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ASBESTOS COMPLIANCE PLAN

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May 18, 1979

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SECTION I INTRODUCTION

CertainTeed Corporation, Pipe and Plastics Group manufactures asbestos cement pipe in five plant locations in the United States. The pipe is used for water supply systems, sewage systems, and irrigation systems.

Asbestos is a primary component used to reenforce the cement pipe structure. During the wet manufacturing process and the subsequent machining or finishing operations, dust containing asbestos, silica, and cement are released to the environment.

Generally in all the work stations where dust is generated, engineering controls have been installed that reduce the employee exposures below the permissible levels. Exhaust/ventilation systems are used in conjunction with a baghouse to control the dust. In addition, other work practices such as good housekeeping and vacuum cleaners are used to minimize dust accumulation.

Although this document is written about asbestos, it must be pointed out that there is a potential silica exposure hazard to employees. By controlling the asbestos exposure below permissible levels, the silica hazard has also been controlled. For silica, OSHA published recommended guidelines in 1976 that closely follow the asbestos standard requirements.

Status of the OSHA Regulations

The current OSHA standard regulating manufacturing facilities became effective on July 7, 1972. On July 1, 1976, the

permissible exposure level was reduced from five fibers per cubic centimeter (5 f/cc) to two fibers per cubic centimeter (2 f/cc) eight hour time weighted exposure level. Other items discussed in the standard were methods of compliance, personal protective equipment, methods of measurement, monitoring exposures, caution signs and labels, housekeeping, recordkeeping, and medical examinations.

On October 9, 1975, the Occupational Safety and Health Administration proposed a revised standard that would reduce the exposure level to one-half fiber per cubic centimeter. In addition, other requirements of the standard were revised plus several new concepts were proposed.

Consequently, this compliance plan will incorporate all the regulations of the 1972 standard plus some of the feasible requirements of the 1975 proposed standard.

SECTION II HEALTH AND SAFETY POLICY

The Pipe and Plastics Group will provide and maintain a safe and healthy workplace for all employees.

Recognized job hazards will be reduced or eliminated by engineering controls or work practice controls.

Group management will support the health and safety program to assure successful implementation to protect the employees, the public, and the property.

The Pipe and Plastics Group's plants will comply with all laws and regulations.

A medical surveillance program will be provided to all asbestos plant employees to monitor the effects of the work-place environment on their health.

SECTION III PURPOSE OF THE COMPLIANCE PLAN

1. Define and interpret the OSHA asbestos standard as the requirements apply to the A/C manufacturing plants.

2. Define the minimum requirements that the A/C plants must perform to comply with the law, protect the employee, and minimize risks of violations, fines, penalties, and future legal action.

3. Define an audit procedure to evaluate each plant's performance with the established criteria.

SECTION IV OBJECTIVES

1. The primary objective of this program is to protect the employees.

2. Assure that the employees are adequately informed and trained for working in an environment where asbestos is present.

3. Comply with all applicable laws and regulations as they relate to the employees and the workplace.

SECTION V OSHA ASBESTOS STANDARD AND CERTAINTEED'S PERFORMANCE REQUIREMENTS

The purpose of this section is to interpret the asbestos standard as the requirements apply and should be implemented by CertainTeed.

A complete copy of the asbestos standard is contained in Appendix I including the 1972 preamble and amendments. Appendix I should be studied thoroughly to understand the following tabulation of paragraphs and comments.

If a paragraph is omitted in the tabulation, this will mean that the information was not applicable or CertainTeed is in compliance. Other paragraphs that require CertainTeed to perform will have comments.

