



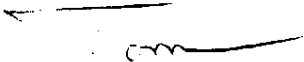
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Reader

Interoffice Communication

To Safety Directors
From Tom Grumbles
Date July 20, 1982
Subject OSHA ANPR RESPONSE ON RESPIRATOR PROTECTION

Enclosed is a copy of the OSHA ANPR concerning revision of the Respiratory Protection Standards. As you can see this is a data gathering exercise on OSHA's part to aid in their revision. We have been asked by DuPont to supply data where possible on particular questions listed in the enclosed letter to use in their response to OSHA.

Please review these questions and return your comments to me by July 30.


Thomas G. Grumbles

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Enclosure
,

cc Michele Malloy

CCR 000001087



GENERAL INFORMATION BULLETIN

Editor: Mary P. Kilcoyne

G-87

May 25, 1982

FEDERAL LEVEL

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

Respiratory Protection

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The Occupational Safety and Health Administration announced that it is seeking public comments on plans to revise its standards covering respirators used to limit worker exposure to toxic substances in the workplace (Federal Register, May 14, 1982, pp.20803-9, attached). OSHA's current regulations were issued in 1971 based on then-current national consensus standards developed by the American National Standards Institute. Since that time, "the field of industrial respiratory protection has advanced significantly", but the OSHA standard has not been amended to reflect these advances.

Current regulations require engineering controls to be used to reduce excessive employee exposure to airborne contaminants, and permit respirator use only while feasible engineering controls are being installed or when such controls are not considered feasible.

This requirement "is the subject of continuing controversy" where respirator programs are considered "more cost effective than engineering controls," the agency stated.

Evaluation of the technical aspects of respirator effectiveness is considered by the agency "to be an important and crucial first step in re-examining the broad policy of the priority of engineering controls over respirators," OSHA declared. The subject of "hierarchy of controls" will be addressed in a separate request for comment "in the near future," the notice said.

OSHA's request for data addressed such matters as respirator testing criteria; surveillance of working conditions where respirators are used; effectiveness of powered air purifying respirators, protection factors, appropriate respiratory protection standards for construction and maritime industries; special problems for small business; effect of respirator wear on productivity; cost of respirator programs; requirements for effective-

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May 25, 1982

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tive qualitative and quantitative fit testing programs, including the appropriateness of using potential carcinogens as testing agents; employee training provisions; and medical screening.

Provisions of OSHA's respiratory protection standards apply to more than 500 airborne contaminants regulated by the agency in circumstances where feasible engineering controls are insufficient to bring worker exposures below OSHA standards as well as to any other workplace where respirators are used.

Since 1971, a number of OSHA health standards, such as lead, cotton dust, and arsenic, have included additional requirements for respiratory protection. Some of these standards require that respirator fit be determined through quantitative fit testing, which measures respirator fit through actual measurement and comparison of the contaminant level inside and outside a respirator facepiece.

In a separate rulemaking proceeding, OSHA is looking into the quantitative fit testing requirements of the lead standard to determine if qualitative fit testing, an alternative method, also may be appropriate for determining respirator fit. The agency noted that the record in the proceeding would be included in the current proceeding.

Written comments postmarked no later than Sept. 13, 1982, should be submitted to the OSHA Docket Office, Docket H-049, Room S-6212, U.S. Department of Labor, 200 Constitution Ave., N.W., Washington, D.C. 20210.

appeared in the Federal Register for Tuesday, February 9, 1982 (47 FR 5902).

The rules of § 601.601(a)(3) of the "Statement of Procedural Rules" (28 CFR Part 601) shall apply with respect to the public hearing. Persons who have submitted written comments within the time prescribed in the notice of proposed rulemaking and also desire to present oral comments at the hearing on the proposed regulations should submit an outline of the comments to be presented at the hearing and the time they wish to devote to each subject by June 8, 1982. Each speaker will be limited to 10 minutes for oral presentation exclusive of time consumed by questions from the panel for the government and answers to these questions.

Because of controlled access restrictions, attendees cannot be admitted beyond the lobby of the Internal Revenue Building until 9:45 a.m.

An agenda showing the scheduling of the speakers will be made after outlines are received from the speakers. Copies of the agenda will be available free of charge at the hearing.

This document does not meet the criteria for significant regulations set forth in paragraph 8 of the Treasury Directive for improving government regulations appearing in the Federal Register for Wednesday, November 8, 1973.

By direction of the Commissioner of Internal Revenue.

David E. Dickinson,

Director, Legislation and Regulations Division.

(FR Doc. 82-13217 Filed 5-13-82; 8:45 am)

BILLING CODE 4520-01-01

DEPARTMENT OF LABOR

Occupational Safety and Health Administration

29 CFR Part 1910

(Docket No. H-002)

Hazard Communication; Public Hearings

Note.—This document originally appeared in the Federal Register for Wednesday, May 12, 1982. It is reprinted in this issue to meet requirements for publication on the Tuesday/Friday schedule assigned to the Department of Labor.

AGENCY: Occupational Safety and Health Administration (OSHA), Labor.

ACTION: Notice of proposed rulemaking; modification of hearing notice.

SUMMARY: On March 19, 1982, OSHA published a notice of proposed

rulemaking (NPRM) on hazard communication in the Federal Register (47 FR 12092). A notice announcing dates and locations for public hearings on the NPRM was published on April 16, 1982 (47 FR 16348).

