



-1-

S U P P L E M E N T

ASBESTOS INDUSTRY RESPONSE

NOTICE OF PROPOSED RULEMAKING

OCCUPATIONAL EXPOSURE TO ASBESTOS 29 CFR PART 1910

FEDERAL REGULATION VOL. 40 NO. 197, 9 OCTOBER, 1975

DETAILED COMMENTS CONCERNING PROPOSED REGULATION:

(Provisions for which no comments are offered
are omitted)

15190576

1. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(a) SCOPE AND APPLICATION: This section applies to every place of employment where asbestos or a product containing asbestos is manufactured, processed, packaged, stored, applied, used or otherwise handled. However, this section does not apply to construction work within the scope of Section 1910.12 of this part nor to working conditions of employees with respect to which other Federal agencies exercise statutory authority to prescribe or enforce standards or regulations affecting occupational safety and health.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(a) SCOPE AND APPLICATION: This section applies to every fixed place of employment where asbestos or a product containing asbestos is manufactured, processed, packaged, stored, applied, used or otherwise handled. However, this section does not apply to construction work within the scope of Section 1910.12 of this part nor to working conditions of employees with respect to which other Federal agencies exercise statutory authority to prescribe or enforce standards or regulations affecting occupational safety and health.

RATIONALE

Use of the phrase "fixed place of employment" excludes from coverage of the section both transportation of asbestos and asbestos containing products and activities performed in the field, whether defined as construction or not. The language is

RATIONALE (continued).

consistent with the sentence which follows and makes it possible easily and quickly to ascertain whether or not the regulation applies to many ordinary work situations, without any need for reference to other laws and regulations.

2. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(b) DEFINITIONS. For the purpose of this section: -

- (1) "Asbestos" includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite, and every product containing any of these minerals.
- (2) "Asbestos fiber" means a particulate form of asbestos longer than 5 micrometers, with a length-to-diameter ratio of at least 3 to 1, and with a maximum diameter of 5 micrometers.
- (3) "Emergency" means as unforeseeable and unexpected occurrence likely to release airborne concentrations of asbestos fibers in excess of 5 fibers per cubic centimeter of air, such as, but not limited to, failure of equipment or control devices, and rupture of containers.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(b) DEFINITIONS. For the purpose of this section: -

- (1) "Asbestos" includes chrysotile, amosite, and crocidolite, and members of the anthophyllite, tremolite, and actinolite mineral group when they occur in fibrous habit.
- (2) "Asbestos fiber" means a particulate form of asbestos, longer than 5 micrometers, with a length to diameter ratio of ^{at least} 5 to 1, and with a maximum diameter of 5 micrometers.

- (3) "Emergency" means an unforeseeable and unexpected occurrence likely to release airborne concentrations of asbestos fibers in excess of 10 fibers per cubic centimeter of air, such as, but not limited to, failure of equipment or control devices, and rupture of containers.
- (4) "Feasible" means feasible in both the technological and economic sense.
- (5) "Authorized person" * * * * *
- (6) "Assistant Secretary" * * * * *
- (7) "Director" * * * * *

RATIONALE

Although mineralogical definitions usually apply to rather broad classes of mineral materials and therefore, typically, are imprecise; the words "chrysotile", "amosite" and "crocidolite" generally are understood to describe minerals which clearly are separable into discrete fibers. On the other hand, the words "anthophyllite", "tremolite" and "actinolite" cover a wide range of minerals, both fibrous and non'fibrous. A failure to distinguish between the fibrous and non'fibrous forms might bring under the proposed regulation a number of work places where there are no health hazards of the kind which the regulation seeks to control.

Deletion of the words "and every product containing any of these minerals" from the definition of "asbestos" brings the regulatory definition into accord with customary trade and industry parlance and avoids the possibility of confusion and misunderstanding. Asbestos containing products and materials are made subject to

the regulation by the wording of paragraph (a) Scope and Application.

Changing the aspect ration in the definition of "asbestos fiber" from "3 to 1" to "5 to 1" will exclude from coverage of the regulation particles which truly are not fibrous in nature and which widely are believed to have no biological effect. The change also will bring the regulatory definition into closer conformity with the definition currently being developed by ASTM Committee E-34.

The number "10" is substituted for the number "5" in the definition of "emergency" to make that definition consistent with changes proposed in paragraph (c) Permissible Exposure to Airborne Concentrations of Asbestos Fibers and with similar changes proposed elsewhere.

"Feasibility" is defined to clarify the meaning of the word; to bring the concept into conformity with recent judicial decisions, and to provide definitional support, on economic feasibility grounds, for the use, by small and intermittent users of asbestos and asbestos containing products, of personal protection as the primary method of compliance with the regulation.

3. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(c) PERMISSABLE EXPOSURE TO AIRBORNE CONCENTRATION OF ASBESTOS FIBERS -

(1) 8-hour time-weighted average concentration: No employee may be exposed to an 8-hour time-weighted average airborne concentration of asbestos fibers in excess of 0.5 fiber per cubic centimeter (or 500,000 fibers per cubic meter) of air, as determined on the basis of a 40-hour work week and by the method prescribed in paragraph (c) (3) of this section.

(2) Ceiling concentration: No employee may be exposed to airborne concentrations of asbestos fibers in excess of 5 fibers per cubic centimeter (or 5 million fibers per cubic meter) of air, as determined over a period up to 15 minutes, by the method prescribed in paragraph (e) (3) of this section.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(c) PERMISSABLE EXPOSURE TO AIRBORNE CONCENTRATIONS OF ASBESTOS FIBERS -

(1) 8-hour time-weighted average concentration: No employee may be exposed to an 8-hour time-weighted average airborne concentration of asbestos fibers in excess of 2 fibers per cubic centimeter of air, as determined on the basis of a 40-hour work week and by the method prescribed in paragraph (e) (3) of this section.

(2) Ceiling concentration: No employee may be exposed to airborne concentrations of asbestos fibers in excess of 10 fibers

INDUSTRY PROPOSAL (continued)

per cubic centimeter of air as determined over a period of not less than 10 nor more than 15 minutes, by the method prescribed in paragraph (e) (3) of this section.

RATIONALE

A 2 fiber standard is proposed in lieu of the ASHA proposed 0.5 fiber standard for the following reasons:

1. Credible scientific studies concerning asbestos and health published since 1972, when OSHA adopted a 2 fiber permanent standard, do not support the contention that the health of employees in industry will benefit from a reduction of permissible exposure levels from 2 fibers per cc to 0.5 fibers per cc.

2. When industry has proceeded in good faith with substantial capital expenditures, work practice changes and employee training in the belief that the permanent exposure standard would be 2 fibers per cc; a reduction in that standard by a factor of 75% is grossly inequitable and violates the concept of due process, if there is no clear and unequivocal new scientific evidence to support the change.

3. In the absence of clear scientific justification for the change, a reduction in the exposure standard below 2 fibers per cc would impose an unreasonable and unwarranted burden on small enterprises, particularly in the secondary and tertiary, or end user, categories.

4. In the light of the present state of the dust monitoring art, an exposure standard of less than 2 fibers per cc would be

15190583

RATIONALE (continued)

per se inequitable and impossible or impractical to enforce because of the inherent inaccuracies of the membrane filter test method at fiber concentrations less than 2 per cc.

The conversion of the mandated standard, in the text of the regulation, to an equivalent number of fibers per cubic meter is unnecessary, redundant, and confusing.

