

**EASTMAN**

54-245  
Eastman Chemical Company  
P.O. Box 511  
Kingsport, Tennessee 37662

April 12, 1995

**CERTIFIED**

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

OSHA  
DOCKET OFFICER  
DATE APR 18 1995

Re: Notice of Proposed Rulemaking on Respiratory Protection (29 CFR 1910.134,  
29 CFR 1915.152 and 29 CFR 1926.103)

Dear Sir or Madam:

Eastman Chemical Company (Eastman) is pleased to submit comments regarding the Occupational Safety and Health Administration's proposed modifications to its existing standards on respiratory protection. As a leading manufacturer of chemicals, plastics and fibers, at four primary facilities in Kingsport, Tennessee; Longview, Texas; Columbia, South Carolina and Batesville, Arkansas, Eastman has both continuous and batch chemical processes that occasionally require the use of air-purifying respirators and atmosphere-supplying respirators and thus would be subject to this regulation. Eastman is a member of both the Chemical Manufacturers Association (CMA) and the Organization Resources Counselors Inc. (ORC) and has actively participated in the development of their comments. Eastman supports in general the comments of both trade organizations and we are also submitting additional comments in the enclosed document.

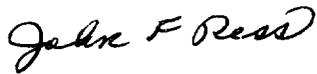
Eastman supports OSHA's effort to upgrade the old 1971 regulation with current state-of-the-art respiratory science and technology and to provide overall consistency with the substance specific standards. We are encouraged that the Agency has included Fit-Testing requirements and protocols in this revision. And we definitely find merit with the details surrounding the respiratory protection program requirement as well as the Agency's openness to solicit input for a proper Medical Evaluation protocol. However,



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Eastman believes there to be several problems associated with this proposal that will introduce additional complexity and burden to our company. If you have questions regarding these comments, please contact me at (615)229-2245 at our Kingsport, TN corporation offices.

Yours very truly,



**John F. Ress**  
**Principal Technical Representative**  
**Eastman Chemical Company**  
**P. O. Box 1994, B-FANB-5**  
**Kingsport, TN 37662**

JFR1-015.DOC

Enclosure

**COMMENTS BY EASTMAN CHEMICAL COMPANY TO OSHA'S  
RESPIRATORY PROTECTION, NOTICE OF  
PROPOSED RULEMAKING  
59 FEDERAL REGISTER 5884 (NOVEMBER 15, 1994)**

**PRIMARY CONCERN**

**HAZARDOUS EXPOSURE LEVEL DEFINITION AND SUBSEQUENT  
RAMIFICATIONS.**

OSHA has defined the term hazardous exposure level as "(1) The permissible exposure limit (PEL) for the hazardous chemical in 29 CFR Part 1910, Subpart Z, of the General Industry Standards of the Occupational Safety and Health Administration (OSHA); 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, TLV, or REL for the hazardous chemical, an exposure level based on available scientific information including material safety data sheets.

OSHA further explains that "...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 some situations, the suppliers of the chemicals may make recommendations for appropriate exposure levels based on their own experience. 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."

EASTMAN is primarily concerned that this substantiation requires an employer to set an exposure level for chemicals that do not have an existing exposure limit. With the nature of our business and the related batch chemical operations, we estimate that there may be several hundred distinct chemicals used or produced in our processes each year that require the use of respiratory protection (for a short period of time). In our experience, available data, often limited to LD<sub>50</sub> and irritancy are too limited to establish a numerical value for exposure levels. If EASTMAN were to undertake exposure limit setting to satisfy this exposure goal requirement, we estimate that tens of millions of dollars would be required for the necessary toxicity testing and appropriate review. If our interpretation is correct, then other companies handling the same chemicals would also be establishing their-own exposure limits and different limits for the same chemical would result. This proliferation of company produced exposure limits would be disastrous to the Occupational Safety and Health community.

At EASTMAN facilities professional judgement (based on available hazard information) is used to determine which respirator is acceptable. This includes estimates of hazard, exposure monitoring and use conditions; if an exposure limit exists then this is included in our analysis. For chemicals that have a low hazard potential, an air-purifying respirator will be used; if our professional judgement indicates that an air-purifying respirator is not adequate, then we use an air-supplied respirator.

Further, EASTMAN supports the use of PEL's (and STEL's) as published, documented exposure limits for hazardous exposure level determination.

In summary, EASTMAN recommends the definition of hazardous exposure level should be defined as the PEL and that employers should be required to use estimates of hazards, exposure concentrations and use conditions (i.e. Professional Judgement) to make decisions on respirator selection.