The locations announced for the hearings were Washington, D.C., Houston, San Diego and Detroit. The selection of these sites was based primarily on geographical considerations. Interested parties have since suggested that participation on the West Coast could be significantly increased by moving the hearing site there from San Diego to Los Angeles. OSHA has agreed to this suggestion and is hereby announcing that the hearing originally scheduled for San Diego on July 20, 1982, will take place instead in Los Angeles at the address indicated below. The other hearings will take place on the dates and at the locations announced in the April 16th notice at 47 FR 16348. The hearings will be conducted in accordance with the procedures specified in the March 19th NPRM at 47 FR 12110.

In order to allow interested parties more opportunity to decide to participate in the regional hearings, OSHA is also hereby extending the time for submission of notices of intention to appear and statements for these regional hearings. Notices and statements for participants in the Washington, D.C. hearing are still due May 18, 1982, and June 1, 1982, respectively.

DATES: Notices of intention to appear at the regional hearings must be received on or before June 15, 1982. Statements and any documentary evidence to be presented at these hearings must be submitted by July 1, 1982.

The date each hearing will begin and the cities in which they will be held are as follows:

Date hearing begins	City
1. June 15, 1982	Washington, D.C.
2. July 13, 1982	Houston, Texas
3. July 20, 1982	Los Angeles, California
4. July 27, 1982	Detroit, Michigan

ADDRESSES: Notices of intention to appear at the hearings, statements and documentary evidence should be submitted to Mr. Tom Hall, Division of Consumer Affairs, Occupational Safety and Health Administration, 200 Constitution Avenue, N.W., Room N3635, Washington, D.C. 20210. (202) 523-8024.

The address for the hearing on July 20, 1982 is:
Santa Barbara (A) Room, Western Bonaventure Los Angeles Hotel, Fifth

and Figueroa Streets, Los Angeles, California.

Notices of intention to appear at the public hearings, as well as any other information gathered by the Agency during this rulemaking, will be available for inspection and copying in the Docket Office, Docket H-022, Occupational Safety and Health Administration, 200 Constitution Avenue N.W., Room S3212, Washington, D.C. 20210; (202) 523-7094.

FOR FURTHER INFORMATION CONTACT:

Hearings: Mr. Tom Hall, Division of Consumer Affairs, Occupational Safety and Health Administration, 200 Constitution Avenue, N.W., Room N3635, Washington, D.C. 20210; (202) 523-8024.

Proposal: Ms. Jennifer Silk, Office of Special Standards, Occupational Safety and Health Administration, 200 Constitution Avenue, N.W., Room N3633, Washington, D.C. 20210; (202) 523-7168.

This document was prepared under the direction of Thorne G. Auchter, Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, 200 Constitution Avenue, N.W., Washington, D.C. 20210.

(Secs. 4(b), 6(c) and 8(g), Pub. L. 91-593, 84 Stat. 1503, 1509, 1509; 29 U.S.C. 655, 657; 29 CFR Part 1911; Secretary of Labor's Order No. 8-76 (41 FR 26500))

Signed at Washington, D.C., this 10th day of May 1982.

Thorne G. Auchter,

Assistant Secretary for Occupational Safety and Health.

(FR Doc. 82-12075 Filed 5-10-82; 12:03 pm)

BILLING CODE 4510-05-01

29 CFR Parts 1910, 1915-1918, and 1923

(Docket No. H-002)

Respiratory Protection

AGENCY: Occupational Safety and Health Administration (OSHA), Labor.

ACTION: Advance notice of proposed rulemaking.

SUMMARY: This notice requests data, views, and arguments concerning possible revisions to OSHA standards on respiratory protection in 29 CFR 1910.134, 29 CFR 1915.82, 29 CFR 1916.82, 29 CFR 1917.82, 29 CFR 1918.102, and 29 CFR 1926.103 including the need to regulate, relevant alternatives, and economic impact.

DATES: Data, views and arguments should be submitted by September 13, 1982.

ADDRESSES: Written submissions in response to this notice should be submitted to the Docket Officer, Docket

No. H-049, Room S6212, Occupational Safety and Health Administration, U.S. Department of Labor, 200 Constitution Avenue, NW., Washington, D.C. 20210; telephone 202-523-7894. All written submissions and documents mentioned in this notice will be available for inspection and copying at the above address.

FOR FURTHER INFORMATION CONTACT: Mr. James Foster, Occupational Safety and Health Administration, Rm. N-3637, 200 Constitution Avenue, NW., Washington, D.C. 20210; telephone 202-523-8151.

SUPPLEMENTARY INFORMATION: Many thousands of employees are exposed to potentially hazardous concentrations of toxic materials in the workplace and must wear respirators to protect their health. The current regulations governing the use of respirators have been in effect since 1971. The general industry standard, 29 CFR 1910.134, was adopted in May 1971 from a national consensus standard (American National Standard Z88.2-1969, Practices for Respiratory Protection). The construction industry standard, 29 CFR 1926.103, was promulgated in April 1971. On February 9, 1979, 29 CFR 1910.134 was formally recognized as applicable to the construction industry (44 FR 8577). The maritime standards were originally promulgated in the nineteen sixties under a different codification in the CFR by agencies which preceded OSHA. The present code designations and their promulgation dates are, as follows: 29 CFR 1915.82, Feb. 20, 1960 (25 FR 1543); 29 CFR 1918.82, January 22, 1963 (28 FR 547); 29 CFR 1917.82, March 27, 1964 (29 FR 4052); and 29 CFR 1918.102, Feb. 20, 1960 (25 FR 1565).

