COLORADO DEPARTMENT OF REGULATORY AGENCIES OFFICE OF POLICY AND RESEARCH

## ASBESTOS CONTROL PROGRAM

## 2000 SUNSET REVIEW

October 15, 2000

Members of the Colorado General Assembly c/o the Office of Legislative Legal Services
State Capitol Building
Denver, Colorado 80203
Dear Members of the General Assembly:
The Colorado Department of Regulatory Agencies has completed the evaluation of the Asbestos Control Program. I am pleased to submit this written report, which will be the basis for my office's oral testimony before the 2001 Legislative Committees of Reference. The report is submitted pursuant to §24-34-104(8)(a), of the Colorado Revised Statutes (C.R.S.), which states in part:
"The department of regulatory agencies shall conduct an analysis of the performance of each division, board or agency or each function scheduled for termination under this section...

The department of regulatory agencies shall submit a report and supporting materials to the office of legislative legal services no later than October 15 of the year preceding the date established for termination . . ."

The report discusses the question of whether there is a need for the regulation provided under Part 5 of article 7 of title 25, C.R.S. The report also discusses the effectiveness of the Air Quality Control Commission and staff in carrying out the intention of the statutes and makes recommendations for statutory and administrative changes in the event this regulatory program is continued by the General Assembly.

Sincerely,
M. Michael Cooke

Executive Director

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## Background

## Sunset Process

The Asbestos Control Program instituted under the authority of the Air Quality Control Commission (Commission) and enforced by the Air Pollution Control Division (Division) in the Colorado Department of Public Health and Environment (CDPHE) shall be terminated on July 1, 2001 unless continued by the General Assembly. During the year prior to this date, it is the responsibility of the Department of Regulatory Agencies (DORA) to conduct an analysis and evaluation of the Asbestos Control Program in the state of Colorado pursuant to §24-34-104, C.R.S.

The purpose of this review is to determine whether the Asbestos Control Program should be continued for the protection of the public and to evaluate the performance of the Air Pollution Control Division of the Colorado Department of Public Health and Environment (CDPHE). During this review, CDPHE must demonstrate that there is still a need for the program and that the regulation is the least restrictive regulation consistent with the public interest. The Department's findings and recommendations are submitted to the Legislative Committee of Reference of the General Assembly. (Statutory Criteria used in sunset reviews may be found in Appendix A of this report).

The sunset review process included an analysis of the statute, interviews with state and federal authorities, staff, industry representatives, and local government officials. DORA makes every effort to elicit information and comments from all interested parties.

## Overview of Asbestos

Asbestos is the name given to a group of minerals that occur naturally as masses of strong, flexible fibers that can be separated into thin threads and woven. These fibers are not affected by heat or chemicals and do not conduct electricity. For these reasons, asbestos has been widely used in many industries. Four types of asbestos have been commonly used:

- Chrysotile, or white asbestos (curly, flexible white fibers) which accounts for about 90 percent of the asbestos used in industry;
- Amosite (straight, brittle fibers that are light gray to pale brown in color);
- Crocidolite, or blue asbestos (straight blue fibers); and
- Anthophyllite (brittle white fibers).

Asbestos fiber masses tend to break easily into a dust composed of tiny particles that can float in the air and stick to clothes. The fibers may be easily inhaled or swallowed and can cause serious health problems.

Asbestos has been mined and used commercially in North America since the late 1800s, but its use increased greatly during World War II. Since then, it has been used in many industries. For example, the building and construction industry uses it for strengthening cement and plastics as well as for insulation, fireproofing, and sound absorption. The shipbuilding industry has used asbestos to insulate boilers, steam pipes, hot water pipes, and nuclear reactors in ships. The automotive industry uses asbestos in vehicle brake shoes and clutch pads.

In the late 1970s, the U.S. Consumer Product Safety Commission banned the use of asbestos in wallboard patching compounds and gas fireplaces because these products released excessive amounts of asbestos fibers into the environment. In addition, manufacturers of electric hair dryers voluntarily withdrew asbestos. These and other regulatory actions, coupled with widespread public concern about the hazards of asbestos, have resulted in a significant annual decline in U.S. use of asbestos. Domestic use of asbestos amounted to about 560,000 metric tons in 1979, but it had dropped to about 55,000 metric tons by 1989. According to recent (1998) U.S. Environmental Protection Agency information, the importation of asbestos containing materials has increased.