OSHA ASBESTOS STANDARD

Paragraph Number	Title	CertainTeed Requirements
(a)	Definitions	
(b)	Permissible Exposure	
(b)(1)	Effective July 7, 1972	5 fibers per cubic centimeter - 8 hour TWA
(b)(2)	Effective July 1, 1976	2 fibers per cubic centimeter - 8 hour TWA
(b)(3)	Ceiling Concentration	10 fibers per cubic centimeter
(c)	Methods of Compliance	
(c)(1)	Engineering Methods	Ventilation/exhaust systems with dust collectors are used throughout CertainTeed plants
(c)(2)	Work Practices	
(c)(2)(i)	Wet Methods	Are used as required for clean up
(c)(2)(ii)	Particular Products and Operations	Fiber dump operation is either ventilated or automatic bag opener is used
(c)(2)(iii)	Spraying, Demolition or Removal	Not Applicable
(d)	Personal Protective Equipment	
(d)(1)	Respirators	Respirators must be used if particular job or operation offers the opportunity to exceed the permissible exposure limits paragraphs (b)(2) and (b)(3)

Paragraph Number	Title	CertainTeed Requirements
(d)(1) (continued)	Respirators	Employees have the option to wear respirators if their job exposure is below the permissible limits
(d)(2)	Type to be Used	Refer to the Pipe and Plastics Group Respiratory Protection Plan for details/requirements of the respirator program that complies with OSHA section 1910.134
(d)(3)	Special Clothing	CertainTeed will provide and employees must use special clothing when a job or operation will expose the employees to levels above the ceiling limit paragraph (b)(3)
(d)(4)	Change Rooms	
(d)(4)(i)		Employees whose exposure levels regularly exceed paragraph (b) shall be provided with change room facilities
(d)(4)(ii)	Clothes Lockers	Two clothes lockers will be provided for employees whose jobs regularly exceed permissible ceiling levels
(d)(4)(iii)	Laundering	(A) Contaminated clothing shall be handled to prevent release of asbestos fibers that would exceed paragraph (b) (B) Laundry shall be informed that clothing may contain asbestos fiber (C) Laundry shall handle clothing to prevent release of fiber to employees

Paragraph Number	Title	CertainTeed Requirements
(d)(4)(iii) (continued)	Laundering	(D) Containinated clothing shall be transported in bags and labeled according to paragraph (g) of standard
(e)	Method of Measurement Reference Document Copy at each plant "USPHS/NIOSH Membrane Filter Method For Evaluating Airborne Asbestos Fibers" NIOSH No. 79-127	NIOSH Method PCAM 239 will be used to determine airborn concentration. The safety manager at each plant will be trained to perform fiber counts. Each plant will be equipped to count fibers according to the NIOSH method.
(f)	Monitoring	
(f)(1)	Initial Determination	Completed
(f)(2) and (f)(3)	Personal Monitoring Environmental Monitoring	All work stations will be sampled at least every six months even though stations are below the permissible levels. This also includes warehouse, office, shipping dock, etc.
(f)(4)	Employee Observation of Monitoring	Employees shall have access to any monitoring records. See additional comments for paragraph "(i) Recordkeeping" pertaining to employee access.
(g)	Caution signs and labels	
(g)(1)	Caution signs	Signs are required if exposure levels exceed paragraph (b)

Paragraph Number	Title	CertainTeed Requirements
(g)(2)	Caution Labels	All material leaving the plant that has been shown to release asbestos fiber in sufficient quantity to exceed permissible levels of paragraph (b) to workers handling material shall be placed in bags and labeled
(h)	Housekeeping	
(h)(1)	Cleaning	Plant shall be kept clean to prevent build-up of asbestos fibers
(h)(2)	Waste Disposal	All waste shall be sealed and labeled if when handled asbestos fibers are released in excess of limits in paragraph (b)
(i)	Recordkeeping	
(i)(1)	Exposure Records	All exposure and monitoring records shall be kept permanently - none shall be destroyed Note: Original standard required three years and this was subsequently changed to twenty years
(i)(2)	Employee Access	Each employee shall have access to those exposure records that indicate his exposure to asbestos. Each employee's history of exposure shall be maintained on the "Employee Asbestos Monitoring Data" Form - See Appendix II.