**COMMENT ON "VOLUNTARY USAGE"  
(From the Preamble)**

**OSHA Question: [58896]**

*"OSHA is ... seeking comment on the appropriateness of the scope of the standard and on whether the scope of the standard should go beyond required respirator use to include voluntary respirator use situations as well."*

**EASTMAN Recommendation:**

EASTMAN recommends that voluntary respirator use should not be included in the scope of the standard. As OSHA points out and we concur, if this provision were included, "... would serve to discourage permission to use respirator voluntarily and thus, in some situations could lessen workplace protection."

**COMMENTS ON SPECIFIC REQUIREMENTS OR REQUESTS IN THE PROPOSAL**

**Section (C) Respiratory Protection Program**

**OSHA Question [58899]**

*"OSHA invites further comments on whether specific minimum training requirements for program administrators should be set, and on what the training should be."*

**EASTMAN Recommendation:**

**EASTMAN believes training of the administrator is essential. While we don't recommend there be specific training requirements for program administrators in this standard, we support the concept that the level of training for the respirator program administrator must be adequate to deal with the complexity of the respirator program and this should be an employer requirement.**

**Section (D) Selection of Respirators**

**OSHA Requirement (D)(2) [58939]**

*"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 facepiece type and from at least two different manufacturers."*

**EASTMAN Recommendation:**

**EASTMAN's experience has shown that the ORC recommendation (listed below) is a reasonable cost-effective approach to ensure that the employee has an acceptable fit; namely:**

**"Where respirators (other than SCBA) that rely on a tight facial seal are used, the employee shall provide sufficient sizes and models necessary to provide an acceptable fit. Where SCBA are to be used, employees may standardize on one SCBA system, with sufficient facepiece sizes available to provide an acceptable fit."**

**OSHA Requirement (D)(3)[58939]**

*"In addition, the employer shall obtain and evaluate the following information for each work situation:..."*

**EASTMAN Comment**

**The 11 provisions are good as a reference as to what should be done, however, documentation of this requirement would require additional paperwork by our company. Existing processes in place ensure this is already being done with Process Safety Committee Reviews, periodic safety meetings and MSDS review meetings. Make this a "performance oriented" requirement.**

**OSHA Requirement (D)(5)[58939]**

*"The employer shall make types of respirators available for selection ... in accordance with the assigned protection factor table in the NIOSH Respirator Decision Logic published in May 1987."*

**EASTMAN Recommendation**

EASTMAN recommends that OSHA use the ANSI Z88.2 protection factors listed in their Table I until NIOSH completes development of new assigned protection factors.

**(E) Medical Evaluation**

**OSHA Question [58907 & 58911]**

*OSHA is seeking comment on each of the three alternatives and on the specific elements that make up the required procedures for each alternative. OSHA (also) requests comments on the administration of the medical questionnaire and on the appropriate individuals for performing this test.*

**EASTMAN Recommendation**

EASTMAN recommends adopting a modified version of Alternative #3 as the most prudent and cost-effective medical evaluation alternative. The modification we're recommending is:

A health questionnaire be administered to all respirator wearers. The questionnaire should be administered prior to fit testing by a person trained in its administration. If the questionnaire suggests the need for a medical evaluation by a physician, then a physician's written opinion regarding the employee's ability to wear a respirator (including what testing may be indicated e.g. pulmonary function and/or exercise stress testing) would be required.

**Medical Removal Protection**

**OSHA Requirement [58940]**

*"The employer shall have the employee's medical status reviewed by or under the supervision of, a licensed physician annually ...."*

**EASTMAN Recommendation:** EASTMAN's experiences with medical removal protection do not support annual review. EASTMAN recommends OSHA adopt the age sliding scale approach in ANSI Z88.6.

**(F) Fit Testing**

**OSHA Requirement #(2) [58940]:** *"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."*

**EASTMAN Comment & Recommendation:** Our experience indicates that virtually no individual fails fit testing one year following the initial test. EASTMAN recommends that this requirement be specific only for tight fitting air-purifying respirators and that the time requirement not be less than two years.

**OSHA Requirement (#3) [58940]:** *"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"*

**EASTMAN Comment:** EASTMAN opposes fit testing of tight fitting powered air-purifying respirators and tight fitting atmosphere-supplying respirators that are used in the positive pressure or pressure demand mode. We are not aware of any data that support this need. Passage of this requirement would be an unnecessary and burdening cost on industry.

**OSHA Requirement (#6) [58940-58941] - Fit Testing Protocols**

**EASTMAN Comment:** EASTMAN applauds OSHA for having fit-testing protocols spelled out in the standard. This provides documented criteria and will enhance industry uniformity.

**EASTMAN Recommendation:** EASTMAN recommends that OSHA specifically list TSI Porta-count instrumentation as an acceptable technology for quantitative fit-testing.