Section 1910.134, which most clearly sets forth the requirements of a respiratory protection program, states that the employer shall provide the proper, approved respirator for the circumstance and is responsible for carrying out a respiratory protection program. The program is to contain written procedures and provide for proper cleaning, disinfection, storage, inspection and maintenance of the respirators. General provisions are set forth on fitting and training. Requirements are included for quality of breathing air, and practices to ensure that it is not contaminated. Provisions for emergencies and for communication and rescue in atmospheres immediately dangerous to life or health are specified. A color code for gas mask canisters is detailed and other provisions are included. The respiratory protection provisions in the other affected standards are more general.

Since the promulgation of these regulations, the field of industrial respiratory protection has advanced significantly. Newer, improved methods of qualitative fit testing are now available. Qualitative fit testing has been used for many years and checks the adequacy of fit of a respirator by relying on the subjective response of the wearer in detecting an odor or irritation from an airborne chemical introduced into the air near the respirator. Another method of respirator fit testing, called quantitative fit testing (QNFT), has been developed and made easily available. Quantitative testing measures the efficacy of fit of a respirator by actually measuring and comparing the contaminant level inside and outside a respirator facepiece. In addition, the concept of assigned protection factors, a numerical indication of the effectiveness of a respirator, has become firmly established. Finally, the consensus of industry concerning what constitutes a reasonable, effective respirator program has changed, as demonstrated by the recent issuance of a revised edition of ANSI Z88.2.

The ANSI Z88.2-1980 standard, entitled "Practices For Respiratory Protection," is a revision of the 1969 ANSI standard. It is available from the American National Standards Institute, 1430 Broadway, New York, New York 10018, and is also available for inspection at the Docket Office. The new edition is an extensive revision of the previous edition, incorporating the following changes:

- Oxygen deficiency is more thoroughly discussed.
- Quantitative fit testing is now included and described.
- Qualitative testing is more fully described.
- The concept of protection factors is introduced.
- Higher protection factors are assigned when quantitative fit testing is used.
- The section on respirator selection is expanded and now includes fit testing.
- The special problems section now includes a discussion of use in confined spaces.

Besides these developments, the demands on respiratory protection have also increased substantially since 1971. Levels of airborne contaminants allowed by recent OSHA health standards, such as arsenic, lead and cotton dust, are substantially lower than previous standards. Levels of contaminants considered acceptable by non-regulatory authorities, such as the American Conference of Governmental Industrial Hygienists (ACGIH), have

been lowered significantly for a great many substances. Providing respiratory protection against known or suspected carcinogens has become much more difficult and complex as more substances have been identified as carcinogens and as the degree of protection expected has increased.

Recent OSHA health standards have imposed respiratory related requirements not found in 29 CFR 1910.134. (See § 1910.1000(h), arsenic; § 1910.1025(f), lead; § 1910.1025(g), coke oven emissions; and § 1910.1025(i), cotton dust). These requirements include:

- Quantitative fit tests have been required both annually and semiannually.
- Employees have been given the privilege of using powered air purifying respirators (PAPR) upon request.
- Employees have been allowed to change the filter elements of a respirator whenever an increase in breathing resistance is detected.
- Employees have been allowed to wash their faces and respirator facepieces to prevent skin irritation associated with using respirators.
- Employers have been required to provide respirators that exhibit minimum facepiece leakage.
- Referral of an employee to a physician trained in pulmonary medicine has been required for an employee who exhibits difficulty breathing either at fit testing or during routine respirator use.

In addition, developments in microprocessor and other new technologies have made it possible to develop respirators with warning devices to indicate whether the respirator is providing appropriate protection while in use, and communication equipment so that employees can warn each other of safety hazards and coordinate their work activities in a safe manner. Improvements in cartridge technology may permit development of respirators for protection from chemicals for which there are not now any approved respirators. Further developments in powered air purifying respirators may permit their broader use to reduce fatigue factors, skin irritation problems, and breathing resistance difficulties sometimes created by negative pressure respirators. These possible improvements when taken together would make it possible to have a more effective respirator program.

Since current respirator standards are based on older technologies,

respirator suppliers have claimed to be prohibited from developing improved respirators which do not fit into existing categories or which provide protection from chemicals not included in present approval criteria because of the time involved from respirator development to ultimate approval. Suggestions on regulatory or other changes to further encourage the development of improved respirators and to permit their approval are requested.

It has become evident to OSHA that there is a good deal of confusion among respirator users over the distinction between the "fit factor" as determined by QNFT and the true, effective protection factor" which is the actual protection afforded by a respirator when in use. The manufacturers of quantitative fit test equipment have correctly emphasized that their equipment does not take account of the normal filter leakage and measures only the leakage around the face/sealing area of the mask plus any contribution from exhalation valve leakage.

In addition, it has become apparent that the laboratory type testing of QNFT may tend to overestimate how well a respirator fits when an employee is working at his job. Therefore there is uncertainty now about how high an apparent protection factor (actually fit factor) must be demonstrated by QNFT to insure that employees are properly protected on the job.