Exposure to asbestos may increase the risk of several serious diseases:

- Asbestosis - a chronic lung ailment that can produce shortness of breath and permanent lung damage and increase the risk of dangerous lung infections;
- Lung cancer;
- Mesothelioma - a relatively rare cancer of the thin membranes that line the chest and abdomen; and
- Other cancers, such as those of the larynx and of the gastrointestinal tract.

Since the early 1940s, millions of American workers have been exposed to asbestos dust, including many of the 4.5 million men and women who worked in shipyards during the peak shipbuilding years of World War II. Health hazards from asbestos dust have been recognized in workers exposed in shipbuilding trades, asbestos mining and milling, manufacturing of asbestos textiles and other asbestos products, insulation work in the construction and building trades, brake repair, and a variety of other trades. Demolition workers, drywall removers, and firefighters also may be exposed to asbestos dust. As a result of government regulations and improved work practices, today's workers are likely to face smaller risks than those exposed in the past.

## History of Asbestos Abatement Regulation in Colorado

The original Asbestos Control Act (Colorado SB 166) was enacted in 1985. Legislative intent was to reduce exposure of the public to asbestos. Asbestos is a known cancer-causing agent that was often used as heating insulation and in noise abatement products; it is considered "friable" if it can be crumbled, pulverized, or reduced to powder by hand pressure. The original law did not contain a certification program for practitioners. The legislation directed the Division and Commission to produce a report on asbestos-related issues including performance standards and practices for asbestos abatement and a minimum allowable asbestos level. The report which did not contain a recommendation for a certification program was submitted to the General Assembly on January 15, 1986.

In 1987, HB 1239 was passed to bring the law into compliance with the 1986 federal Asbestos Hazard Emergency Response Act (AHERA) (P.L. 99-519). The AHERA required all persons engaged in asbestos abatement work in schools as inspectors, management planners, project designers, work-site supervisors, and asbestos abatement workers to be certified.

The State requirements for persons engaged in asbestos abatement work included a certification program for abatement contractors and supervisors and a requirement that contractors use workers trained and certified in proper abatement procedures. HB 87-1239 established dual certification programs, one for schools and one for non-school work.

In 1988, SB 191 was passed limiting Division jurisdiction to enter and regulate work areas where general public access is limited. However, the restriction did not apply to certification requirements. SB 191 also established a maximum allowable asbestos level of fibers in the air in areas of public access.

The changes in 1990 were a result of recommendations made during the 1989 Sunset Review. The amended law required that the Division develop or purchase examinations to be administered to applicants for certification under the program. In addition, the bill established procedures to be followed and requirements for applicants who failed such examination and sought reexamination. The sunset legislation also provided grounds for disciplinary action against persons certified under the program for violation of its provisions.

Approval to enforce AHERA was conferred by the U.S. Environmental Protection Agency in 1994 by granting a waiver to the Colorado Department of Public Health and the Environment. This waiver regarding school asbestos inspections allows the CDPHE to directly enforce the notice of noncompliance instead of submitting these notices to the U.S Environmental Protection Agency for enforcement.

Changes in 1995 were a result of recommendations made in the 1994 Sunset Review and recommendations from the House State Affairs Committee. The amended law increased the de minimis levels for required asbestos abatement from not less than 50 to not less than 260 linear feet on pipes and from 32 to 160 square feet on other materials. In addition, the bill amended the section regarding disciplinary action in other states by replacing the term "substantially similar" with "that would be subject to discipline under Colorado law. Changing the language allowed a shift in the burden of proof to the licensee. The eligibility period for reinstating an expired certificate was reduced from two years to one year and the period of extending recertification after revocation of a license was extended from six months to one year. Lastly, the amended bill required the Division to adopt increased training requirements for asbestos abatement workers to conform to federal regulations.