We interpret the words "as determined on the basis of a 40-hour work week" to mean that any occupational exposure to airborne asbestos fibers of more or less than 40 hours per week shall be so adjusted that the recorded exposure of any individual holding that job properly will reflect his cumulative exposure to fibers. Thus, an employee working 50 hours per week at an 8-hour time-weighted average concentration of 1 fiber per cc will be shown on the record to have been exposed to 1.25 fibers per cc; an employee working 20 hours per week at an 8-hour time-weighted average concentration of 1 fiber per cc and 20 hours per week at an 8-hour time-weighted average concentration of 0.5 fibers per cc will be shown on the record to have been exposed to 0.75 fibers per cc; and an employee working 20 hours per week at an 8-hour time-weighted average concentration of 1 fiber per cc and 20 hours per week at a task involving no asbestos or asbestos containing products will be shown on the record to have been exposed to 0.5 fibers per cc. If this is a correct interpretation of the wording, it provides a useful and equitable basis for applying the regulation to operations which involve occasional, intermittent or variable exposures to airborne asbestos fibers.

RATIONALE (continued)

If this is not a correct interpretation of the wording, the language should be clarified.

A 10 fiber ceiling is proposed in lieu of the OSHA proposed 5 fiber ceiling for the following reasons:

1. Credible scientific studies concerning asbestos and health published since 1972, when OSHA adopted a 10 fiber permanent ceiling, do not support the contention that the health of employees in industry will benefit from a reduction of ceiling levels from 10 fibers per cc to 5 fibers per cc.

2. When industry has proceeded in good faith with substantial capital expenditures, work practice changes and employee training in the belief that the permanent ceiling would be 10 fibers per cc; a reduction in that ceiling by a factor of 50% is grossly inequitable and violates the concept of due process, if there is no clear and unequivocal new scientific evidence to support the change.

3. In the absence of clear scientific justification for the change, a reduction in the permanent ceiling below 10 fibers per cc would impose an unreasonable and unwarranted burden on small enterprises, particularly in the secondary and tertiary, or end user categories.

The conversion of the mandated ceiling, in the text of the regulation, to an equivalent number of fibers per cubic meter is unnecessary, redundant and confusing.

For ceiling concentration determinations a sampling period of

RATIONALE (continued)

not less than 10 minutes nor more than 15 minutes is recommended to achieve statistical accuracy of plus or minus 10% at the 10 fiber level. At a lower mandated fiber level the sampling time would have to be extended to assure comparable accuracy. There appears to be no satisfactory solution to the problem of measuring ceiling fiber concentrations in the presence of a mixed dust which may blind the filter.

4. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(d) REGULATED AREAS. Any work area where a person may be exposed to airborne concentrations of asbestos fibers in excess of either of the limits imposed by paragraph (c) of this section shall be designated a regulated area. Only authorized persons may be allowed to enter such an area. A daily roster of all persons entering a regulated area shall be made and maintained.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(d) REGULATED AREAS. Any work area where the airborne concentrations of asbestos fibers regularly are in excess of either of the limits imposed by paragraph (c) of this section shall be designated a regulated area. Only authorized persons may be allowed to enter such an area.

RATIONALE

To define a regulated area as a "work area where a person may be exposed to airborne concentrations of asbestos fibers in excess of either of the limits" is to make the concept almost meaningless. There will be few places in any facility handling asbestos or products containing asbestos where some combination of circumstances might not create a brief exposure to airborne fiber concentrations above the mandated limits. The considerable burdens of creating and maintaining regulated areas should be confined to those situations in which there is a real possibility of excess exposure.

RATIONALE (continued)

If the purpose of a daily roster of persons entering a regulated area is to permit the development of an individual exposure history for use in subsequent diagnosis and treatment, the record is unnecessary. Payroll records will indicate individuals regularly assigned to work in a regulated area. Information concerning occasional or intermittent visits by other authorized persons will be of no value, because it will not be possible to correlate such information with fluctuating and differing exposure levels at various times and locations within the regulated area. If the purpose of a daily roster of persons entering a regulated area is simply to remind management and other employees that unauthorized personnel are to be excluded; the record is a cumbersome, unreasonable and expensive means of achieving a simple objective.

5. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(e) MONITORING. The purpose of all monitoring required by this paragraph is to measure accurately the airborne concentrations of asbestos fibers in a workplace to which employees would be exposed if they worked in the area without the use of personal protective equipment, such as respirators.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(e) MONITORING. The purpose of all monitoring required by this paragraph is to measure whether or not the airborne concentration of asbestos fibers in a work place to which employees would be exposed if they worked in the area without the use of personal protective equipment, such as respirators, exceeds either of the permissible exposure limits specified in paragraph (c) of this section.

RATIONALE

No informed person would maintain that the mandated membrane filter monitoring method measures airborne fiber concentrations accurately and it is misleading to the uninformed to state in a Federal regulation that the technique is accurate. The purpose of monitoring is to establish and verify the continuation of conditions necessary for compliance with exposure limits, and the regulation should so indicate.

6. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(e) MONITORING. * * * * *

(1) INITIAL. Every employer shall cause every place of employment where asbestos fibers may be released to be monitored in such a manner as to determine whether employees are exposed to concentrations of asbestos fibers in excess of either of the two limits prescribed in paragraph (c) of this section. If either limit is exceeded, the employer shall immediately undertake a compliance program in accordance with paragraph (f) of this section.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(e) MONITORING. * * * * *

(1) INITIAL. Every employer to which this section applies shall make an initial determination as to whether or not, at any place of employment under his control, under any reasonably foreseeable conditions, airborne asbestos fiber concentrations in excess of either of the exposure limits prescribed in paragraph (c) of this section, may be released. If, for any place of employment, information sufficient to make a reliable initial determination is not available or if the determination indicates a reasonably foreseeable possibility of exposure over either limit, that place of employment then shall be monitored in such a manner as to determine whether or not employees, in fact, are so exposed. If either limit is exceeded, the employer

INDUSTRY PROPOSAL (continued)

immediately shall undertake a compliance program in accordance with paragraph (f) of this section.

RATIONALE

Since there are few, if any, places of employment at which asbestos or asbestos containing materials (i.e., gasketing, friction materials, electrical insulation, building materials, etc.) are not present, and since any asbestos containing material under some conceivable condition of use or abuse might release an asbestos fiber; both the present regulation and the OSHA proposal would appear to require initial monitoring at virtually every place of employment in the United States. Surely such a burdensome and wasteful undertaking goes beyond the intent of the Occupational Safety and Health Act. The purpose of the statute is to assure a reasonably safe and healthful workplace. That objective can be achieved by monitoring only those places of employment which credibly might violate the exposure limits.

There are many work situations involving the use or handling of asbestos or asbestos containing materials which could not, under any normal circumstances, release airborne concentrations of asbestos fibers in excess of 2 fibers per cc. Examples might be: the handling, storage, installation or application of bonded asbestos materials involving no cutting, sanding, sawing, drilling or other abrasive treatment; the handling, conveyance, forming or application of asbestos fibers in a resin or other adhesive matrix; and the storage, pumping, transport or forming of

RATIONALE

asbestos fibers in slurry form. A rational application of the regulation, particularly among small or intermittent users of asbestos materials, should permit the conscientious employer to reach an ad hoc conclusion that expensive and inconvenient monitoring need not be performed at a particular place of employment.

7. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(e) MONITORING. * * * * *

(2) FREQUENCY. If monitoring shows that an employee's exposure is above either limit prescribed in paragraph (c) of this section, the monitoring shall be repeated every month, except as otherwise provided in paragraph (e) (2) (ii) of this section.

(ii) If monitoring shows that an employee's exposure is below both limits prescribed in paragraph (c) of this section, the monitoring shall be repeated every three months, except as otherwise provided in paragraph (e) (2) (i) or (e) (2) (iii) or (e) (2) (iv) of this section.