OSHA has also been evaluating the appropriateness of improved methods of qualitative fit testing as an alternative to the quantitative fit testing required by the lead standard (29 CFR 1910.1025), although that issue is being dealt with in a separate rulemaking proceeding (see 46 FR 27358, May 19, 1981). The arguments and information involved are so relevant to this advance notice, therefore the record of that rulemaking (docket no. H-049A) will also be placed in the record of this proceeding. One of the major questions involved in that rulemaking is whether qualitative fit testing (QLFT) can be so arranged and conducted as to properly determine whether a respirator is in fact adequate for a specific application.

Another important question is whether di-2-ethylhexyl phthalate (DEHP), the most widely used challenge agent for QNFT, should continue to be used for QNFT in view of the recent finding by the National Toxicology Program that DEHP caused cancer in 1000 mice in a two year feeding study. This study is reported in "NTP Technical Report on the Carcinogenesis Bioassay of Di-2-ethylhexyl phthalate—CAS 117-81-7," DHHS Pubin. No. NIH-

81-1773, which is available in draft form (dated Oct. 15, 1980) in the OSHA docket office (Docket file H-049A, exhibit 12). There are several substitute challenge agents that can be used to conduct QNFT, thereby considerably reducing the importance of DEHP. Examples include corn oil and di-2-ethylhexyl sebacate.

All of these factors indicate to OSHA that existing standards related to respiratory protection should be reexamined in light of current knowledge and accepted industrial hygiene practice. If OSHA does not respond to this situation, many employees may be needlessly overexposed to a variety of airborne toxic materials because of inappropriate respirator programs. Such exposure could result in severe illness and disability. Alternatively, obsolete regulation may unnecessarily limit an employer's options in providing respiratory protection, or restrict innovation in respiratory protection devices. Inadequate regulations may also impose unnecessary costs.

Consequently, OSHA is interested in receiving data and views from all interested parties on a wide variety of issues related to the revision of OSHA's respiratory protection standards. These issues are presented in the form of questions to assist interested persons in developing their responses. These questions represent issues that have already been brought to the Agency's attention. Some are of general nature and others address specialized technical issues which may be principally of interest only to the technical community. Interested persons, of course, may wish to submit information and views on issues that are not addressed by the questions or to respond only to some of the questions of special interest to themselves.

Paragraph (a)(1) of § 1910.134 requires that engineering controls be used to reduce excessive employee exposures to airborne contaminants and permits the use of respirators only while feasible engineering controls are being installed or when such controls are not feasible. This requirement is the subject of continuing controversy in those situations where respiratory protection programs are thought to be more cost effective than engineering controls. This rulemaking on respiratory protection standards is a necessary prerequisite in addressing this policy. Although the agency is inviting comment on this subject (see question 30), OSHA regards the evaluation of the technical aspects of respirator adequacy and effectiveness, as well as respirator program requirements, to be an

important and crucial first step in reexamining the broad policy of the priority of engineering controls over respirators. Rational decisions concerning when it is appropriate to use respirators must be based on prior knowledge of the effectiveness of respirators and respiratory protection programs. The factors that determine the performance levels of respirator programs are independent of decisions to employ respiratory protection in some particular situation. In a like manner, judgements as to cost effectiveness must also be based on prior knowledge of the costs associated with respiratory protection programs. Thus, OSHA will address the technical aspects of respiratory protection in this rulemaking before addressing the larger subject of the relationship between engineering controls and personal protective equipment. General policy with respect to engineering controls is a controversial standards policy important enough to be treated separately from the technical aspects of respirators and respiratory protection programs. Therefore OSHA will in the near future publish a separate notice discussing in detail this subject of the hierarchy of controls and requesting comment separately on issues relevant to it.

In order to assist the public and the Agency in evaluating these issues, OSHA has compiled the following background information and reports.

Los Alamos National Laboratory (LANL) of the University of California at Los Alamos, New Mexico, has done considerable work on respiratory protection. Their report LA-6084-MS, issued January 1976, entitled "Respirator Protection Factors," is the basic source for the protection factors now commonly applied to various respirators. This report also discusses quantitative fit testing. Other LANL reports that may be of interest include LA-5428, issued March 1974, "Selection of Respirator Test Panels Representative of U.S. Adult Facial Sizes"; LA-6722-PR, issued February 1977, "Respirator Studies for the National Institute for Occupational Safety and Health: July, 1975—Dec. 31, 1976," which discusses various aspects of quantitative fit testing and respirator evaluation; and LA-7317-PR, issued June 1978, "Respirator Studies for the National Institute for Occupational Safety and Health: Jan. 1-Dec. 31, 1977," which discusses the testing of powered air purifying respirators, interlaboratory comparison of data for dust-fume-mist filters, and fit testing for gas and vapor respirators. The LANL work has also resulted in reports in the literature, including "Effect of Facial Hair on

Respirator Performance" by E. C. Hyatt, et. al., that appeared on pp. 135-142 of the American Industrial Hygiene Association Journal of April 1973, and "The Physiological Consequences of wearing Industrial Respirators; a Review" by Peter B. Raven, et. al., that appeared on pp. 517-534 in the June 1979 issue of the same journal.

As part of a joint OSHA-NIOSH project called the standards completion project, the two agencies developed a document called the Respirator Decision Logic. This document is an attempt to set forth in a clear, logical, concise form the factors that must be considered and the choices that must be made in selecting a suitable respirator for any application. Although the document was not published, the last revision, dated February 1, 1978, is available from the OSHA docket office at the address shown below (cite docket number H-049 and exhibit 9).