## Summary of Statute and Rules

This section of the report provides an overview of the highlights of the Colorado statute and regulations concerning asbestos abatement.

Part 5 of article 7 of title 25 outlines Colorado's statutory requirements regarding asbestos abatement. Pursuant to part 5, the Air Quality Control Commission is directed to promulgate rules and regulations regarding asbestos abatement. In addition, part 5 outlines the requirements for certification of asbestos abatement projects and for certification of personnel who perform asbestos abatement.

Part 5 is based on federal standards such as the Asbestos Hazard Emergency Response Act of 1986 (AHERA) which covers asbestos abatement requirements in schools and the National Emission Standards for Hazardous Air Pollutants (NESHAP). NESHAP encompasses procedures that must be followed when dealing with asbestos to prevent emissions to the outside air. Rules and regulations promulgated by the Commission have been adopted pursuant to the requirements of AHERA and NESHAP.

None of the statutory or regulatory requirements regarding certification or abatement apply to an individual who performs abatement on a single-family dwelling, which is the individual's primary residence.

The Department of Public Health and Environment's Air Pollution Control Division is responsible for administering and enforcing the provisions of the Act. In doing so, the Division provides administrative and technical assistance to the Commission, investigates complaints, administers examinations, and enforces compliance with the Act through inspections of asbestos projects. The Division is also empowered to enforce compliance with the Act through cease and desist orders, through hearings before an administrative law judge, and through injunctive proceedings.

In addition, the Division is responsible for administering and enforcing the portion of the federal government's National Emission Standards for Hazardous Air Pollutant (NESHAP) Act that relates to asbestos.

The statute requires any person who conducts asbestos abatement work to obtain a general abatement contractor certificate from the Division. The contractor must provide a training program for employed asbestos abatement workers.

The statute defines the scope of abatement work as wrecking or removing parts of the ceiling, floor, wall, or beams that contain friable asbestos-containing material. Asbestos abatement work is also defined as procedures that are intended to prevent the emission of asbestos, including enclosure, encapsulation, and removal.

The Division is granted the authority to certify those persons who must be certified according to the federal regulations (P.L. 99519). There are five categories of certification including trained supervisors, abatement project designers, inspectors, management planners, and abatement workers. In accordance with the federal "Asbestos School Hazard Abatement Reauthorization Act of 1990", the Division certifies all persons engaged in the inspection, the preparation of management plans, the design of abatement actions, or the conduct of abatement actions in schools or public or commercial buildings.

The Division may deny certificates or revoke, suspend, or refuse to renew certificates. It may take disciplinary action if there is a violation of the statute or rules. The Division may also revoke or suspend the certificates of a contractor for failure to implement an employee-training program for asbestos abatement workers. For violations of the Act, the Division may issue a letter of admonition or a cease and desist order. The Division may also assess fines of up to $\$ 25,000$ per day of violation. In addition to, or in lieu of disciplinary action, the Division may require corrective education in the area of asbestos abatement focusing on weak or problematic areas of a certified person's practice.

General abatement certificates are valid for three years. All other individual certificates issued (i.e. supervisor, project designer, etc.) are valid for one, three, or five years. An individual may reinstate an expired certificate within one year of expiration by paying a fee and passing an examination. However, after one year individuals must reapply to the Division. Renewal applications are due at least 30 days prior to the expiration of the certificate. To be eligible for renewal, all applicants must complete a refresher course prior to the submission of their renewal applications. If an individual allows the certificate to lapse for more than one year, the individual is ineligible for renewal and must reapply to the Division for certification.

## Regulation No. 8 Part B - Rules Implementing the Control of Asbestos

Regulation No. 8 - Part B - Asbestos: Control of Hazardous Air Pollutants effective November 30, 1996 and promulgated by the Colorado Air Quality Control Commission is administered by the Air Pollution Control Division. Regulation No. 8 regulates the practice of asbestos abatement to minimize the public's exposure to asbestos. Regulation No. 8 also designates training, examination, and education requirements for personnel engaged in asbestos control activities such as asbestos removal workers, abatement supervisors, certified asbestos inspectors, management planners, removal project designers, and air monitoring specialists for both non-school and school abatement work.