(iii) If two consecutive monitorings made at least 5 days, but not more than 3 months apart, show that an employee's exposure is below both limits prescribed in paragraph (c) of this section, monitoring need not be repeated, except as otherwise provided in paragraph (e) (2) (iv) of this section.

(iv) Whenever an employer has reason to believe that an employee's level of exposure has changed because of a change in production, process, controls, or other relevant factors, the employee shall be monitored as soon as practicable, and thereafter paragraphs (e) (2) (i); (e) (2) (ii) or (e) (2) (iii) shall apply.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

INDUSTRY PROPOSAL (continued)

(e) MONITORING. * * * * *

(2) FREQUENCY (i). If monitoring shows that an employee's exposure is above either limit prescribed in paragraph (c) of this section; monitoring thereafter shall be repeated as often as necessary to verify any reductions in airborne fiber concentrations to be expected from implementation of a compliance program adopted under paragraph (f) of this section but no less frequently than once each 6 months.

(ii) If two consecutive monitorings made at least 5 days, but not more than 6 months apart, show that an employee's exposure is below both limits prescribed in paragraph (c) of this section, monitoring need not be repeated, except as otherwise provided in paragraph (e) (2) (iii) of this section.

(iii) Whenever an employer has reason to believe that an employee's level of exposure has increased because of a change in production, process, controls, or other relevant factors, the employee shall be monitored as soon as practicable and thereafter paragraphs (e) (2) (i) or (e) (2) (ii) shall apply.

RATIONALE

Even though an employee's exposure may be above prescribed limits, it is unnecessarily burdensome and expensive to require frequent repetitions of the monitoring procedure, unless there is reason to believe that conditions have changed. If work practice changes have been made or equipment installed under a compliance program,

RATIONALE (continued)

the employer will be motivated to monitor as a measure of his progress. If the employer has reason to believe that conditions have deteriorated, he is obliged by sub-paragraph (iii) promptly to repeat the monitoring procedure. In any situation in which a work place is over prescribed exposure limits, a repetition of the monitoring procedure every 6 months should be sufficient to assure that airborne concentrations of fibers are not unaccountably rising and to assure that small businesses are not generating airborne concentrations of fibers in excess of levels at which they can use personal protection as the primary mode of compliance.

Since an employer who receives a monitoring report that a workplace is below the mandated exposure levels, will wish promptly to repeat the test so that he may be excused from the requirement of further monitoring; OSHA sub-paragraph (ii) is unnecessary and should be deleted.

Because outside laboratories often are slow to complete the microscopic examination of dust samples, a delay of 6 months should be allowed between the first and second favorable sampling required for relief from the necessity for further monitoring.

An employer should not be required to monitor if he believes that a change in his operation has reduced airborne concentrations of asbestos fibers. If he believes that the reduction is great enough to bring a workplace below permissible exposure limits, he has ample incentive to perform the test.

8. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(e) MONITORING. * * * * *

(4) EMPLOYEE NOTIFICATION

(i) Within five (5) working days after the receipt of the measurement results, the employer shall notify each employee in writing of the results concerning the employee's exposure.

(ii) Where the results reveal an employee's exposure to be above either of the permissible exposure limits, such notification shall also include a statement of the corrective action being taken to reduce exposure to or below the permissible exposure limits.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(e) MONITORING. * * * * *

(4) EMPLOYEE NOTIFICATION

Within five (5) working days after receipt of measurement results, the employer, in writing, shall notify employees found to be exposed to concentrations of airborne asbestos in excess of either of the permissible exposure limits. The notification shall include a statement of the method of compliance which the employer has elected to adopt under the provisions of paragraph (f) of this section.

RATIONALE

The purpose of the statute, protection of employee's health, does not require that employees be notified if their exposure to airborne asbestos is below permissible limits.

9. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(f) METHODS OF COMPLIANCE. Employee exposure to asbestos fibers shall be controlled to or below the permissible exposure limits by engineering controls, work practices, and personal protection controls.

1. ENGINEERING AND WORK PRACTICE CONTROLS. Engineering controls shall be instituted immediately to reduce employee exposure to or below the permissible exposure limits, except to the extent that such controls are not feasible. Where engineering controls which can be instituted immediately are not sufficient to reduce exposure to or below the permissible exposure limits, they shall nonetheless be used to reduce exposure to the lowest practicable level, and shall be supplemented by the use of work practice controls.

2. PERSONAL PROTECTION CONTROLS. Where engineering and work practice controls are not sufficient to reduce employee exposure to or below the permissible exposure limits, they shall nonetheless be used to reduce exposure to the lowest possible level, and shall be supplemented by the use of respirators, in accordance with paragraph (g) of this section.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(f) METHODS OF COMPLIANCE. Employee exposure to airborne asbestos fibers shall be controlled to or below the permissible exposure limits by engineering controls, work practices and personal

INDUSTRY PROPOSAL (continued)

protection controls as follows:

(1) ENGINEERING, WORK PRACTICES AND PERSONAL PROTECTION CONTROLS. Engineering and work practice controls shall be instituted immediately to reduce employee exposure to or below the permissible exposure limits, except to the extent that such controls are not feasible. Wherever feasible engineering and work practice controls which can be instituted immediately are not sufficient to reduce exposures to or below the permissible exposure limits; they shall nonetheless be used, except as hereinafter provided, to reduce exposure to the lowest practicable level, and shall be supplemented by the use of respiratory protection in accordance with paragraph (g) of this section. Employers of less than 25 persons and employers in whose facilities asbestos or asbestos containing products are being used, handled, fabricated or installed during less than an aggregate of 2 hours of each 8-hour shift, may make a reasonable determination that, for their operations, engineering controls are not feasible and may elect to use work practices and respiratory protection alone as their method of compliance, but respiratory protection may be used only in the manner and within the limitations described in paragraph (g) of this section.

RATIONALE

Although engineering controls have the virtue of being generally less subject to human failings than work practice controls, information received from our participating companies indicates

RATIONALE (continued)

that poor work practices can overwhelm the best engineering installation and typically can create more dangerous levels of exposure than do equipment failures. For this reason, we believe that work practices should be elevated in the regulation to a status co-equal with engineering controls.

Despite the fact that our survey data remains inadequate to support definitive conclusions in this regard, indications are that the cost of engineering controls does not decrease ratably as the capacity of the equipment is reduced. It also appears to be true, in general, that dust exposure points in smaller manufacturing and repair facilities are less easily defined, because work is moved from place to place within the installation. These two factors together lead to the conclusion that engineering controls are relatively more expensive for the small employer and, therefore, more difficult to justify on grounds of economics, and that such controls in a small shop are more difficult to design and operate effectively. For these reasons, we believe that the small employer and the intermittent user of asbestos and asbestos containing materials should be given the option, within stringent limitations, to employ work practices and personal protection as his primary mode of compliance.

10. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(f) METHODS OF COMPLIANCE * * * * *

(3) PARTICULAR TOOLS. All hand-operated and power-operated tools which may produce or release asbestos fibers in excess of the exposure limits prescribed in paragraph (c) of this section, such as, but not limited to, saws, scorers, abrasive wheels, and drills, shall be provided with local exhaust ventilation systems.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(f) METHODS OF COMPLIANCE * * * * *

(3) PARTICULAR TOOLS. Insofar as practicable, all portable or fixed location power tools which may produce or release asbestos fibers in excess of the exposure limits prescribed in paragraph (c) of this section, such as, but not limited to, saws, scorers, abrasive wheels, and drills, shall be provided with local exhaust ventilation systems.