Several documents submitted to OSHA for the standards completion project, docket no. SCP-1, are also relevant here. The "Industrial Safety Equipment Association Analysis of Supporting Test Data" submitted by Mr. Frank Wilcher of ISEA takes issue with the LANL determinations of protection factors, (see exhibit 45-9). Two papers from that file address aspects of respirator comfort: "Respirator Comfort: Subjective Response to Force Applied to the Face" by S. H. Snook, et. al., A.I.H.A. Journal, March-April 1966, p. 93-97, (exhibit 18F); and "Performance and Acceptance of Respirator Facial Seals" by W. A. Burgess and W. C. Hinds, Ergonomics, 1970, vol. 13, no. 4, p. 455-464, (exhibit 18G). "Effectiveness of Dust Respirators in Underground Coal Mines" by H. E. Harris, et. al., Transactions of the Society of Mining Engineers, AIME, vol. 256, June 1974, p. 153-161 (exhibit 18D) discusses the actual protection afforded by respirators on the job and factors that account for variations.

In addition, quantitative fit testing has been studied by Mr. William H. Revoir then with the Norton Co. for the ANSI committee on respirator practices, and reported in two Norton technical reports, no's R-115 and R-116, (docket H049A, exhibits 13 and 14, respectively). Report R-115 deals with a comparison of test results between a qualitative test using isoamyl acetate and a quantitative test using DEHP. Report R-116 discusses the impact on test results of performing head and neck movements during testing.

All of these studies and reports provide further background information relevant to the questions asked in this advance notice. These studies and other

documents referred to in this notice have been placed in the docket and are available for inspection and copying at the docket office.

In addition to specific responses to the questions posed in this notice and in accordance with the provisions of the Regulatory Flexibility Act (Pub. L. 96-354, 94 Stat. 1167 [5 U.S.C. 601 *et seq.*]) and Executive Order No. 12291, OSHA also requests information regarding the economic impact which the contemplated changes discussed below might have on affected industries in general and, in particular, on small businesses and other small entities. (See question 32). Information regarding environmental impacts is also requested. Since this notice is an advance notice of proposed rulemaking, and no specific proposal or alternatives are presented, firm, detailed cost and impact data may not be available. However, whatever data that are available or can be estimated should be submitted to assist the Agency in the development of a proposal and alternatives.

Commentators responding to this notice should note that § 1910.134 is applicable to workplaces in general. It also applies to the construction and maritime industries to the extent that § 1910.134's provisions are not covered by the provisions on respirators in the construction and maritime standards. Also, where a more specific standard, such as a single-substance health standard, contains respirator provisions, those provisions take precedence over the more general provisions of § 1910.134. The provisions on respirators in the construction standards and in the maritime standards apply only to their respective industries.

Issues for comment: Data, views, and arguments are solicited on all of the issues described below and on other relevant issues.

Since this notice addresses a wide variety of industries, each commentator should include the following information so that his (her) other remarks may be usefully grouped and compared: What conditions or circumstances are you using as a basis for your comments, in terms of:

- Job(s), operation(s), process(es);
- Toxic material(s);
- Level of exposure without regard to respirators;
- Frequency and duration of exposure;
- Type and amount of work or physical labor, including frequency and duration;
- Medical screening or surveillance already practiced;

g. Applicable environmental conditions: high or low temperature, high humidity, skin irritants present, etc.;

h. Work schedule, including breaks and rest periods;

i. Size of facility physically and in terms of employment; and

j. Age and health of affected employees?

1. Should current standards be revised? What alternatives to regulation are available?

2.a. Should all or part of the new ANSI Z88.2-1980 standard be adopted as an OSHA standard?

b. If so, which parts and why?

c. Which, if any, advisory provisions of the ANSI standard should be made mandatory for OSHA purposes?

3.a. Should a protection factor of 100 for full facepiece respirators be made generally applicable in the regulations or should 50, as recommended by Los Alamos National Laboratories, be retained?

b. Should the protection factors (other than for full facepiece respirators) recommended by Los Alamos National Laboratories be made generally applicable in the regulations?

c. What other values, if any, should be specified for protection factors?

d. In what manner, if any, should OSHA allow QNFT to be used by an employer to assign a higher protection factor to a respirator for an individual or a group?

e. In what way should a distinction be made between *fit* factors determined by QNFT and *true protection* factors, that include filter leakage?

f. What methods or protocols are available to determine the true protection factor an employee achieves while in the actual workplace?

4.a. Should there be a distinction in the regulations between disposable respirators and other half-mask respirators?

b. In particular, should the protection factors for the disposable respirators be the same as for other half-mask respirators?

5.a. What protocol(s), if any, for qualitative fit testing (QLFT) should be specified in any new OSHA standards as acceptable testing method(s)?

b. Are there different protocols appropriate for different uses of QLFT such as selection and fitting, periodic fit checking, or checking the fit at each donning?

c. How often should QLFT be repeated?

d. What exercises should be performed by the test subject during QLFT?

e. Should it be allowable to use substances identified as potential carcinogens as fit test challenge agents? If so, what basis should be used to determine that the probable dose is acceptable or unacceptable?

f. What basis should OSHA use to determine the acceptability of suggested QLFT protocols?

g. With the use of nonirritating test agents, does test subject bias significantly affect the usefulness of qualitative testing, or affect the test results a significant amount of the time?

h. Should increased testing or more frequent testing be required for respirators with facepieces that need adjustment other than strap tension to fit properly?

i. Under what circumstances and using what testing protocol would QLFT be sufficient to ensure that an employee's respirator fits sufficiently well?