Paragraph Number	Title	CertainTeed Requirements
(i)(3)	Employee Notification	Each time an employee is monitored, the results shall be given to the employee and he shall sign off a copy of the results for inclusion in his personal file. This will be done no matter what the exposure level. Refer to Appendix III "Monitoring Questionnaire". If the employee's exposure exceeds the permissible levels of paragraph (b), the employee shall be notified in writing of the over-exposure within five days after the results of the monitoring are known. See Appendix IV and use the "Notice of Over-Exposure" Form to give to the employee and place a copy in his file.
(j)	Medical Examination	
(j)(1)	General	CertainTeed Corporation will provide a medical examination program to the employees of the A/C plants exposed to asbestos. The examination will meet or exceed all the requirements of the OSHA standard as specified.
(j)(2)	Preplacement	No employee shall be hired unless he successfully passes a preplacement physical. The examination is a condition of employment.

Paragraph Number	Title	CertainTeed Requirements
(j)(3)	Annual Examination	All employees will be offered an annual medical examination. If an employee refuses an asbestos medical examination, he shall sign the "Employee Refusal Form for Medical Examination - Asbestos"- refer to Appendix V. If the examining physician discovers any illness, the doctor is obligated to advise the employee and make available to the employee's personal physician copies of the medical findings. Appendix VI Corporate Procedure Number AD008 shall provide the guidelines for the employee disclosure. In each case, the employee will sign a copy of the form #01-11-0046 dated 1/79 "Physical Findings Conveyed to Employee" - Exhibit "A" of Appendix VI. Form shall become part of the employee's medical records.
(j)(4)	Termination of Employment	Terminating employees shall be offered a medical examination
(j)(5)	Recent Examination	No exams are required if employee was examined within a year.
(j)(6)	Medical Records	
(j)(6)(i)	Maintenance	All medical records are permanent and should not be destroyed.

Paragraph Number	Title	CertainTeed Requirements
(j)(6)(ii)	Access	(A) The employee can request to have copies of his medical records sent to his personal physician (B) Examining physicians shall advise CertainTeed of medical information that relates to the employee's occupational illness.

SECTION VI EMPLOYEE INFORMATION AND TRAINING

General Requirements

1. Employees engaged in the manufacture, storage, handling and use of Asbestos, Silica and Asbestos Cement Products shall be provided training describing the hazards of Asbestos and Silica and the precautions for their safe use. The elements of the program shall include, but not be limited to the following:

   a. The nature of the health hazard from chronic exposure to asbestos hazard.

   b. The specific nature of operations that result in exposure to asbestos in excess of the permissible limit and necessary protective steps.

   c. The purpose, use and limitations of respiratory protective devices.

   d. Proper work practices and house-keeping to reduce the dust exposure hazard.

   e. The purpose and description of the monitoring program.

   f. The purpose and description of the medical surveillance program.

   g. Emergency procedures related to equipment breakdown and asbestos releases.

   h. Specific information to aid the employee in recognition of conditions that may result in the release of asbestos.

   i. A review of the OSHA asbestos standard at the employee's first training and indoctrination program, and annually thereafter.

2. Permanent, temporary, turnaround and CertainTeed employees temporarily assigned to the plant working in asbestos operations shall be given the training program above.

3. Contractors scheduled to work at the A/C plants and working in asbestos operations shall be given the training program by the Safety Department as defined above provided such services have been previously contracted.

4. Vendors, salesmen, public utility service employees and others not falling into one of the above groups will not be provided the training program.

Employee Information And Training	CertainTeed Requirements
Hazards of Asbestos	All employees will be required to view the film "Working with Asbestos". Each employee will be given a copy of the AIA/NA booklet "What You Should Know About Asbestos and Health" or a comparable publication. Asbestos Warning Posters shall be placed strategically throughout the plant.
Smoking	The employees shall be informed of the hazards of smoking and the increased risk associated with asbestos.
Respirators	The employees shall be trained in the use and selections of respirators. They will follow the guidelines established in the P&PG Respiratory Protection Program.
Safety Equipment	All employees will be instructed in the use of safety and personal protection equipment, e.g. safety glasses, hard hats, safety shoes, ear plugs and ear muffs, protective clothing, etc.
OSHA Asbestos Standard	The OSHA Asbestos Standard will be used as a training aid for instructing the employees about the hazards of asbestos and the requirements of the standard. Each paragraph should be discussed. Copies of the standard shall be given or made available to the employees.

