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INTERNATIONAL PAPER

ENVIRONMENTAL, HEALTH & SAFETY
INDUSTRIAL HYGIENE

(404) 246-4150

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The Docket Office
Docket H-049
U.S. Department of Labor
Occupational Safety and
Health Administration
Room N2625
200 Constitution Ave, N.W.
Washington, D.C. 20210

Dear Sirs:

Thank you for the opportunity to comment on the proposed changes to the respiratory protection standard. We are very much interested in seeing the standard modified to bring it up to the current state of the art in methodology and technology. However, we find it very disconcerting that OSHA has devoted so much time and effort in responding to comments received ten years ago (i.e., in response to the 1982 Advanced Notice of Proposed Rulemaking and the 1985 preliminary draft). By doing this OSHA is not keeping up with current state of the art.

(a)(2) Voluntary Use of Respirators:
Our greatest concern is over OSHA's refusal to establish criteria for voluntary respirator use (e.g., the use of a respirator for an employee's personal comfort). The majority of respirator use at International Paper falls into this category. We provide training and medical evaluations for all respirator users. However, due to a lack of consistency in OSHA's position as to weather voluntary use falls under the respiratory protection standard or not, employees working for companies less progressive than International Paper may be at undue risk. An employee that isn't physically fit to wear a respirator is just as much at risk wearing one for personal comfort as he/she is if required to wear one. In addition, past experience shows that employees that are not trained on the proper use and limitations of the respirator will inevitably misuse the devise (e.g., use of a dust/mist respirator for organic vapors or paint spray). **OSHA should stick with its March 19, 1991 position as stated in the letter to Ms. T. Presley (Martin Marietta Energy Systems, Inc) by Ms. Partricia K. Clark**. This should provide the necessary protection to users, while not placing a great burden on industry. Contrary to previous commenters (Ex. 36-11, 36-13, 36-38, 36-44, 36-47, 36-48, 36-51A), International Paper would not deny an employee a respirator for his/her personal comfort. We do want to assure that employees are medically fit to wear the respirator and are adequately trained if they choose to use a respirator at our sites.

Low Risk Respirator Use:

In the situation where a respirator is used for "comfort only", and the type of respirator worn is a PAPR or disposable filtering-faceipece respirator which does not put the employee at increased physiological burden, the provisions of the standard such as fit-testing and medical screening should be relaxed (e.g., initial fit-test and answering a medical questionnaire only). However, it is important that the employee be trained in how to use the respirator as well as the specific situations where it is and is not allowed to be used. Employees should also be trained to report any difficulties or facial change to the program administrator so that additional fit-testing or medical evaluations can be conducted.

(b) Definitions:

Adequate Warning Properties: A better and less ambiguous term than "adequate warning properties" is the ANSI definition found in Z88.2-1992 for Poor Warning Properties. The use of this definition would avoid potential confusion during respirator selection and should be used in place of adequate warning properties.

Hazardous Exposure Level: Where there is no PEL for a chemical, OSHA should allow the employer the flexibility in selecting which exposure limits they will use. The employer should document the logic for selecting the limit used, but should not be limited to the TLV or REL. Additionally, to avoid potential confusion, OSHA should make it clear that employers are not required to develop their own exposure limits. The present language in the preamble could easily be interpreted to imply that employers must set an exposure level.

Immediately Dangerous to Life or Health (IDLH): OSHA should replace its definition of IDLH with that found in ANSI Z88.2-1992. The ANSI definition is more accurate and would cause less confusion.

Oxygen Deficient Atmosphere: OSHA should replace its definition with that found in ANSI Z88.2-1992.

Oxygen Deficient IDLH Atmosphere: Again, OSHA should replace its definition with that found in ANSI Z88.2-1992.

Maximum Use Concentration (MUC): OSHA should delete the reference to NIOSH MUC since NIOSH no longer specifies this value.

(d)(5) Assigned Protection Factors (APFs):

In the proposed rule, OSHA states that the National Institute for Occupational Safety and Health (NIOSH) will be responsible for developing APFs. NIOSH is to issue these APFs in a future module of its respirator certification rule (42 CFR 84) which is currently being revised. In the

interim, OSHA proposes that users adhere to the APFs in NIOSH's 1987 Respirator Decision Logic (RDL). However, the RDL values are based on imperfect data and outdated practices.

OSHA itself placed an APF of 5 for all filtering-facepiece disposable dust masks in the cotton dust standard. This APF was challenged and upheld in 1987 by a U.S. Court of Appeals on the basis of sound scientific logic. In addition, OSHA prohibited the use of these respirators altogether in its asbestos standard based on the inability to achieve an adequate fit. The supporting data for this prohibition was detailed in the September 5, 1986 letter to Peter G. Nash, Esq. (Representing the 3M Company) from Mr. Frank A. White.

These respirators have additional shortcommings,[1,2,3,4,5,6] and, therefore, should have a lower APF. These respirators are given a maximum APF of 5 in NIOSH's *1987 Recommended Assigned Protection Factors for Particulate-filter Respirators*. A better, and possibly more accurate, APF would be based on the filter approval (e.g., dust/mist, dust/mist/fume, or HEPA). A similar system is currently in place in the United Kingdom and Australia.

