....or (3) If there is no PEL or TLV...the NIOSH REL or (4) If there is no PEL, TLV, or REL, an exposure level based on available scientific information including MSDSs.

AlliedSignal opposes OSHA's inclusion of TLVs and RELs as limits which employers must observe. Where there is no OSHA PEL for a substance, OSHA should allow employers the flexibility to select an appropriate exposure limit using professional judgement based on all available hazard information. There are many other sources of exposure limit information besides the ACGIH and NIOSH.

AlliedSignal is also concerned that the standard language and the following language from the Preamble (FR 58896) implies that employers must now begin setting their own exposure limits where OSHA and others have failed to do so:

If there is no PEL or TLV for the chemical, the employer must determine the "hazardous exposure level" based on available scientific information including the MSDS....In any event, the employer must establish a protective goal, based on available information, in order to choose the appropriate respirator, and must be able to substantiate how that goal was chosen.

OSHA surely recognizes that the standard-setting process is complex and highly technical, beyond the expertise of many employers. Multi-disciplinary expertise (IH, toxicology, medical, safety, product safety, legal) is necessary to adequately devise protective PELs. Such expertise is not present in most corporations. This provision would also have substantial financial impacts -- costs which OSHA has not addressed in their cost-benefit analysis for the proposed rule. OSHA has not accounted for the professional services necessary to create standards ("goals") which can be substantiated nor has OSHA considered the consequences of forbidding respirator use because an exposure limit for a substance does not exist.

AlliedSignal believes OSHA should not require employers to establish exposure limits. Instead, we encourage OSHA to continue with their PEL Revision project, expanding that if OSHA feels additional exposure limits are necessary.

Immediately Dangerous to Life or Health (IDLH)

...an atmospheric concentration of any toxic, corrosive or asphyxiant substance that poses an immediate threat to life or would cause irreversible or delayed adverse health effects or would interfere with an individual's ability to escape from a dangerous atmosphere.

AlliedSignal recommends that OSHA use the ANSI Z88.2 (1992) IDLH definition: *"Any atmosphere that poses an immediate hazard to life or poses immediate irreversible debilitating effects on health."* We oppose the inclusion of "delayed adverse health effects" as these are not "immediate". The OSHA definition would encompass the entire universe of all chronic toxins, yet science tells us little about the likelihood of a single high exposure causing a delayed adverse effect like cancer. As an example, would OSHA consider a burst steam line to be an IDLH atmosphere if the line was insulated with asbestos that became airborne from the break? This is clearly beyond the scope of "immediately dangerous to life or health".

Ref. (c) Respiratory Protection Program

Paragraph (2)

The employer shall designate a person qualified by appropriate training and/or experience to be responsible for the management and administration of the respiratory protection program for conducting the required periodic evaluations of its effectiveness.

AlliedSignal agrees that there should be no specific minimum training for program administrators. We believe the level of training for the respirator program administrator must be adequate to deal with the complexity of the program.

Ref. (d) Selection of Respirators

Paragraph (2)

Where elastomeric facepiece respirators are to be used, the employer shall provide a selection of respirators from an assortment of at least three sizes for each type of facepiece and from at least two different manufacturers.

AlliedSignal believes that very few respirator programs need to have a selection representing at least two different manufacturers. At very small locations, this introduces a burdensome cost and complexity that is not always necessary and results in little benefit. In AlliedSignal's experience, most of our employees can be fit with the respirators from a single manufacturer. Where this is not the case, then a second respirator is introduced -- to those specific individuals with a problem. We should try to keep our respirator programs simple. If forced to stock/make available the respirators from a second manufacturer, it will result in additional training, additional costs and an increased risk that an employee will not select the "right" respirator. OSHA has not adequately addressed the increased costs that would be incurred by requiring two manufacturer's respirators for the selection process.

Ref.: (d) Selection of Respirators

Paragraph (4)

The employer shall select appropriate respirators from among those approved and certified by the National Institute of Occupational Safety and Health (NIOSH).

AlliedSignal suggests rewording this paragraph by adding "when available" to the end of the sentence. OSHA has included this language in the Preamble in two places: CFR 58900 and CFR 58901, and we feel it is important that it be part of the compliance language. We are concerned that, as written, OSHA is implying that employers would not be permitted to use an organic vapor respirator cartridge/canister for protection from a given chemical unless NIOSH has tested the cartridge/canister against that specific chemical.