Employee Information And Training	CertainTeed Requirements
Training Materials	A list of training materials and examples shall be kept on file for exhibition in case any OSHA inspection takes place.
Training Records	The following records shall be maintained for each training session conducted in the plant. 1. Subjects covered 2. Materials used 3. Attendees
Annual Retraining	An annual retraining program shall be conducted for all employees to cover the above subject matter.
Employee Sign Off Form For Safety and Asbestos	Each employee will be required to sign off the Asbestos/Safety Sign Off Form - Appendix VII to acknowledge that he has been informed according to the various federal regulations.

SECTION VII ASBESTOS CEMENT PLANT GUIDELINES FOR EMPLOYEES, CONTRACTORS AND VISITORS

The following chart presents the guidelines to be used for various types of workers or contractors who may work at the asbestos cement pipe plants. The chart describes how the specific sections of the OSHA Standard would apply to these workers and what CertainTeed is required to perform.

All contractors shall be notified in writing of:

1. the material and processes used at an A/C plant.
2. the contractors duty to comply with the various health and safety regulations of the A/C plant.
3. the contractors duty to provide medical surveillance and monitoring if their employees are exposed to an asbestos and silica hazard.

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ASBESTOS CEMENT PLANT GUIDELINES BY PERSONNEL CLASSIFICATION

REQUIREMENT DESCRIPTION	Permanent Employees	Temporary Employees	Temporary Assigned Permanent Employees	Contractors	Vendors	Salesmen	Utility/Service Employees	Visitors
1. MEDICAL SURVEILLANCE								
a. Medical exam and test required upon employment and regularly thereafter based upon results of monitoring	X	X	X					
b. Not required				X	X	X	X	X
2. MONITORING								
a. Personnel monitoring on a scheduled basis	X	X	X					
b. Personnel not to be monitored by the A/C plant				X	X	X	X	X
3. PERSONNEL PROTECTION								
a. Full protective equipment and/or clothing required applicable for work location	X	X	X	X	X	X	X	X

ASBESTOS CEMENT PLANT GUIDELINES BY PERSONNEL CLASSIFICATION

REQUIREMENT DESCRIPTION	Permanent Employees	Temporary Employees	Temporary Assigned Permanent Employees	Contractors	Vendors	Salesmen	Utility/Service Employees	Visitors
4. TRAINING								
a. Complete employee orientation at date of hire (including A/C training)	X	X	X					
b. A/C employee orientation will not be provided				X	X	X	X	X
5. RECORDKEEPING								
a. Asbestos/Silica records will be filed within Company	X	X	X					
b. No records or reports required or maintained				X	X	X	X	X

SECTION VIII COMPLIANCE CHECKLIST

The purpose of this section is to provide the plant manager or safety manager with a checklist of compliance requirements to determine if the major elements of asbestos/silica OSHA Standard are being fulfilled.

1. Plant Walkaround Inspection
   a. Housekeeping
   b. Work practices
   c. Workers protective equipment
      - respirators
      - hearing protection
      - safety glasses
      - safety shoes
      - protective clothing
   d. Signs
      - warning/asbestos/silica
      - no smoking
   e. Lockers/change rooms
   f. Waste disposal
   g. Ventilation/exhaust system operation
2. Respirator Program
   a. Storage
   b. Cleaning
   c. Inspection
   d. Fit/wearing by employees
   e. Training
3. Monitoring Program
   a. Asbestos
   b. Silica
   c. Records
   d. Number/type of work stations
   e. Employee access

4. Medical Program
   a. Records
      - medical
      - x-ray
      - storage location

5. Training Programs
   a. Materials/booklets/films
   b. Records of training
   c. Attendees
   d. Employee sign-off sheets