Based on the above information, we suggest that OSHA adopt an interim APF of 2 for disposable filtering-facepiece respirators having approval for dust/mist, 4 for those with approval for dust/mist/fume, and 6 for those with HEPA approval. This would prevent the propagation of an outdated APF table if the NIOSH selection criteria are incorporated by reference in OSHA's revision to 29 CFR 1910.134.

We also believe that the APF assigned by the NIOSH RDL for PAPRs do not represent the level of performance that these pieces of equipment are capable of achieving. **OSHA should use the protection factors listed in ANSI Z88.2-1992 which are based upon credible published data.**

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1. Hinds, W.C. and G. Kraske: Performance of dust respirators with facial seal leaks: I. Experimental. Am. Ind. Hyg. Assoc. J. 48:836-841 (1987)

2. Liu, B.R.H. and B. Fardi: A Fundamental Study of Respiratory Air Filtration. [Final Report for NIOSH Grant #R01 OH01485-01A1, University of Minnesota, Particle Technology Laboratory Publication No. 680] Minneapolis, Minnesota (September 1988), 6.3, pp. 296-299.

3. Stevens, G.A. and E.S. Moyer: "Worst case" aerosol testing parameters: I. Sodium chloride and dioctyl phthalate aerosol filter efficiency and a function of particle size and flow rate. Am. Ind. Hyg. Assoc. J. 50:257-264 (1989)

4. National Institute for Occupational Safety and Health: A performance Evaluation of DM and DMF Filter Respirators Certified for Protection Against Toxic Dust, Fumes, and Mists. [Working Draft] Atlanta, GA (September 15, 1992)

5. Bullock, W.H. and L.T. Laird: A Pilot Study of the Particle Size Distribution of Dust in the Paper and Wood Products Industry. Am. Ind. Hyg. Assoc. J. 55(9):863-840 (1994)

6. Letter to Peter G. Nash, Esq. form Frank A. White, Deputy Assistant Secretary for Occupational Safety and Health, dated September 5, 1986.

(d) Medical Evaluations:

International Paper supports alternative three. We have been conducting a version of alternative three for the past 5 years. In addition, we have been conducting health screening for employees using respirators for "comfort only" for three years. **We recommend that OSHA adopt alternative three with the following modifications:**

> **(1) Health Screening -- Before respirator use starts, the employer shall provide a health screening, and if needed, a medical evaluation, to determine whether an employee has a health problem that may interfere with their ability to wear a respirator. This determination shall be reviewed periodically.**
>
> **(2) Medical Evaluation -- A medical examination shall be required for any employee who gives a "yes" answer on the questionnaire.**

The existence of a physical or mental problem associated with wearing a respirator is not eliminated by the five hour exclusion. If an individual has a problem, and needs a medical evaluation to determine his or her ability to safely wear a respirator, it is needed regardless of whether the respirator is worn for 30 minutes or five hours. A five hour exclusion is neither good medicine or good industrial hygiene. **Therefore, we recommend that OSHA not consider an exclusion based on any duration of respirator use.**

(f) Fit-Testing:

> Frequency of fit-testing -- Annual fit-testing should not be necessary if the employees are properly trained to notify the program administrator of any facial feature changes or weight change. In addition, if the employee notices that they are not getting an adequate seal during the positive/negative pressure seal check, they should seek a new fit-test. **Therefore, we suggest that a bi-annual fit-testing with proper training should be adequate.**
>
> Fit-testing atmosphere-supplying respirators -- It is doubtful that fit-testing of atmosphere-supplying respirators provides any additional benefit beyond what is received in training (e.g., training on proper donning and seal checks). Several published articles revealed that there is little likelihood of negative pressure spikes occurring during the wearing of a positive-pressure atmosphere-supplying respriator.[7,8] **Therefore, we recommend that OSHA delete the requirement to fit-test pressure demand and continuous flow atmosphere-supplying respirators.**

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7. Campbell D.L., G.P. Noonan, T.T., Merinar and T.A. Stobbe: Estimated Workplace Protection Factors for Positive Pressure Self-Contained Breathing Apparatus. Am. Ind. Hyg. Assoc. J 55 (4) : 322-329. (1994)

8. Bently R.A., G.J. Bostock, D.J. Longson, and M. W. Roff: Determination of the Quantitative Fit Factors of Various Types of Respiratory Protective Equipment. J. Int. Soc. Resp. Prot. 2 (4) ; 313-337 (1984)

Portacount fit-testing method -- **We recommend that condensation nuclei quantitative fit-testing methodology (e.g., TSI Portacount), be recognized as an approved QNFT method and that it be included in Appendix A.**

Three fit-tests -- The requirement to conduct three (3) separate tests when performing a quantitative fit-test is counter-productive to good industrial hygiene practice. Three tests add significantly to the time and cost of conducting fit-testing without adding value to the process. This requirement would cause many to revert to the less scientific and more subjective measures used for qualitative fit-testing. **We recommend that OSHA require only one quantitative fit-test per respirator fitting.**

(k) Training:

The training section of the standard should be based on the current training outline found in the ANSI standard (Z88.2-1992). It should also include provisions for performance-based language for emergency use respirators (e.g., SCBAs). **We recommend that OSHA adopt the ANSI training requirements found in Z88.2-1992. In addition, we recommend that more frequent refresher training be required to maintain proficiency on the use of SCBAs (e.g., quarterly drills).**

Sincerely yours,

William H. Bullock

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