RATIONALE

Hand tools which are not power operated generate little dust and cannot practicably be equipped with local exhaust ventilation systems. Moreover, if hand tools are being employed, power may not be available to operate an exhaust ventilation system.

11. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(f) METHODS OF COMPLIANCE. * * * * *

(5) LOCAL EXHAUST VENTILATION. Local exhaust ventilation and dust collection systems shall be designed, constructed, installed and maintained in accordance with the American National Standard Fundamentals Governing the Design and Operation of Local Exhaust Systems, ANSI Z 9.2-1971, which is incorporated for reference herein. (See Section 1910.6 of this part concerning the availability of ANSI Z 9.2-1971, and the maintenance of a historic file in connection therewith).

INDUSTRY RECOMMENDATION.

SECTION 1910.1001 ASBESTOS

(f) METHODS OF COMPLIANCE. * * * * *

(5) LOCAL EXHAUST VENTILATION. Local exhaust ventilation and dust collection systems shall be designed, constructed, installed and maintained in accordance with recommendations contained in Industrial Ventilation, a book published by the American Conference of Industrial Hygienists, and American National Standard Fundamentals Governing the Design and Operation of Local Exhaust Systems, ANSI Z 9.2-1971 (which is incorporated herein by reference), or equivalent. (See 1910.6 of this part concerning the availability of ANSI A 9.2-1971, and the maintenance of a historic file in connection therewith).

RATIONALE

Because ANSI standards are amended at infrequent intervals, and,

RATIONALE (continued)

therefore, may be out of date, employers should be permitted to use better systems.

12. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(f) METHODS OF COMPLIANCE * * * * *

(6) MECHANICAL VENTILATION. When mechanical ventilation is used to control exposure, measurements which demonstrate the effectiveness of the system to control the exposure, such as capture velocity, duct velocity, or static pressure, shall be made at least every 3 month. Measurements of the system's effectiveness to control exposure shall also be made within 5 days of any change in production, process or control which might result in employee exposure.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(f) METHODS OF COMPLIANCE * * * * *

(6) MECHANICAL VENTILATION. When mechanical ventilation is used to control exposure, measurements which demonstrate the effectiveness of the system to control the exposure, such as capture velocity, duct velocity, or static pressure, shall be made as frequently as required in accordance with sound engineering practice. Measurements of the system's effectiveness to control exposure shall also be made within 5 days following any change in production, process or control which might result in an increase in airborne concentrations of asbestos fibers.

RATIONALE

Testing an exhaust system every 3 months would constitute an unnecessary and unreasonable burden and expense, unless justified

RATIONALE

by sound engineering practice.

No statutory purpose would be served by retesting an exhaust system after a change in production, process or control which reduced airborne concentrations of asbestos fibers.

13. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(f) METHODS OF COMPLIANCE * * * * *

(7) COMPLIANCE PROGRAM:

(i) Every employer shall establish and implement a written program to reduce exposures to or below the permissible exposure limits solely by means of engineering and work practice controls.

(ii) The written program shall include:

(A) A description of each exposed operation, e.g., crew size, operating procedures and maintenance practices.

(B) Engineering plans and studies used to determine the controls for operation.

(C) A report of the technology considered in meeting the permissible exposure limits.

(D) Monitoring data.

(E) A detailed schedule for implementation of the engineering controls and work practices that cannot be implemented immediately as well as for the development and implementation of any additional engineering and work practices necessary to meet the permissible exposure limits.

(F) Other relevant information.

(iii) Written plans for compliance programs shall be submitted, upon request, to the Assistant Secretary and Director, and shall be available at the worksite for examination and copying by the Assistant Secretary and the Director. Such written plans shall be revised and updated at least every six months to reflect the current status of the program.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

Delete

RATIONALE

There is no information or data required to be included in the written compliance program which is not available elsewhere in the employer's records or which cannot be developed from those records. All such records are subject to inspection by the compliance officer.

The fundamental purpose of the Occupational Safety and Health Act, employee health, will be better served if engineering time required to prepare a written compliance program is devoted, instead, to the development, installation and operation of dust-free processes, improved engineering controls and better work practices.

Small employers, who may lack the skills within their own organizations to develop written compliance programs, would be heavily burdened by the requirements of this provision of the proposed regulation.

14. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(g) RESPIRATORY PROTECTION

(1) USE. Respirators shall be used where required under this section. Compliance with the permissible exposure limits may not be achieved by the use of respirators, except:

(i) During the time period necessary to install engineering or work practice controls; or

(ii) In work situations in which engineering controls and supplemental work practice controls are insufficient to reduce exposure to or below the permissible exposure limits; or

(iii) In emergencies.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(g) RESPIRATORY PROTECTION

(1) USE. Where respiratory protection is required under this section, compliance with the permissible exposure limits may not be achieved by the use of respirators, except:

(i) During the time period necessary to install engineering or work practice controls; or

(ii) In work situations in which engineering and work practice controls are not feasible; or

(iii) In work situations in which engineering and work practice controls are insufficient to reduce exposure to or below the permissible exposure limits; or

(iv) In those situations in which employers of less than 25 persons, or employers in whose facilities asbestos or asbestos

15190607

INDUSTRY PROPOSAL (continued)

containing products are being used, handled, fabricated or installed during less than an aggregate of 2 hours of each 8-hour shift, have made a reasonable determination, pursuant to paragraph (f) (1) of this section, that, for their operations, engineering controls are not feasible; but in such situations respirators may not be used by any employee for more than 30 minutes in any hour nor for more than an aggregate of 4 hours in any work day, no such employee may be exposed to airborne asbestos fibers in excess of the permissible limits while he is not wearing his respirator, and the employer shall be especially careful to comply in full with the requirements of paragraph (k) of this section; or

(v) In emergencies.

RATIONALE

It seems essential to the asbestos industry that the use of respiratory protection as a method of compliance with the regulation be expanded for the following reasons:

1. Dust emission points in an asbestos handling or manufacturing facility often are ill-defined (cf., a smoke stack as an emission source) and fugitive; and, if the emission source is broadly defined (the whole factory or shop), employees actually must work within the emission source itself.

2. Small and intermittent users of asbestos or asbestos containing materials frequently cannot justify, on grounds of economics, the installation and operation of relatively costly equipment for the control of asbestos fiber emissions.

15. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(g) RESPIRATORY PROTECTION. * * * * *

(2) SELECTION. * * * * *

TABLE I

Respiratory Protection Against Asbestos Fibers. Required respirator concentration of asbestos.

(In the left column of this table in the OSHA proposal, the various exposure levels defined for purposes of respirator selection are given in terms of "X" times" the applicable exposure limit prescribed in paragraph (c) of this section).

INDUSTRY PROPOSAL

The exposure levels defined in Table I should be stated in terms of fibers per cc, as determined by the membrane filter method.

RATIONALE

It is unclear whether the exposure level to be used in connection with the factor in Table I is the standard exposure in paragraph (c) or the ceiling exposure in paragraph (c). Publishing the table in terms of fibers per cc would avoid confusion and misunderstanding.

16. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(g) RESPIRATORY PROTECTION. * * * * *

(3) RESPIRATOR PROGRAM. * * * * *

(iii) Employees who wear respirators shall be allowed to leave work areas to wash their face and respirator facepiece to prevent skin irritation due to respirator use.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

Delete

RATIONALE

It is not the purpose of the Occupational Safety and Health Act to promote employee comfort or to interfere with normal, routine employer-employee relations. This kind of provision might encourage abuse by some employees; the entire matter is better left to reasonable management discretion and the collective bargaining process.

17. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(g) RESPIRATORY PROTECTION. * * * * *

(3) RESPIRATOR PROGRAM * * * * *

(iv) No employee shall be assigned to tasks requiring the use of a respirator if, based upon his most recent examination, an examining physician has determined that the employee would be unable to function normally while wearing a respirator, or that the safety or health of the employee or other employees would be impaired by his use of a respirator. To the maximum extent possible, such employee shall be rotated to another job, or given the opportunity to transfer to a different position, whose duties he is able to perform, with the same employer, in the same geographical area and with the same seniority, status and rate of pay he had just prior to such transfer.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(g) RESPIRATORY PROTECTION. * * * * *

(3) RESPIRATOR PROGRAM * * * * *

(iii) No employee shall be assigned to tasks requiring the use of a respirator if, based upon his most recent examination under paragraph (i) the examining physician has determined that the employee will be unable to function normally while wearing a respirator, or that the safety or health of the employee or other employees will be impaired by his use of a respirator. To the extent permitted by any applicable collective bargaining agreement, such an employee shall be rotated to another job, or

INDUSTRY PROPOSAL (continued)

given the opportunity to transfer to a different position, the duties of which he is able to perform, with the same employer, in the same geographical area and with the same seniority, status and rate of pay as he had immediately prior to the transfer, if such a different position is available.

RATIONALE

A qualified industrial physician is best able to ascertain whether or not an employee safely can function with a respirator. To leave that determination to any physician is to invite some employees to shop for doctors who will give them the opinion which they want. One of the principal purposes of the medical examination required by paragraph (i) is to identify those employees who no longer safely can work at their job assignments. Regulations issued under the Occupational Safety and Health Act should not intrude upon the collective bargaining process or be in conflict with the provisions of any applicable collective bargaining agreement, the National Labor Relations Act or other labor legislation. The removal of an employee from a job which poses a significant risk to his health and safety clearly is one of the objectives of OSHA, his transfer to another job without loss of seniority clearly is not. This latter objective must be sought under theegis of other pertinent laws or regulations, the collective bargaining contract or through appeal to management discretion.

RATIONALE

which the employee actually wears is supplied by the employer and is not removed from the place of employment, and the employee then showers after work, the purposes of the Act are satisfied.

The wording of the OSHA proposal would suggest that, after the event, an employee who had been casually or accidentally exposed to concentrations of airborne asbestos fibers over the prescribed limits, be given special clothing. It would seem more logical to issue special work clothing to all employees regularly assigned to work in regulated areas, since it is they who might reasonably be expected to be exposed to the higher concentrations of airborne fibers.

18. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(h) PERSONAL PROTECTIVE CLOTHING

(1) The employer shall provide, and require the use of, personal protective clothing, such as coveralls or similar whole body clothing, head coverings, gloves and foot coverings, for any employee exposed to airborne concentrations of asbestos fibers which exceed either of the limits prescribed in paragraph (c) of this section.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(h) PERSONAL WORK CLOTHING

(1) The employer shall provide, and require the use of, personal work clothing, including head coverings, for any employee regularly assigned to work in a regulated area.

RATIONALE

There is no medical evidence to indicate that asbestos fibers in contact with the skin constitute any hazard to health. The purpose of a change of clothing at work, then, is to prevent the transport of fibers out of the workplace, and into other areas where they may become airborne and respirable. Under these circumstances, the clothing should not be described as "protective".

In some operations (i.e. textiles), gloves are dangerous to wear. In other operations involving the manufacture or use of asbestos, employees work at elevated temperatures and would object strongly to the use of whole body coverings. As long as that work clothing

19. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(h) PERSONAL PROTECTIVE CLOTHING * * * * *

(2) Clean and dry protective clothing and equipment shall be provided to each affected employee at least daily.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(h) PERSONAL WORK CLOTHING * * * * *

(2) Clean and dry work clothing shall be provided to each affected employee at least weekly, except that where employee exposures are in excess of the ceiling concentration prescribed in paragraph (c), such clothing shall be provided at least daily.

RATIONALE

Since paragraph (h) (1) does not refer to "equipment", the reference to "equipment" in paragraph (h) (2) and in following paragraphs is unnecessary and confusing.

Work in a regulated area at fiber concentrations less than the ceiling will not noticeably contaminate work clothing. A weekly change of such clothing should satisfy the requirements of personal hygiene and minimize the cost of the clothing program. Under the industry proposal, work clothing will be provided daily where the ceiling exposure limit is exceeded.

20. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(h) PERSONAL PROTECTIVE CLOTHING * * * * *

(3) The employer shall clean, launder, maintain or dispose of protective clothing and equipment required by this section.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(h) PERSONAL WORK CLOTHING * * * * *

(3) The employer shall clean, launder, maintain or dispose of work clothing required by this section.

RATIONALE

See comments above re (h) (2).

21. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(h) PERSONAL PROTECTIVE CLOTHING. * * * * *

(4) The employer shall assure that all protective clothing and equipment is removed only in change rooms required by paragraph (i) (1) of this section.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(h) PERSONAL WORK CLOTHING. * * * * *

(4) The employer shall require that work clothing issued pursuant to paragraph (h) (1) be removed only in the regulated area or in change rooms required by paragraph (i) (1) of this section.

RATIONALE

See comments above re (h) (2).

This paragraph should not apply to work clothing worn by employees working in non-regulated areas.

Employees working in regulated areas may wish to remove outer garments because they are too warm; and they should be permitted to do that, as long as they do not remove the garment from the regulated area.

22. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(h) PERSONAL PROTECTIVE CLOTHING * * * * *

(5) The employer shall assure that no employee removes contaminated protective clothing and equipment from the change room, except for the purpose of cleaning, laundering, maintenance, or disposal.

INDUSTRY PROPOSAL

SECTION 1010.1001 ASBESTOS

(h) PERSONAL WORK CLOTHING * * * * *

(5) The employer shall require that no employee regularly assigned to work in a regulated area is to remove contaminated work clothing, which he is not wearing, from his regulated area or the change room, except for the purpose of cleaning, laundering, maintenance or disposal.

RATIONALE

See comments above re (h) (2).

Since it may not be possible, in every asbestos operation, to confine to regulated areas all employees regularly assigned there, and since it is impractical to require that such employees shower and change each time they leave their work areas, the regulation should indicate that they may leave their work areas wearing contaminated work clothing. The possibility that asbestos fibers on such clothing may become airborne in concentrations above permissible limits is remote.

23. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(h) PERSONAL PROTECTIVE CLOTHING * * * * *

(6) Contaminated protective clothing and equipment shall be placed in impermeable closed containers.

(7) The employer shall inform any person who launders or cleans protective clothing and equipment contaminated with asbestos of the potentially harmful effects of exposure to asbestos fibers.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(h) PERSONAL WORK CLOTHING * * * * *

(6) Contaminated work clothing issued pursuant to paragraph

(h) (1) when it is ready for cleaning, laundering, repair or disposal, shall be placed in dust-tight, closed containers or dust-tight, sealed bags, and such containers and bags shall bear labels in accordance with paragraph (1) (2) of this section.

RATIONALE

See comments above re (h) (2).

Until such time as it is to be cleaned, laundered, repaired or discarded, contaminated work clothing will be stored in the separate storage facility prescribed by paragraph (i) (1).

Strictly speaking, there are no "impermeable" containers. "Dust-tight" would be a more accurate description.

Employers generally are not qualified by training or experience to "inform . . . of the potentially harmful effects of exposure

RATIONALE

to asbestos fibers". They should not be burdened with this duty and should not be held accountable for performing a function which exceeds their capabilities. It would seem sufficient, for the purposes of the Act, to place a standard warning label on any container used for contaminated clothing.

24. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(i) HYGIENE FACILITIES AND PRACTICES

(1) CHANGE ROOMS. Where employees wear protective clothing and equipment, clean change rooms equipped with storage facilities for street clothes and separate storage facilities for protective clothing and equipment shall be provided.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(i) HYGIENE FACILITIES AND PRACTICES

(1) Where employees are required to wear work clothing provided by the employer in accordance with paragraph (h) of this section, clean change rooms equipped with storage facilities for street clothes and separate facilities for such work clothing shall be provided.

RATIONALE

See comments above re (h) (2)

Because of the costs involved, the requirement that special change rooms must be provided should be limited to facilities for those employees required to wear special clothing under paragraph (h) (1).

25. OSHA APPROVAL

SECTION 1910.1001 ASBESTOS

(i) HYGIENE FACILITIES AND PRACTICES * * * * *

(2) SHOWERS. Employees working in regulated areas shall be required to shower before leaving at the end of the work shift. The employer shall provide shower facilities in accordance with Section 1910.141 (d) (3) of this part.

(3) LAVATORIES. Employees working in regulated areas shall be required to wash hands, face and forearms prior to drinking, eating or smoking. The employer shall provide an adequate number of lavatories for this purpose which shall meet the requirements of Section 1910.141 (d) (1) and (2) of this part.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(i) HYGIENE FACILITIES AND PRACTICES * * * * *

(2) SHOWERS. Employees working in regulated areas shall be provided with shower facilities and requested to shower before leaving at the end of the work shift. The employer shall provide shower facilities in accordance with Section 1910.141 (d) (3) of this part.

(3) LAVATORIES. Employees working in regulated areas shall be requested to wash hands, face and forearms prior to drinking, eating or smoking. The employer shall provide an adequate number of lavatories for this purpose which shall meet the requirements of Section 1910.141 (d) (1) and (2) of this part.

RATIONALE

To place an obligation upon the employer to require that certain

RATIONALE (continued)

of his employees shower before leaving work and to require that they wash before drinking, eating or smoking raises some very difficult labor relations issues and would be virtually impossible to enforce. The ultimate employer's sanction, discharge, if applied, probably would be challenged, might lead to burdensome arbitration proceedings and seems excessive for the offenses of not washing or showering. Lesser sanctions also might be challenged and, at the least, would disrupt cooperative working relationships. In addition it would be patently absurd for a supervisor to be required to ascertain whether or not an employee had washed before he smoked or took a drink at a drinking fountain, or even to ascertain whether or not all employees working in a regulated area had showered before departing for home. We think it more feasible to provide shower and lavatory facilities, train employees in the health hazards of asbestos and ask that they shower and wash.

26. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(i) HYGIENE FACILITIES AND PRACTICES * * * * *

(4) ARRANGEMENT OF SHOWER FACILITIES. Clothes lockers and shower facilities shall be arranged so as to separate regulated areas and non-contaminated areas.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(i) HYGIENE FACILITIES AND PRACTICES * * * * *

(4) LOCATION OF CHANGE ROOMS AND SHOWER FACILITIES. The change room and shower area shall be so located that employees may leave work at the end of their work shifts without passing through a regulated area.

RATIONALE

If it is the intent of the OSHA proposal that employees shall be able to enter or leave a regulated area only by passing through a clothes locker and shower facility, the concept is not practical. Materials used in the regulated area cannot enter through the locker room, nor can the product of the regulated area leave there through the locker room. And employees may (and sometimes must) move where materials and products move.

If it is the intent of the OSHA proposal that a locker room and shower facility shall be adjacent to each regulated area, the objective may be a very costly one to achieve and would serve no useful purpose. It is not feasible to confine regulated area employees exclusively to those areas, and other employees (i.e.,

RATIONALE (continued)

maintenance employees) must be free to move from regulated to non-regulated areas. Under these circumstances, the passage of regulated area employees through non-regulated areas at the end of the work shift would seem to create little additional health hazard. In some existing plants, it would not be possible to construct shower and locker facilities adjacent to regulated areas, simply because the necessary space is not available. In other instances, the installation of such facilities, which may involve significant piping and plumbing expense, would be very costly indeed.

Change and shower rooms should, of course, be so located that an employee who has showered and changed at the end of his shift may leave for home without reentering the regulated area.

Since any area in or around a facility handling asbestos or products containing asbestos may be "contaminated" in a strict sense, the use of the term "non-regulated areas" is to be preferred to "uncontaminated areas".

27. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(i) HYGIENE FACILITIES AND PRACTICES * * * * *

(5) ARRANGEMENT OF LAVATORY FACILITIES. Lavatory and toilet facilities which are located in regulated areas shall be arranged so that no access is available from them to uncontaminated area.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(i) HYGIENE FACILITIES AND PRACTICES * * * * *

(5) ARRANGEMENT OF LAVATORY FACILITIES. Lavatory and toilet facilities which are located in regulated areas shall be arranged so that no access is available from them to non-regulated areas.

RATIONALE

See comment above re (i) (4).

28. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(i) HYGIENE FACILITIES AND PRACTICES

(6) PROHIBITION OF ACTIVITIES IN REGULATED AREAS The presence or consumption of food or beverages, the presence or use of smoking or nonfood chewing prohibit shall be prohibited in regulated areas.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(i) HYGIENE FACILITIES AND PRACTICES

(6) PROHIBITION OF ACTIVITIES IN REGULATED AREAS. The employer shall advise employees that the presence or consumption of food or beverages, the presence or use of smoking or non-food chewing products is not permitted in regulated areas.

RATIONALE

See comments above re (i) (2) and (3).

It would seem more reasonable and practical to train employees in the health hazards of asbestos and then advise them of the prohibited activities.

29. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(j) MEDICAL SURVEILLANCE.

(1) GENERAL. Every employer shall provide or make available at his cost medical examinations relative to exposure to asbestos, as required by this paragraph. If an employee refuses a medical examination provided in accordance with this paragraph, the employer shall inform the employee of the possible health consequences of such refusal, and shall obtain a signed statement from the employee stating that such employee has been informed of the consequences and refuses to be examined.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(j) MEDICAL SURVEILLANCE

(1) GENERAL. Every employer shall provide or make available at his cost medical examinations relative to exposure to asbestos, as required by this paragraph. If an employee refuses a medical examination provided in accordance with this paragraph, the employer shall inform the employee that the examination is part of a program to protect him against the health hazards of asbestos, and shall endeavor to obtain a signed statement from the employee stating that such employee has been informed of the purpose of the procedure and refuses to be examined. If the employee will not sign such a statement, it shall be noted on his personnel record that the examination was refused.

RATIONALE

Employers are not qualified by training or experience properly to "inform * * * * of the possible health consequences of" a refusal to take a physical examination and, therefore, should not be required to perform this function.

An employer can do no more than ask an employee to sign a statement of refusal to take a physical examination. If he will not sign, a statement to that effect should be noted on his record.

30. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(j) MEDICAL SURVEILLANCE. * * * * *

(2) PREPLACEMENT. The employer shall provide or make available to each of his employees, within 30 calendar days following his first employment in an area exposed to airborne concentrations of asbestos fibers, a comprehensive medical examination. Such examinations shall include, as a minimum, a chest roentgenogram (posterior-anterior 14 X 17 inches), a history to elicit symptoms of respiratory disease, pulmonary function tests to include forced vital capacity (FVC) and forced expiratory volume at 1 second (FEV_{1.0}) and for employees with 10 or more years of exposure to airborne concentrations of asbestos fibers or who are 45 years of age or older, a sputum cytology examination.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(j) MEDICAL SURVEILLANCE * * * * *

(2) PREPLACEMENT. The employer shall provide or make available to each of his employees, within 30 calendar days following his first employment in an area exposed to airborne concentrations of asbestos fibers above the limits prescribed in paragraph (c), a comprehensive medical examination. Such examination shall include, as a minimum a chest roentgenogram (posterior-anterior 14 X 17 inches), a history to elicit symptoms of respiratory disease, and pulmonary function tests to include forced vital capacity (FVC) and forced expiratory volume at 1 second (FEV_{1.0}).