APPENDIXES

Appendix I	OSHA Asbestos Standard - Section 1910.1001 and Amendments
Appendix II	"Employee Asbestos Monitoring Data" Form
Appendix III	"Monitoring Questionnaire" Form
Appendix IV	"Notice of Over-Exposure" Form
Appendix V	"Employee Refusal Form For Medical Examination"
Appendix VI	"Corporate Procedure Number AD008" - "Disclosure to Employees of Illnesses Discovered in the Course of Company Sponsored Physical Examination"
Appendix VII	Form 1 - "Record of Training Asbestos and Silica Hazard" Form 2 - "New Employee Review And Departmental Indoctrination"

Title 29—LABOR

Chapter XVII—Occupational Safety and Health Administration, Department of Labor

PART 1910—OCCUPATIONAL SAFETY AND HEALTH STANDARDS

Standard for Exposure to Asbestos Dust

On December 7, 1971, an emergency temporary standard concerning exposure to asbestos fibers was published in the FEDERAL REGISTER (36 F.R. 23207). In accordance with section 6(c)(3) of the Williams-Steiger Occupaional Safety and Health Act of 1970, a notice of proposed rulemaking regarding a permanent standard for exposure to asbestos fibers was published in the FEDERAL REGISTER on January 12, 1972 (37 F.R. 466). The notice invited interested persons to submit both orally and in writing, data, views, and arguments concerning the proposal.

On or about January 24, 1972, the Advisory Committee on Asbestos Dust was established and requested to make written recommendations with regard to the proposed standard on asbestos. On or about February 1, 1972, the Department of Health, Education, and Welfare transmitted to the Secretary of Labor a criteria document containing Recommendations for an Occupational Exposure Standard for Asbestos by the National Institute for Occupational Safety and Health (NIOSH). Public notice was given of the receipt of the recommendations and their availability for inspection and copying. On or about February 25, 1972, the Advisory Committee on Asbestos Dust submitted its written recommendations to the Assistant Secretary of Labor for Occupational Safety and Health.

Pursuant to the notice of rule making, a hearing was held on March 14 through 17, 1972, for the purpose of receiving oral data, views, and arguments concerning the proposed standard. On or about March 31, 1972, the presiding hearing examiner certified to the Assistant Secretary of Labor for Occupational Safety and Health the record of the proceeding. The record includes prehearing written comments, a transcript of the oral presentations made at the hearing, and numerous exhibits received during the course of the hearing or within the period allowed after the close of the hearing.

The proposed standard dealt with (1) permissible concentrations of asbestos fibers; (2) methods of compliance; (3) warning signs; (4) monitoring; (5) medical examinations; and (6) recordkeeping. Each of these major proposals elicited comments, arguments, objections, and counterproposals. They all have been examined and considered.

1. *Acceptable concentrations of asbestos dust.* The proposed standard would limit occupational exposure to 8-hour time-weighted average (TWA) airborne concentrations of asbestos dust not exceeding five fibers longer than five micrometers per milliliter. Concentrations above five fibers but not to exceed 10 fibers (ceiling concentration) would be permitted up to 15 minutes in an hour, but for not more than 5 hours in any one 8-hour day.

NIOSH in effect has recommended that the five-fiber TWA and 10-fiber peak concentrations be permitted only for 2 years; thereafter, TWA concentrations should be not more than 2 fibers per cubic centimeter ($cm.^3$) of air, and peak concentrations should not exceed 10 fibers/$cm.^3$, with no time restriction. Numerous objections and counterproposals have been made, with regard to both the limits of asbestos fiber concentrations and the time periods to comply with them. Some, for example, have recommended return to a 12-fiber standard of an earlier day; i.e., a level adopted under the Walsh-Healey Public Contracts Act in 1969. Others have recommended a two-fiber standard to become effective in 6 months, then a one-fiber standard for 2 years, and finally a zero-fiber standard after 3 years. These recommendations give a fair indication of the wide spread of the counterproposals.