Currently, NIOSH "approval and certification" of an organic vapor device applies to "organic vapors". The "approval and certification" process is completed by testing one of three challenge tests (carbon tetrachloride, heptane or pentane). These three materials serve only as a "surrogate" for the general class of "organic vapors". Thereafter, the appropriate application of the organic vapor device is a determination appropriately made by the employer. Employers must have the flexibility to conduct and apply independent breakthrough testing results. Without this allowance, OSHA would effectively eliminate the use of air-purifying respirators in the workplace. Perhaps OSHA could develop a non-mandatory appendix addressing cartridge testing protocols which assist in the selection of appropriate respirators.

AlliedSignal recommends that OSHA clarify the language addressing selection of "appropriate" respirators in the standard.

Ref. (e) Medical Surveillance

OSHA has proposed three alternatives for Medical Surveillance. The first alternative is the Physician's Written Opinion (PWO); the second alternative is a defined medical examination plus the PWO; and the third alternative is a questionnaire plus the PWO.

Each of the three alternatives ultimately requires a PWO. AlliedSignal believes that this appropriately gives the physician the responsibility for determining ability to safely wear a respirator. This alternative provides the greatest flexibility, and does not preclude the physician from requiring or performing an examination or utilizing a screening medical questionnaire.

AlliedSignal believes that it would be appropriate to include a discussion of the physical examination as a non-mandatory appendix. AlliedSignal believes that just as there is not a "one size fits all" respirator, there is not a "one size fits all" respirator examination.

Paragraph (3)

The employer shall have the employee's medical status reviewed by, or under the supervision of, a licensed physician annually and at any time the employee experiences unusual difficulty breathing while being fitted for or while using a respirator.

AlliedSignal agrees with the latter part of this requirement, i.e., an evaluation if there is breathing difficulty. However, AlliedSignal believes that an annual evaluation is, in many cases, unnecessary. AlliedSignal suggests the following:

The employer shall have the employee's medical status reviewed at intervals of 12 to 24 months, based on the recommendation of the physician.

Ref. Appendix C: Medical Evaluation Procedures (Non-Mandatory)

It appears to AlliedSignal that this Appendix did not have final review by a physician. For instance, it discusses "*conditions which may cause a sudden loss of consciousness*" as an examination under "*Endocrine system*". There are many causes of "*sudden loss of consciousness*", most of non-endocrine origin. It may be that this was meant to determine the possibility of insulin induced hypoglycemia in a diabetic, but there is no "examination" for this. The appendix mentions "*uncontrolled hypertension symptoms*" when hypertension is usually asymptomatic. Pulmonary function testing does not detect "*perfusion disorders*".

AlliedSignal recommends that OSHA use performance oriented language, rather than anatomical system oriented language in the appendix. The preamble of the appendix is generally acceptable. In addition to the Preamble, AlliedSignal suggests:

- o The physician must review the medical status of the employee every 12 to 24 months. A longer interval is appropriate for younger, healthy employees, while a shorter interval is appropriate for older employees or those with medical problems.
- o The physician should utilize the medical history, physical examination and appropriate tests to determine whether or not there are any medical conditions which would place the employee's health at increased risk of material impairment from respirator use or which would require limitations upon the use of respirators to be recommended. The physician should understand the type(s) of respirator(s) the employee will wear, how often the respirator(s) will be worn, and the circumstances under which the respirator(s) will be worn.
- o The medical history and examination should place particular emphasis on respiratory and cardiovascular function:
 - Breathing problems during normal activities, with exercise, or with respirator use.
 - Heart, circulatory or respiratory conditions which are or might become symptomatic or which require medication or medical treatment.
- o In addition, the physician may need to evaluate vision and hearing ability; neurological status; skin disorders, and psychological ability to wear a respirator or to work under conditions in which a respirator must be worn.
- o For those who will wear a self-contained breathing apparatus or a rebreather type respirator under strenuous work conditions such as emergency or fire and rescue operations, the physician must review the medical status of the employee every 12 months. For these employees, an evaluation of exercise tolerance should be considered.

Ref. Preamble: Table A, CFR 58893

In the table, OSHA estimates the "Annualized Costs of Proposed Revisions to Respirator Standard". For medical, the costs for Manufacturing, Non-manufacturing and Construction total \$0.0. AlliedSignal believes that this is an obvious error. Under previous OSHA requirements, many employers have likely provided medical evaluations. For those employers, there will be a small but definite incremental increase in costs. However, since OSHA has previously not required a medical evaluation, it is likely that the increase in costs could be significant. A basic evaluation by a physician, or by a nurse or other health care practitioner with physician oversight, is likely to cost \$50 per employee. Depending on the necessity for additional testing or evaluation, the cost could rise to \$150 - \$200 per employee. If a formal cardiac stress test is required, there could be an additional \$200 - \$250 cost per employee.