RATIONALE

The words "an area exposed to airborne concentrations of asbestos fibers" describe every workplace in the United States. In most workplaces, asbestos containing materials will be present, if only as constituent parts of buildings or machinery; and, therefore, there will be at least a remote possibility that an asbestos fiber or two may be released. Even in workplaces where asbestos materials may not be present, atmospheric background levels of asbestos fibers will be encountered and, thus, there will be "airborne concentrations of asbestos fibers". Because of these words, the proposed regulation (the existing regulation contains similar wording) requires that virtually every employee in the United States be given a physical examination relative to asbestos exposure. If such an effect ever was intended for this provision, it would constitute a gross misapplication of limited medical resources and a serious failure properly to order industrial health priorities. Medical examinations to protect persons from the health hazards of asbestos must be administered only to individuals exposed to fiber concentrations above a stated level. For this purpose, the standard prescribed in paragraph (c) (2 fibers per cc) commends itself, first because it will be known (as a consequence of monitoring), second, because it is related to the basic purpose of the Occupational Safety and Health Act, and third, because it is at the lower level of reliability of the test method used to measure airborne fiber concentrations. In addition, a 2 fiber per cc limit will relieve many small and intermittent users of asbestos and asbestos materials of the necessity of implementing a medical surveillance program.

RATIONALE (continued)

There remains serious doubt about the value of sputum cytology as a diagnostic technique; and there are, in the United States, very few persons trained to make the test. It is premature to mandate the use of sputum cytology.

31. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(j) MEDICAL SURVEILLANCE * * * * *

(3) ANNUAL. Every employer shall provide or make available comprehensive medical examinations to each of his employees exposed to airborne concentrations of asbestos fibers at least annually. Such examination shall include, as a minimum, a chest roentgenogram (posterior-anterior 14 X 17 inches), a history to elicit symptoms of respiratory disease, pulmonary function tests to include forced vital capacity (FVC) and forced expiratory volume at 1 second (FEV_{1.0}) and, for employees with 10 or more years of exposure to airborne concentrations of asbestos fibers or who are 45 years of age or older, a sputum cytology examination.

(4) TERMINATION OF EMPLOYMENT. The employer shall provide or make available, within 30 calendar days before or after termination of employment of any employee exposed to airborne concentrations of asbestos fibers, a comprehensive medical examination. Such examination shall include, as a minimum, a chest roentgenogram (posterior-anterior 14 X 17 inches), a history to elicit symptoms of respiratory disease, pulmonary function tests to include forced vital capacity (FVC) and forced expiratory volume at 1 second (FEV_{1.0}) and, for employees with 10 or more years of exposure to airborne concentrations of asbestos fibers or who are 45 years of age or older, a sputum cytology examination.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

INDUSTRY PROPOSAL (continued)

(j) MEDICAL SURVEILLANCE * * * * *

(3) ANNUAL. Every employer shall provide or make available comprehensive medical examinations to each of his employees exposed to airborne concentrations of asbestos fibers above the limits prescribed in paragraph (c), at least annually. Such examination shall include, as a minimum, a chest roentgenogram (posterior-anterior 14 X 17 inches), a history to elicit symptoms of respiratory disease, and pulmonary function tests to include forced vital capacity (FVC) and forced expiratory volume at 1 second (FEV_{1.0}).

(4) TERMINATION OF EXPOSURE. The employer shall provide or make available, within 30 calendar days before or after the permanent termination of any employee's exposure to airborne concentrations of asbestos fibers above the limits prescribed in paragraph (c), a comprehensive medical examination. Such examination shall include, as a minimum, a chest roentgenogram (posterior-anterior 14 X 17 inches), a history to elicit symptoms of respiratory disease and pulmonary function tests to include forced vital capacity (FVC) and forced expiratory volume at 1 second (FEV_{1.0}).

RATIONALE

See comments above re (j) (2).

If medical surveillance may cease for the employee who is terminated, it also should cease for the employee who is transferred to a job involving no exposure to asbestos or exposure below prescribed limits.

32. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(j) MEDICAL SURVEILLANCE * * * * *

(6) PHYSICIAN'S WRITTEN OPINION (i) With respect to each examination required by this paragraph, the employer shall obtain a written opinion from the examining physician, containing the following:

- (A) The physician's opinion as to whether the examined employee has any medical conditions which would place the employee at increased risk of material impairment of his or her health from exposure to asbestos fibers, or which would, directly or indirectly, be aggravated by such exposure.
 - (B) Any recommended limitations upon the employee's exposure to asbestos fibers, or upon the use of protective clothing and equipment, such as respirators; and
 - (C) A statement that the employee has been informed by the physician of any medical conditions which require further examination or treatment.
- (ii) The written opinion shall not reveal specific findings or diagnoses unrelated to occupational exposure to asbestos fibers.
- (iii) A copy of the written opinion shall be provided to the affected employee.

15190635

INDUSTRY COMMENT

SECTION 1910.1001 ASBESTOS

(j) MEDICAL SURVEILLANCE * * * * *

(6) PHYSICIAN'S WRITTEN OPINION. * * * * * It has been suggested that physicians may be reluctant to give the required opinion for fear of possible future liability to the employee.

It also should be noted that it is contrary to the practice of many physicians to give to a patient a copy of his record or an extract from it. If the required opinion should be considered by the physician to be the same as or comparable to the patient's record, the doctor may not wish to have his opinion delivered to the employee.

33. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(j) MEDICAL SURVEILLANCE * * * * *

(7) WITHDRAWAL FROM EXPOSURE. No employee shall be exposed to asbestos fibers in such a way as would put the employee at increased risk of material impairment of his or her health from such exposure. This determination may be based on the physician's written opinion.

INDUSTRY PROPOSAL

Delete

RATIONALE

This provision obliges the employer to make a determination which he is not qualified to make.

Even if the opinion of the examining physician is made to control, the provision raises some of the same difficult labor-management issues discussed under paragraph (g) (iv) of the OSHA proposal.

34. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(k) EMPLOYEE INFORMATION AND TRAINING

(1) TRAINING PROGRAM * * * * *

(ii) The training program * * * * *

- (A) The specific nature of the operations which could result in exposure to asbestos fibers as well as any necessary protective steps.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(k) EMPLOYEE INFORMATION AND TRAINING

(1) TRAINING PROGRAM * * * * *

(ii) The training program * * * * *

- (A) The specific nature of the operation which could result in exposure to asbestos fibers above the limits prescribed in paragraph (c), as well as any necessary protective steps.

RATIONALE

Since everyone is exposed to asbestos fibers at some level, training should relate to the kind of event that might result in exposures above the prescribed standard.

35. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(m) HOUSEKEEPING * * * * *

(2) WASTE DISPOSAL. Asbestos waste, scrap, debris, bags, containers, equipment and asbestos contaminated clothing, consigned for disposal, which may produce in any reasonably foreseeable use, handling, storage, processing, disposal, or transportation airborne concentrations of asbestos fibers in excess of the exposure limits prescribed in paragraph (c) of this section shall be collected and disposed of in sealed impermeable bags, or other closed impermeable containers.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(m) HOUSEKEEPING * * * * *

(2) WASTE DISPOSAL. Asbestos waste, scrap, debris, bags, containers, equipment, and asbestos-contaminated clothing, consigned for disposal, which may produce in any reasonably foreseeable use, handling, storage, processing, disposal or transportation airborne concentrations of asbestos fibers in excess of the exposure limits prescribed in paragraph (c) of this section shall be collected and disposed of in sealed, dust-tight bags, or other closed, dust-tight containers.

RATIONALE

See comment above re (h) (6).

15190639

36. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(n) RECORDKEEPING

(1) EXPOSURE RECORDS. * * * * *

- (ii) Each record of an employee's exposure shall be maintained for at least 40 years, or for the duration of the employee's employment plus 20 years, whichever period is longer.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(n) RECORDKEEPING.

(1) EXPOSURE RECORDS. * * * * *

- (ii) Each record of an employee's exposure shall be maintained for at least 40 years, or for the duration of the employee's employment plus 20 years, whichever period is longer. However, employers of less than 25 persons at any single place of employment shall be required to maintain such records only for a period of 3 years.

RATIONALE

Historical records of employee exposure have value only for two purposes: to provide information to assist in the health care of the individual employee and to provide data for future epidemiological studies. For the latter purpose, a cohort of 25 is too small to support reliable statistical conclusions. In light of that fact, it is recommended that small employers be

RATIONALE (continued)

relieved of the burden of maintaining monitoring records beyond 3 years, a period of time which should provide adequate information for individual employee health care.

15190641

37. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(n) RECORDKEEPING * * * * *

(2) MEDICAL RECORDS * * * * *

- (ii) Each record shall be maintained for at least 40 years, or for the duration of the employee's employment plus 20 years, whichever period is longer.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(n) RECORDKEEPING * * * * *

(2) MEDICAL RECORDS * * * * *

- (ii) Each record shall be maintained for at least 40 years, or for the duration of the employee's employment plus 20 years, whichever period is longer. However, employers of less than 25 persons at any single place of employment shall be required to maintain such records only for a period of 5 years.

RATIONALE

Historical records of employee medical examinations have value only for two purposes: to provide information to assist in the health care of the individual employee and to provide data for future epidemiological studies. For the latter purpose, a cohort of 25 is too small to support reliable statistical conclusions. In light of that fact, it is recommended that small employers be relieved of the burden of maintaining medical records beyond

RATIONALE

5 years, a period of time which should provide adequate information for individual employee health care.

38. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(n) RECORDKEEPING * * * * *

(3) MECHANICAL VENTILATION MEASUREMENTS * * * * *

(ii) Each record shall be maintained for at least
3 years.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(n) RECORDKEEPING * * * * *

(3) MECHANICAL VENTILATION MEASUREMENTS * * * * *

(ii) The most recent record for each installation which
remains in service shall be maintained as a permanent
file.

RATIONALE

Changed to be consistent with recommendation made for (f) (6).
Because monitoring records generated under the provisions of
paragraph (e) are available for epidemiological studies and
individual employee health care programs, only the most recent
mechanical ventilation measurements have any utility. Employers
should be relieved of the burden of maintaining any additional
mechanical ventilation test records.

39. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(n) RECORDKEEPING * * * * *

(4) EMPLOYEE TRAINING * * * * *

(ii) Each record shall be maintained for at least
3 years.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(n) RECORDKEEPING * * * * *

(4) EMPLOYEE TRAINING * * * * *

(ii) Each record shall be maintained for a period
of one year.

RATIONALE

A record of the most recent training program should be sufficient
for the compliance officer.

40. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(n) RECORDKEEPING * * * * *

(5) ROSTERS. Each roster required by paragraph (d) of this section shall be maintained for at least 40 years or for the duration of the personnel's employment plus 20 years, whichever period is longer.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(n) RECORDKEEPING * * * * *

(5) ROSTERS. Delete

RATIONALE

Change to accord with recommendation concerning maintenance of a roster under paragraph (d).

41. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(n) RECORDKEEPING * * * * *

(6) AVAILABILITY

- (i) All records required to be maintained by this section shall be made available, upon request, to the Assistant Secretary and the Director for examination and copying.
- (ii) Employee exposure measurements records required by this paragraph shall be made available for examination and copying to employees, former employees, and their designated representatives.
- (iii) Employee medical records required by this paragraph shall be made available upon request for examination and copying to a physician designated by the employee or former employee.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(n) RECORDKEEPING * * * * *

(5) AVAILABILITY

- (i) All records required to be maintained by this section shall be made available, upon request, to the Assistant Secretary and the Director for examination and copying.
- (ii) Employee medical records required by this paragraph shall be made available upon request for examination and copying to a licensed physician designated by the employee or former employee.

RATIONALE

Paragraph renumbered to reflect deletion of OSHA proposed paragraph (5).

Exposure measurement records have no value to employees or former employees except in an action at law against the employer or others. If court proceedings are initiated, they are available upon subpoena.

15190648

42. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(n) RECORDKEEPING * * * * *

(7) TRANSFER OF RECORDS

- (i) In the event the employer ceases to do business, the successor shall receive and retain all records required to be maintained by this paragraph.
- (ii) In the event the employer ceases to do business and there is no successor to receive and retain his records for the prescribed period, these records shall be transmitted by mail to the Director, and each employee and former employee, shall be individually notified in writing of this transfer.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(n) RECORDKEEPING * * * * *

(6) TRANSFER OF RECORDS

- (i) In the event that an employer sells or otherwise transfers a business involving the use or handling of asbestos or products containing asbestos, his buyer or transferee shall receive and retain all records required to be maintained by this paragraph.
- (ii) In the event that an employer discontinues permanently all use or handling of asbestos or products containing asbestos, he may, after a delay of 2 years, transmit by mail to the Director all records required to be maintained by this paragraph.

INDUSTRY PROPOSAL (continued)

- (iii) In the event that an employer ceases to do business entirely, he may transmit forthwith by mail to the Director, all records required to be maintained by this paragraph.

RATIONALE

Paragraph numbered to reflect deletion of OSHA proposed paragraph (5).

Provision should be made for the preservation of records both when an employer liquidates his entire business and when he simply discontinues his asbestos business.

It would be burdensome and, in some cases, impossible to notify all former employees of the transfer of records. Moreover, the benefit is not worth the effort, since every employee will know that the record may be found either among the files of the employer or his successor or at the office of the Director.

43. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(o) OBSERVATION OF MONITORING * * * * *

(2) OBSERVATION PROCEDURES

- (ii) Without interfering with the measurement, observers shall be entitled to receive an explanation of the monitoring or measurement procedures, observe all steps related to the measurements and record the results obtained.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(o) OBSERVATION OF MONITORING * * * * *

(2) OBSERVATION PROCEDURES

- (ii) Without interfering with the measurement, observers shall be entitled to observe all steps related to monitoring and to record the results obtained.

RATIONALE

If an explanation of monitoring procedures is required, that explanation might better be accomplished as part of the employee information and training program offered under paragraph (k).

44. OSHA PROPOSAL

SECTION 1910.1001 ASBESTOS

(p) APPENDICES. The information contained in the appendices to this section is not intended, by itself, to create any additional obligations not otherwise imposed, or to detract from any existing obligation.

INDUSTRY PROPOSAL

SECTION 1910.1001 ASBESTOS

(p) APPENDICES. Delete this paragraph and all the appendices.

RATIONALE

It is easier to revise this material and keep it up to date if it is not part of the regulation subject to cumbersome rulemaking procedures.