No one has disputed that exposure to asbestos of high enough intensity and long enough duration is causally related to asbestosis and cancers. The dispute is as to the determination of a specific level below which exposure is safe. Various studies attempting to establish quantitative relations between specific levels of exposure to asbestos fibers and the appearance of adverse biological manifestations, such as asbestosis, lung cancers, and mesothelioma, have given rise to controversy as to the validity of the measuring techniques used and the reliability of the relations attempted to be established. Because of the long lapse of time between onset of exposure and biological manifestations, we have now evidence of the consequences of exposure, but we do not have, in general, accurate measures of the levels of exposure occurring 20 or 30 years ago, which have given rise to these consequences. There are also controversies concerning the relative toxicity of the various kinds of asbestos, and varying hazards in different workplaces.

It is fair to say that the controversy has centered in the area between a two-fiber TWA concentration and five-fiber TWA concentration, with variations on the time needed for compliance. Many employers support a five-fiber TWA. Most medical opinion is divided between a two-fiber standard and a five-fiber standard.

In view of the undisputed grave consequences from exposure to asbestos fibers, it is essential that the exposure be regulated now, on the basis of the best evidence available now, even though it may not be as good as scientifically desirable. An asbestos standard can be reevaluated in the light of the results of ongoing studies, and future studies, but cannot wait for them. Lives of employees are at stake.

It is concluded that there should be one minimum standard of exposure to asbestos applicable to all workplaces exposed to any kind, or mixture of kinds, of asbestos. Reasons of practical administration preclude a variety of standards for different kinds of asbestos and of workplaces. Also, while the evidence tends to show that crocidolite, for instance, is more harmful than chrysotile, the evidence is not sufficient to establish separate standards for varieties of asbestos.

Because there must be one standard governing exposure to all varieties of asbestos, and in workplaces apparently more hazardous than others; because some present employees with regular exposure to asbestos have probably already accumulated great doses of asbestos fibers, due to higher levels of exposure in the past; because it appears that levels of exposure which may be safe with regard to asbestosis are not safe with regard to mesothelioma; because the statute requires the protection of every employee, even of one who may have regular exposure to asbestos during a working life which may reach, or even exceed, 40 years; and because of several other considerations which have been urged and are reflected in the record of the proceeding, the conflict in the medical evidence is resolved in favor of the health of employees. As of July 1, 1976, TWA concentrations of asbestos fibers longer than 5 micrometers will not be allowed to exceed two fibers/cc., with a ceiling value of 10 fibers/cc. The current TWA concentrations of five fibers, and

NOTE: The preamble to the "permanent" asbestos standard, issued June 7, 1972, is reproduced for information. It was not included in the republication of the standard on June 27, 1974, but directly relates, providing background considerations for OSHA's exposure to asbestos dust regulation.

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ceiling concentrations of 10 fibers/cc. [illegible] be permitted until July 1, 1976, during what will be a transitional period [illegible]med necessary to allow employers to make the needed changes for coming into compliance with the more stringent standard.

The record shows that the many work operations subject to the single asbestos standard (textile, manufacturing, industrial, and marine installation, etc.) will meet varying degrees of difficulty in complying with the standard. In some plants, extensive redesign and relocation of equipment may be needed. It appears, however, the delay in the effective date of the two-fiber standard will provide all employers a reasonable time to comply. At the same time, so long as the ceiling limit is complied with, no harm is reasonably expected to result from exposures during the transitional period.

2. *Methods of compliance.* It has been pointed out by many persons, that protection against asbestos fibers is best obtained by controlling the generation of fibers first, and secondly, by controlling the dispersion of released fibers into the ambient air of the workplaces. Therefore, the standard requires feasible technological controls and appropriate work practices as the primary means of compliance. Rotation of employees as a way of meeting the TWA concentration requirement is allowed only in stated exceptional circumstances, because, as a general rule, it would be difficult to implement. Personal protective equipment, [illegible] as respirators, cannot be relied [illegible] because, among other reasons, they [illegible]y be so uncomfortable as to be burdensome, except for short periods of time. Therefore, it is expected that respirators and shift rotation will be used during the period necessary to install engineering controls and to train employees in sound work practices, but, after technological compliance has been achieved, their use must be limited to special work situations and emergencies. Where both are practicable, shift rotation is required.