6.a. What protocol(s), if any, for quantitative fit testing (QNFT) should be specified as acceptable testing method(s) in any new OSHA standards?

b. To be an adequate test, should QNFT be able to distinguish the respirator efficiency for each test as performed by the test subject?

c. To be an adequate test, should QNFT be able to demonstrate the variation of contaminant concentration behind the respirator during the breathing cycle?

d. What exercises should be performed by the test subject during QNFT, and for how long?

e. What test agents are suitable for QNFT, and what are the essential characteristics of an appropriate aerosol for solid and liquid agents?

f. What algorithm should be used to calculate the protection factor from QNFT?

g. What situations require QNFT?

h. What is an acceptable accuracy for QNFT test?

i. Should it be allowable to use substances identified as suspect carcinogens as test agents? If so, what basis should be used to determine that the probable dose is acceptable or unacceptable?

j. Should increased testing (i.e., repetitions) be required for respirators with facepieces that need adjustment other than strap tension to fit properly?

k. For each required protection factor, how high a fit factor, determined by QNFT, should be required to ensure employee protection?

l. How will the fit factor determined with different testing equipment, challenge agents, procedures, and test conditions?

7. Which respirator related provisions, if any, of the more recent OSHA health standards (e.g. § 1910.1018(h)—arsenic, § 1910.1029(g)—coke oven emissions, § 1910.1043(f)—cotton dust, etc.) should be made generally applicable by incorporation into § 1910.134, Parts 1915–1918, or § 1926.103?

a. What type and level of training and retraining should be provided to all respirator users [c.f. § 1910.134(b)(2), (e)(5), (e)(5)(i), § 1915.82(a)(4), § 1926.103(c)(1)]?

b. In such training, what topics should be covered and how thoroughly?

c. In which cases should more specialized or comprehensive training be required?

d. How should required training and retraining be specified?

9. What specifications should be made concerning the content of standard operating procedures presently required in § 1910.134(b)(1) and (e)(3)?

10.a. What medical screening, if any, of potential users of respirators should be required?

b. For those employees who use respirators, is it safe to require medical examinations only in those cases where there is some complaint by the employee or a problem is noticed by the fit testing technician?

c. Should the regulations limit an employer's choice of type, class or specialty of health care provider in obtaining these medical examinations?

d. Could a questionnaire be used to select those few individuals who should be medically examined?

e. What medical conditions, if any, of an employee should preclude the wearing of a respirator? Explain.

f. What medical conditions, if any, could be aggravated by wearing a respirator?

g. Could the wearing of a respirator medically endanger an employee? If so, with what respirator, and as a result of what medical condition?

11. The respirator testing criteria used by the National Institute for Occupational Safety and Health (NIOSH) and the Mine Safety and Health Administration (MSHA) (30 CFR Part 11) have been acknowledged by NIOSH to be in need of extensive revision.

a. Should OSHA independently address the adequacy and application of some or all types or models of respirators? If yes, specify in detail.

b. Should OSHA always accept the adequacy of MSHA/NIOSH approved respirators without additional requirements (e.g. higher performance requirements for use against certain substances)?

c. Under what circumstances, if any, should OSHA allow the use of respirators not approved by MSHA/NIOSH under 30 CFR Part 11?

d. Should OSHA automatically reject any modification to approved respirators?

e. Should OSHA allow the interchange of parts between different makes or types of respirators?

f. Should OSHA recognize other organizations' (other than NIOSH) testing and certification of respirators?

g. Are there changes in regulations or procedures that would encourage more rapid development and utilization of respirators to provide protection from chemicals for which there are no currently approved respirators?

h. Are there changes in regulations or procedures which would encourage more rapid development and utilization of respirators which would provide immediate warning of over exposure; improved communication capabilities; reduced skin irritation, breathing resistance or heat stress; or other improvements?

i. In order for negative pressure air purifying respirators to be permitted for protection from a gaseous chemical, should that chemical always present adequate warning properties?

j. How, if at all, should OSHA address physical aspects of respirator performance and suitability such as abrasion resistance, tear strength, withstanding temperature extremes, corrosion resistance, and field of vision?

12. Should OSHA continue to accept as adequate all manufacturers' instructions for fit checking (§ 1910.134 (c)(5)(i))?

13. When, if at all, should OSHA limit the amount of time in a single shift that employers may require their employees to wear respirators? (The lead standard (29 CFR 1910.1025 (f)(1)(i) imposes a limit of 4.4 hours in some cases.)

14. In determining compliance with exposure standards for those employees wearing respirators, should OSHA assume that an employee's exposure has been reduced by a factor equal to the assigned protection factor of the respirator? Such an assumption is already part of the enforcement policy for the cotton dust standard. (See 40 FR 85730, Dec. 30, 1980.) It allows an employee to wear a respirator for only part of the work shift when respirators are relied upon to achieve compliance with permissible exposure levels.