Regulation No. 8 includes project requirements for asbestos abatement in both school and non-school environments that addresses notification and disclosure, permitting, abatement work practices, record keeping, inspection and reinspection, construction of the decontamination unit, renovation and demolition projects, measurement of asbestos levels, and waste material handling.

# Federal Regulation 

There are several federal agencies involved in asbestos control. Numerous federal acts cover work practices, emergency responses, emission standards, industry standards, construction standards, respiratory protection standards, other worker protection standards, and the transportation of asbestos.

## Asbestos Hazard Emergency Response Act (AHERA)

The passage of the Asbestos Hazard Emergency Response Act (AHERA) marked the first major legislation to address asbestos. AHERA, which focuses on the nation's schools, directs the U.S. Environmental Protection Agency (EPA) to adopt regulations requiring local education agencies to inspect schools for asbestos-containing materials. Schools are required to take appropriate response actions if such materials are found and submit management, operations, and maintenance plans to the designated state agency detailing each school's programs for managing asbestos. AHERA also contains provisions requiring states to adopt mandatory training and accreditation programs for people performing certain types of asbestos related work in public schools. AHERA requires training and certification for five asbestos disciplines: worker, contractor/supervisor, inspector, management planner, and project designer.

AHERA also requires that either the EPA or a state with an EPAapproved program accredit training course providers. For each discipline, AHERA outlines a functional role and set of job responsibilities, and stipulated minimum training, examination, and continuing education requirements. A provision for a model accreditation plan (MAP) for the training and accreditation programs is included in the legislation. Under the provisions of the law, state asbestos certification programs must be at least as stringent as the model accreditation program. Individuals may obtain accreditation by completing either an EPA-approved training course, or a training course approved by a state with a program that is at least as stringent as the federal program. Individual states, however, may elect to impose more stringent requirements as a condition of accreditation.

## Asbestos School Hazard Abatement Reauthorization Act (ASHARA)

The Asbestos School Hazard Abatement Reauthorization Act (ASHARA), enacted in 1990, extends the accreditation requirements of AHERA to include training and accreditation of people performing certain types of asbestos-related work in public and commercial buildings. The implementing regulations for ASHARA took effect April 4, 1994. States were given 180 days following the start of their next legislative sessions to amend their programs to comply. Twenty-six states, including Colorado have revised their programs to meet ASHARA standards.

## Clean Air Act of 1971 - National Emission Standards for Hazardous Air Pollutants (NESHAP)

The Clear Air Act establishes a list of hazardous air pollutants that includes asbestos and prescribes procedures to follow to prevent asbestos emission to the outside, or ambient air. The National Emission Standards for Hazardous Air Pollutants (NESHAP) cover demolition and renovation projects; require that EPA be notified before the start of a project; and include procedures for the removal, handling, and disposal of asbestos as well as the operation of waste sites accepting the material. The Air Pollution Control Division has been delegated authority for enforcement of the federal NESHAP's program, and the NESHAP's regulations are contained within the Colorado Air Quality Control Commission's Regulation No. 8. According to the EPA, 46 states have implemented programs meeting the EPA requirements and have received either partial or full enforcement authority for NESHAP.

## Occupational Safety and Health Administration (OSHA), U.S. Department of Labor

All employers or contractors who employ asbestos abatement workers to perform any asbestos-related work in the private sector must comply with OSHA regulations. The Colorado Asbestos Control Program is not designed to overlap, replace, or duplicate these regulations.

OSHA regulations contain major provisions that cover the following worker health and safety issues:

- Monitoring of asbestos concentrations in the air;
- Permissible exposure limits (PEL) of fibers in the air;
- Short duration exposure limits of fibers in the air over 30 minutes;
- Methods to ensure any exposure remains within the PEL;
- Limiting access to and regulation of employee actions in contaminated areas, including posting warning signs;
- Permissible work practices and housekeeping;
- Use of respirators and protective clothing;
- Hygiene facilities and practices;
- Employee training;
- Medical surveillance for employees exposed to asbestos; and
- Record keeping practices.