3. *Labeling.* The proposed standard stopped short of requiring labeling asbestos and asbestos-containing products. The proposed standard would have required only warning signs at locations where asbestos hazards are present. However, labeling, rather than warning signs, has proved to be a point of controversy. Both NIOSH and the Advisory Committee on Asbestos Dust recommended labels for asbestos products and containers, and these recommendations became very controversial in the course of the proceeding. Many counterproproposals have been made as to the language of the warning as well as to the products to be subject to the labeling requirements. Employers, in general, strongly contend that (1) finished products which effectively entrap asbestos fibers, so that these would not be released in the normal use of the products, should not be required to be labeled; and (2) words such as "danger" and "cancer" are unwarrantedly alarming.

Both contentions have merit, and the standard has been changed accordingly.

4. *Monitoring.* The proposed standard would have required personal monitoring and environmental monitoring. Many issues have been raised concerning the availability and reliability of measuring instruments, frequency of monitoring, and conditions in which monitoring should be required. The adopted standard takes the objections into consideration. It requires periodic monitoring at intervals no longer than 6 months, thus allowing considerable time and discretion, and prescribes the use of the membrane filter method, which is an acceptable method for determination of asbestos fibers.

It has also been recommended that employees or their representatives should have an opportunity to observe the monitoring. The recommendation has been accepted.

5. *Medical examinations.* The proposed standard would only require an appropriate medical examination on a periodic basis. The generality of the proposal has attracted many objections and also many helpful comments. The recommendations of NIOSH and of the Advisory Committee on Asbestos Dust were much more specific with respect to both frequency and type of medical examinations to be required. The comments vary as to the class of employees to be examined and as to the frequency of the examinations.

The adopted standard requires medical examinations both at the beginning and the termination of employments exposed to concentrations of asbestos fibers, and also requires annual medical examinations of every employee exposed to airborne concentrations of asbestos. It has been pointed out that in certain industries, such as construction, an employee may work for several employers during the same year. Accordingly, the standard does not require either preemployment, or termination, or periodic examinaton of any employee who has been examined in accordance with the standard within the past year.

One question which has been raised goes to whether the employer or the employee should be allowed to choose the examining physician. The standard gives the option to the employer. Since some employers already have a medical examination program in operation, and, also, have medical departments with some expertise in the diagnosis of asbestos-related diseases, it seems more reasonable to permit them to utilize the present programs and expertise, than to permit an employee to choose a private general practitioner.

6. *Records.* The standard, as proposed and as adopted, requires maintenance of records of monitoring and of medical examinations. Most of the controversy in this area has revolved around the question whether an employer should be allowed to have access to the results of the required medical examinations. The apprehension of those who have argued against employer access is based on the expectation that some employers will use the medical examinations as a means of screening employment applicants, and worse, as grounds for discharging current employees, who show signs of being affected by exposure to asbestos. Since the purpose of the medical examinations is to monitor the health of employees exposed to the hazards of abestos, employees cannot in reason be granted the privilege of refusing to disclose to their employers results of occupational exposure. It does not make sense to require employers to provide medical examinations if they cannot know and use the results of the examinations. For these reasons the standard provides that employers may have a restricted access to some medical information.

On the other hand, there is no intention to allow employers to abuse medical information obtained pursuant to the Act, to the detriment of employees. Therefore, the administration of the medical records requirement will be closely watched, and, in cases of abuse, appropriate action will be considered.

The issues discussed above are believed to be the major ones. Numerous other issues have been raised in the rulemaking proceedings. Some have been referred to incidentally. Many recommendations, for instance, about work practices, are so obviously meritorious that their adoption needs no exposition here. Other recommendations and many objections have not been adopted for a variety of reasons which should be manifest. Several, for instance, have recommended the use of respirators only pursuant to a variance, or in cases of emergency and occasional short-term exposures. The recommendation with respect to variances undoubtedly has many merits, but is considered administratively impractical.

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