15.a. What degree of surveillance of work area conditions and degree of employee exposure and stress are adequate to ensure safe use of respirators [c.f. § 1910.134 (b)(8)]?

b. What costs are associated with this surveillance?

c. For situations that require the use of respirators for extended periods, what limitations should be placed on and employee's schedule of use of that respirator in order to make adequate allowance for:

1. Degree of exertion required by the work activity?

2. Physiological burden imposed by different respirator types?

3. Physiological burden imposed by the ambient temperature and humidity or by radiant heat?

18.a. How frequently should the carbon monoxide concentration be measured from an air compressor without a carbon monoxide alarm?

b. Is there any reason not to require a carbon monoxide alarm on all oil-lubricated compressors used to provide breathing air?

17. Should acceptable respirator breathing air continue to be specified as Grade D from Compressed Gas Association Commodity Specification G7.1-1956 (§ 1910.134(d)(1)) or should some alternate specification, such as grade E, be used?

18. It has been claimed that some powered air purifying respirators (PAPR's) have been shown to induce inward leakage.

a. In view of this, what protection factor is appropriate and how should proper fit be ascertained?

b. Should PAPR's have alarms to indicate low air flow?

c. Under what circumstances would PAPR's be made available to employees?

19. g. What recordkeeping should be required to ensure an effective respirator program? Possible items for

documentation include breathing air, chemical analysis, fit testing, medical evaluations, respirator inspection, etc.

b. What costs are associated with these items?

20. What type and level of training and education should be considered the minimum required to permit a person to train others in respiratory protection?

21. Under what circumstances, if any, should men with beards be permitted to wear each type or style of respirator?

22. To what extent, if any, should the OSHA/NIOSH Respirator Decision Logic be incorporated into revised OSHA standards?

23. What level(s) of oxygen deficiency should impose a restriction on the types of respirators that may be worn?

24. How should "immediately dangerous to life or health" (IDLH) be defined with respect to limiting respirator use for oxygen deficiency or for the presence of toxic materials?

25. How and to what extent should respirator regulations for the maritime and/or construction industries differ from those for general industry?

26. Should regulations be established for permissible shelf life for filters, cartridges and canisters?

27. Using either sanitary, durability, or service life considerations, how long should "disposable" respirators be permitted to be used?

28. For work in atmospheres immediately dangerous to life or health, are there respiratory devices other than self-contained breathing apparatus that are suitable for use by standby persons? (See § 1910.134(e)(3)(iii)).

29. Respirator filters and sorbents have a limited service life.

a. What limits, if any, should be placed on particulate filters?

b. In what manner should allowance be made for the degradation of some filters due to humidity?

c. What scheme should be used to specify service lives for organic vapor cartridges and canisters for various organic vapors. What use can be made in this regard of published breakthrough times for various organic vapors? (See, for example, Nelson and Correia, *American Industrial Hygiene Association Journal*, September, 1976, p. 514; and others.)

d. Should sorbent cartridges be restricted to a single day's use on account of the desorption that may occur during overnight storage and exposure to humidity?

30.a. Should the respirator standards continue to address the relative priority of engineering controls and respirators? (See § 1910.134(a)(1).)

b. Do feasible engineering controls always provide better protection or greater assurance of protection of employee health than the use of respirators?

31. Are there any other issues or problems relevant to respiratory protection programs in general industry, maritime, or construction which OSHA should address in revising current standards?

32.a. What would be the economic impact on affected industries and on small business and other small entities of the possible changes to OSHA regulations described above or suggested by you or other commentators?

b. Which, if any, of these changes would result in major increases or decreases in costs or prices for individual industries, small business, other small entities, or consumers?

c. What changes have a significant economic impact on a

substantial number of small businesses or other small entities?

d. Would these changes, taken individually or as a whole, result in significant adverse or beneficial effects on domestic or foreign competition, investment, productivity, or innovation?

33. There have been claims that the use of respirators results in productivity losses.

a. What factors may contribute to productivity losses?

b. What are the costs of each of these factors?

c. What is the aggregate cost, if any, of productivity losses induced by the use of respirators?

d. What provisions of current respirator standards affect productivity?

e. What effective alternatives are available that could reduce these productivity losses?

34. Respirator program costs can vary widely depending on the conditions which necessitate respirator use.

a. How much time during a typical shift are respirators actually worn?

Please be as specific as possible about type of industry and classification of employee concerned.

b. How many employees and what portion of the employer's workforce use respirators?

c. What are typical maintenance and replacement costs for each type of respirator used?

d. What are the total costs and per employee costs for a quantitative fit testing program? Where known, separately state the costs of program staff training, equipment purchase, equipment rental, consultant fees, employee time, program staff time, and the number of tests performed per employee.

e. What are the total costs and per employee costs for a quantitative fit testing program? Where known separately state the costs of program staff training, equipment purchase, equipment rental, consultant fees, employee time, program staff time, and the number of tests performed per employee.

All comments submitted in response to these questions and this notice generally will become part of the record of any resulting rulemaking and will be carefully considered in the development of any proposed regulation on these matters. All comments in response to this notice should be submitted by September 13, 1982 to the Docket Officer, Docket No. H-049, Room S6212, Occupational Safety and Health Administration, U.S. Department of Labor, 200 Constitution Avenue, N.W.,

Washington, D.C. 20210; telephone 202-7894.

This document was prepared under the direction of Thorne Auchter, Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, 200 Constitution Ave., NW., Washington, D.C. 20210.

List of Subjects in 29 CFR Parts 1910, 1915-1918, 1928

Occupational safety and health, Respiratory protection.