## National Institute for Occupational Safety and Health (NIOSH)

This federal agency is concerned with asbestos exposure in the workplace. NIOSH conducts asbestos-related research, evaluates work sites for possible health hazards, and makes safety recommendations. In addition, NIOSH distributes publications on the health effects of asbestos exposure and can suggest additional sources of information.

## U.S. Environmental Protection Agency (EPA)

EPA regulates the general public's exposure to asbestos in buildings, drinking water, and the environment. The EPA's Toxic Substances Control Act (TSCA) Assistance Office answers questions about toxic substances including asbestos and provides information about accredited laboratories for asbestos testing.

## Consumer Product Safety Commission (CPSC)

The CPSC is responsible for the regulation of asbestos in consumer products. The CPSC maintains a toll-free information line on the potential hazards of commercial products. In addition, the CPSC provides information about laboratories for asbestos testing, guidelines for repairing and removing asbestos, and general information about asbestos in the home.

# Asbestos Regulation in Other States 

States regulate asbestos by developing programs that meet or exceed the federal requirements and standards designed to protect workers and the public from exposure to asbestos. Legislation to manage asbestos in schools that requires the training and certification of asbestos abatement professional has been enacted in 49 states. Some states limit their programs to the federal requirements while others expand their programs to address particular state problems.

The National Directory of AHERA Credited Courses addresses training and accreditation of asbestos control professionals under the Asbestos Hazard Emergency Response Act of 1986 (AHERA) as amended by the Asbestos School Hazard Abatement Reauthorization Act of 1990 (ASHARA). In response to ASHARA and the revised model accreditation plan (MAP), 19 states have revised their training, certification, and accreditation requirements for all five categories of training providers. An additional six states have some type of training, certification, and accreditation program. Over one-half (30) of the 49 states with EPA approved AHERA accreditation programs have full accreditation programs for all five training programs. The remaining 19 states have accredited programs for at least the contractor/supervisor and abatement worker categories.

Table 1 on the following page illustrates the EPA approved certification courses nationwide for 49 states having either full or partial training, certification, and accreditation requirements in ASHARA and AHERA for persons involved in asbestos abatement projects.

Table 1
List of EPA-Approved State Accreditation Programs

|  | AHERA Approval | ASHARA Approval |
| :---: | :---: | :---: |
| Alabama | AW, C/S, I, MP, PD |  |
| Alaska | AW, C/S |  |
| Arkansas | AW,C/S |  |
| Colorado | AW, C/S, I, MP, PD | AW, C/S, I, MP, PD |
| Connecticut | AW, C/S, I, MP, PD | AW, C/S, I, MP, PD |
| Delaware | AW, C/S | AW, C/S, I, MP, PD |
| Florida | AW, C/S | AW, C/S, I, MP, PD |
| Idaho | AW, C/S, I, MP, |  |
| Illinois | AW, C/S, I, MP, PD | AW, C/S, I, MP, PD |
| Indiana | AW, C/S, I, MP, PD | AW, C/S, I, MP, PD |
| lowa | AW, C/S, I, MP, PD |  |
| Kansas | AW, C/S |  |
| Louisiana | AW, C/S, I, MP, PD | AW, C/S, I, MP, PD |
| Maine | AW, C/S, I, MP, PD | AW, C/S, I, MP, PD |
| Maryland | AW, C/S, I, MP, PD |  |
| Massachusetts | AW, C/S, I, MP, PD | AW, C/S, I, MP, PD |
| Michigan | AW, C/S, I, MP, PD | AW, C/S,MP,PD |
| Minnesota | AW, C/S | I, MP, PD |
| Mississippi | AW, C/S, I, MP, PD | AW, C/S, I, MP, PD |
| Missouri | AW, C/S, I, MP, PD |  |
| Montana | AW, C/S, I, MP, PD | AW, C/S, I, MP, PD |
| Nebraska | AW, C/S, I, MP, PD |  |
| Nevada | AW, C/S, I, MP, PD |  |
| New Hampshire | AW, C/S, I, MP, PD | AW,C/S,MP |
| New Jersey | AW, C/S | AW,C/S |
| New York | AW, C/S, I, MP, PD |  |
| North Carolina | AW, C/S, I, MP, PD | AW, C/S, I, MP, PD |
| North Dakota | AW, C/S, I, MP, PD | AW, C/S, I, MP, PD |
| Ohio | AW, C/S, I, MP, PD |  |
| Oregon | AW, C/S | AW, C/S |
| Pennsylvania | AW, C/S, I, MP, PD | AW, C/S, I, MP, PD |
| Rhode Island | AW, C/S, I, MP, PD | AW, C/S, I, MP, PD |
| South Dakota | AW, C/S, I, MP, PD | AW, C/S, I, MP, PD |
| Texas | AW, C/S, I, MP, PD |  |
| Utah | AW, C/S, I, MP, PD | AW, C/S, I, MP, PD |
| Vermont | AW, C/S, I, MP, PD | AW, C/S, I, MP, PD |
| Virginia | AW, C/S, I, MP, PD | AW, C/S, I, MP, PD |
| Washington | AW, C/S | AW, C/S |
| West Virginia | AW, C/S, I, MP, PD |  |
| Wisconsin | AW, C/S, I, MP, PD | AW, C/S, I, MP, PD |
|  |  |  |