Ref. (f) Fit Testing

Paragraph (2)

The employer shall ensure that an employee is fit tested prior to initial use of the respirator, whenever a different make or size respirator is used, and annually thereafter.

AlliedSignal is opposed to an annual requirement for fit testing. We suggest that OSHA require fit testing "periodically, such as every two years or as indicated by significant facial changes." AlliedSignal believes that annual fit testing would not result in significant improvements in the protection offered to employees. It has been our experience that the size of respirator selected rarely changes over a two year period -- AlliedSignal's current interval for fit testing. In addition, employees are trained on the factors which may trigger their need for a new fit test.

AlliedSignal also disagrees with OSHA's argument that an annual fit test is necessary to reinforce training. If the training is not adequate, then OSHA should be addressing training, not fit-testing.

Paragraph (3)

The fit test shall be administered using either an established qualitative or quantitative fit test procedure contained in section II of Appendix A or an alternative procedure which has been developed and approved which meets the Minimum Criteria as defined in section I of Appendix A.

AlliedSignal recommends that OSHA recognize condensation nuclei quantitative fit testing methodology (such as the TSI Portacount) as an approved QNFT method and that it be included in Appendix A. The Portacount is a proven and widely-accepted fit-test device.

AlliedSignal is also concerned about the language used in Appendix A to describe the Minimum Criteria for a QNFT methodology. In the Preamble to this rule OSHA has said this proposed rulemaking was undertaken to allow for the development and use of new

technologies. But OSHA has written these Minimum Criteria so as to effectively eliminate the new technology that already exists and has been used successfully for as much as 5-6 years. We specifically address the limitations of OSHA's language in our remarks about Appendix A.

Ref. Appendix A (Mandatory)

Paragraph B.1.

In order to establish a QLFT method/agent as being acceptable... it shall be demonstrated that at the 95% confidence level 95% of the facepieces with a fit factor less than 100 as determined by an established QNFT method will be identified.

AlliedSignal supports the requirement of a 95% confidence level to establish a valid fit-test protocol. However, AlliedSignal objects to some provisions of OSHA's current protocol particularly the limitations OSHA has placed on new technology due to the language in the appendix. Specifically:

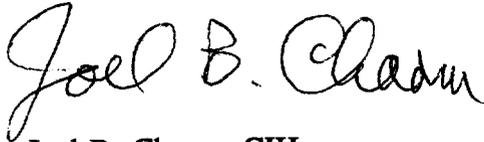
- a) [I.C.2.(a)] OSHA requires an "aerosol gas generator". OSHA is aware of at least two new technological advances for respirator fit-testing (TSI Portacount and Frontier Dynatech negative pressure tester) which have been around for years, neither of which uses an aerosol generation system.
- b) [II.C.3.(d)] OSHA requires the use of a strip chart record. OSHA again limits new technology. The TSI Portacount, for one, does not employ a strip chart recorder.
- c) [II.3.(g-1)] OSHA refers to the use of a "test chamber" as part of the required protocol. Again, the new technology does not require a chamber.

Some other protocol requirements that AlliedSignal disagrees with:

- a) [II.4.(h)] OSHA requires *three successful QNFTs*. ORC believes there is insufficient evidence to demonstrate that three consecutive fit-tests selects a correct-size respirator any better than a single fit-test. This requirement is so burdensome to employers, that it discourages the use of a QNFT. Yet OSHA requires only a single test if a QLFT is performed -- and the agency considers a QLFT to be less effective than a QNFT. In addition, data of workplace protection factors show little correlation to the original fit-test.
- b) [II.A.14.(f)] OSHA requires the test exercise include a "grimace". In the preamble, OSHA explains this requirement as being necessary to break the seal of the respirator and reconfirm that the respirator re-seats itself on the face. If this exercise is performed while conducting a fit-test using new technology like the TSI Portacount, the instrumentation would automatically average in a failed fit-factor for that exercise, which could potentially fail a user from an otherwise acceptable fit. OSHA could change this to require that the grimace be performed at the completion of the other test exercises.

AlliedSignal appreciates this opportunity to comment on OSHA's Proposed Rule for Respiratory Protection. Enclosed are four sets of these comments along with a 3.5" diskette with the document in WordPerfect 5.0.

Sincerely,

A handwritten signature in cursive script that reads "Joel B. Charm".

Joel B. Charm, CIH
Corporate Director, Occupational Health

ebz/22osha