(Sec. 6, Pub. L. 91-596, 84 Stat. 1593 (29 U.S.C. 655), 29 CFR Part 1911; 40 U.S.C. 333; 33 U.S.C. 941; 41 U.S.C. 35, 38; Secretary of Labor's Order No. 8-70 (41 FR 25059))

Signed at Washington, D.C., this 10th day of May 1982.

Thorne Auchter,
Assistant Secretary of Labor.

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DEPARTMENT OF EDUCATION

Office of the Secretary

34 CFR Subtitle A and Chs. IV, VI and VII

Department of Education Semiannual Regulations Agenda and Review List

A. Office of the Secretary, Ed.

ACTION: Publication of the semiannual agenda of regulations.

SUMMARY: The Secretary of Education publishes a semiannual agenda of regulations as required by the Regulatory Flexibility Act and Executive Order 12291 ("Federal Regulations"). This agenda provides a brief description of regulations being developed or reviewed by the Department of Education. The purpose of the agenda is to encourage more effective public participation in the regulatory process

by giving the public early information about pending regulatory activities.

FOR FURTHER INFORMATION CONTACT: Questions or comments related to specific regulations listed in this agenda should be directed to the contact person listed for that set of regulations. Questions or comments on the overall agenda should be directed to A. Neal Shedd, Director, Division of Regulations Management, Office of the General Counsel, Department of Education, Room 2129 FOB-0, 400 Maryland Avenue, SW., Washington, D.C. 20202. Telephone (202) 245-7091.

SUPPLEMENTARY INFORMATION: Executive Order 12291, dated February 17, 1981, and the Regulatory Flexibility Act, Pub. L. 96-354, enacted September 19, 1980, require the Department of Education to publish, in October and April of each year, an agenda of regulations that the Department expects to issue and currently effective regulations that are under review. The agenda includes both notices of proposed rulemaking (NPRMs) currently being drafted and pending final regulations (FR) for which NPRMs have been published.

For each set of proposed or final regulations listed, the agenda provides a: (1) Title, (2) summary, (3) contact person, and (4) decision date (expected month of publication of the final regulations (FR) or (NPRM)).

The summary of each set of regulations includes: (1) A brief description of the proposed or final regulations; (2) notice whether a regulatory impact analysis is required by Executive order 12291; (3) notice whether a regulatory flexibility analysis is required by the Regulatory Flexibility Act; (4) a brief statement of the Department's objectives in issuing or

reviewing the regulations; (5) the legal basis for the regulations; and (6) the Code of Federal Regulations part number assigned to the regulations.

The Department is required by Executive Order 12291 to prepare a regulatory impact analysis for any set of regulations that is a "major rule" as defined by the order, and that is not exempted from the requirements in the order. This semiannual agenda specifies whether or not a regulatory impact analysis will be prepared for each set of regulations listed.

The Regulatory Flexibility Act requires that Federal agencies take into account the impact of their regulations on "small entities," including small businesses, small governmental jurisdictions, and other small organizations. The Department must prepare an initial regulatory flexibility analysis for any proposed regulations for which a notice of proposed rulemaking is issued on or after January 1, 1981 if the proposed regulations will have a significant economic impact on a substantial number of small entities. The Department's plan for review of regulations under the Regulatory Flexibility Act was published on August 5, 1981 at 46 FR 39352. A reference has been included in this agenda to indicate whether a regulatory flexibility analysis is required.

This publication in the Federal Register does not impose any binding obligation on the Department with regard to any specific item on the agenda. Regulatory action in addition to the items listed is not precluded.

Dated: May 7, 1982.

T. H. Dell,
Secretary of Education.

DEPARTMENT OF EDUCATION SEMIANNUAL REGULATIONS AGENDA AND REVIEW LIST

Title	Summary	Contact	Earliest expected decision date
Privacy Act Regulations—Amendment	A. Description: The amendment would exempt from certain access and notice provisions of the Privacy Act investigatory materials compiled for law enforcement purposes and contained in the complaint file and log system of records of the Office for Civil Rights. B. Regulatory impact analysis: Not required. C. Regulatory flexibility analysis: Not required. D. Objectives: The amendment would enhance the ability of the Department to acquire information pertinent to the compliance status of recipients and to achieve compliance by voluntary means. E. Legal basis: Section 5 of the Privacy Act of 1974 (5 U.S.C. 552a(k)). F. Citation: 34 CFR Part 6b.	Antonio J. Celis, (202) 245-2104.	NPRM May 1982.
Education Department General Administrative Regulations (EDGAR)—Grant Programs without Specific Regulations—Parts 75 and 76.	A. Description: The regulations under review establish procedures for grant awards under a program that does not have program-specific regulations. B. Regulatory impact analysis: Not required. C. Regulatory flexibility analysis: Not applicable. D. Objectives: Amendments, if any, to the regulations would be designed to effect regulatory relief, including reduction of paperwork and compliance burdens and improvement of cost effectiveness. E. Legal basis: Section 414, of the Department of Education Organization Act (20 U.S.C. 3474). F. Citation: 34 CFR Parts 75 and 76.	Chester Glod, (202) 245-7810.	NPRM May 1982.
Indian Fellowship Program	A. Description: The regulations under review implement those provisions of the Indian Education Act of 1972 that apply to Indian students applying for and receiving fellowships for study in six specified fields.	Alice Ford, (202) 245-7525.	NPRM May 1982.