**OSHA Requirement (#9) [58941]:** *"Where an employee relies on an outside contractor/party to conduct quantitative fit testing and the contractor is not readily available ... the employer may administer a qualitative fit test to enable the selection of a respirator provided that a quantitative fit is administered in accordance with Appendix A within (30) days."*

**EASTMAN Comment:** EASTMAN supports this requirement with the exception that the timeframe be changed to 90 days; 30 days is not a realistic timeframe.

**(G) Use of Respirators**

**OSHA Request [58922]:** *"OSHA requests any comments or information as to the appropriateness of using contact lenses with respirators and any problems that have occurred with the use of contact lenses in the workplace"*

**EASTMAN Comment:** EASTMAN's experience indicates that contact lenses are safe to use and do not interfere with respirator use. In fact, they may be safer than using respirator glasses with full-face respirators due to fogging and the possibility of the glasses falling from the facepiece.

**OSHA Request [58923]:** *"...OSHA asks for comments on whether employees should be able to choose PAPRs rather than negative pressure respirators because of their reduced breathing resistance."*

**EASTMAN Comment:** EASTMAN's experience is that very few employees have encountered breathing resistance with negative pressure respirators and if such a situation resulted, we would provide a positive pressure respirator. PAPR's have generally not been used in our company and to offer its availability would be an increased cost burden and is unwarranted.

**(H) Maintenance & Care of Respirators**

**OSHA Requirement (#2)(ii)[58941]:** *... "In locations where weathering, contamination or deterioration of the respirator could occur, respirator shall be stored in compartments built to protect them. Such compartments shall be clearly marked as containing emergency respirators and shall be used in accordance with any applicable manufacturer instructions;"*

**EASTMAN Comment:** Detailed storage for emergency equipment should be added. Due to the importance of such equipment, its prevalence in many chemical companies and its infrequent use, the availability of a clean, properly maintained unit is essential. While it may be difficult to follow many vendors' requirements to store in a dry and clean atmosphere, specifying storage in a sealed container will accomplish this recommendation.

**(K) Training**

**OSHA Requirement (#2)[58942]:** *"The employer shall provide the training prior to requiring the employee to wear the respirator in the workplace and annually thereafter."*

**EASTMAN Comment:** Documentation of training is implied for compliance assessment. This should be clearly stated.

**OSHA Request [58929]:** *"OSHA requests comments on the frequency of training, particularly the need for increased training and more frequent refresher training for employees using SCBAs or emergency use respirators".*

**EASTMAN Comments:** EASTMAN supports this annual training requirement. Although Hazard Communication does not spell out annual training, our Company believes this is necessary to adequately train employees. More frequent refresher training for employees using SCBA's or emergency use respirators is necessary to ensure use proficiency.

**(L) Respiratory Protection Program Evaluation**

**OSHA Requirement (#2) [58942]:**

*"The employer shall periodically consult employees wearing respirators to assess wearer acceptance and attempt to correct any problems that are revealed during this assessment. Factors to be included in the assessment are whether the respirators being used are:*

- (i) Preventing the occurrence of illness;
- (ii) Properly fitted;
- (iii) Properly selected for the hazards encountered;
- (iv) Being worn when necessary; and
- (v) Being maintained properly.

**EASTMAN Comment & Recommendation:** Health, Safety and Environmental Audits as well as crew/safety meetings already in effect within our company involve employee consultations. This requirement is burdensome to perform and record for compliance evidence and should be deleted.

## APPENDIX A: FIT TESTING PROCEDURES

**OSHA Requirement (II, A, 5) [58944]:** *"5. The more comfortable facepieces are noted; the most comfortable mask is donned and worn at least five minutes to assess comfort. Assistance in assessing comfort can be given by discussing the points in item II A.6 of this appendix. If the test subject is not familiar with using a particular respirator, the test subject shall be directed to don the mask several times and to adjust the straps each time to become adept at setting proper tension on the straps.*

**EASTMAN Comment & Recommendation:** Donning the respirator for five minutes at the fit test to assess comfort is not realistic of industrial usage where a respirator wearer frequently dons a respirator in the field and enters the contaminated atmosphere within one to three minutes. EASTMAN recommends that the fit test frequency be specified as one minute after donning.

**OSHA Requirement (II, C, 4, h) [58947]:** *(h) In order to successfully complete a QNFT, three successful fit tests are required. The results of each of the three independent fit tests must exceed the minimum fit factor needed for the class of respirator (e.g. quarter facepiece respirator, half mask respirator, full paragraph (f) of this section).*

**EASTMAN Comment:** EASTMAN disagrees that three fit tests are needed for quantitative fit testing. Protection factor studies showed that assigned protection factors could be achieved utilizing a single test; excessive time required for the testing would place an unreasonable burden on the employer without providing any additional benefit.