Key: AW-Abatement Worker; C/S-Contractor/Supervisor; I-Inspectors;
MP-Management Planner; PD- Project Designer

Program Description and Administration

The purpose of the Asbestos Control Program is to ensure the health, safety, and welfare of the citizens of Colorado by regulating the practice of asbestos abatement in locations in which the general public has access.

The Air Pollution Control Division (Division) of the Colorado Department of Public Health and Environment is designated as the agency that provides regulatory oversight of the asbestos abatement program in Colorado. The Air Quality Control Commission (Commission) promulgates rules to regulate emission standards for asbestos.

The Asbestos Control Program in Colorado is cash funded. The following 9.1 FTE designated positions are within the Air Pollution Control Division:

### 1.0 Unit Supervisor

1.0 Certification and Training Coordinator
5.0 Inspectors
1.0 Clerical
. 25 Program Manager
. 85 Statistical Distribution (Health Department distribution of Division support costs)

## Certification

Section 505 of Title 25, Article 7 provides that upon application for a certificate to perform asbestos abatement from the Air Pollution Control Division, payment of a fee determined by the Commission, and fulfillment of minimum qualifications, a certificate to perform asbestos abatement is issued. This statute also requires that any person who inspects schools, public or commercial buildings for the presence of asbestos, prepares management plans, designs abatement actions or conducts abatement actions shall obtain certification. Project design includes the preparation of plans, specifications, project procedures, containment design/placement, descriptions of engineering controls, and preparation of shop drawings for an asbestos abatement project.

The fee is currently $\$ 122.50$ for building inspectors, $\$ 175.00$ for management planners, $\$ 122.50$ for asbestos abatement workers, $\$ 175.00$ for project designers, $\$ 175.00$ for supervisors, and $\$ 525.00$ for asbestos abatement certificates. For a fee of $\$ 175.00$ one may combine either the supervisor/project designer or the building inspector/management planner certificates. Individuals have the option of renewing their certificate for time periods of one, three, or five years.

Table 2 below illustrates the number of asbestos certificates issued to asbestos abatement workers, supervisors, project designers, inspectors, management planners, and contractors. Even though the statute (§25-7-507.5 (2)(b), C.R.S.) allows for a one, three, or five year option for certificate renewal, most persons elect to renew their certificate for one year. Therefore, the statistics below accurately reflect the number of persons renewing their certificates.

Table 2
Asbestos Certificates Issued 1995-August 2000

|  | $\mathbf{1 9 9 5}$ | $\mathbf{1 9 9 6}$ | $\mathbf{1 9 9 7}$ | $\mathbf{1 9 9 8}$ | $\mathbf{1 9 9 9}$ | Through <br> $\mathbf{8 / 2 0 0 0}$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Worker | 664 | 603 | 640 | 659 | 724 | 651 |
| Supervisor | 441 | 406 | 359 | 323 | 359 | 267 |
| Supervisor/Project Designer | 63 | 63 | 66 | 73 | 62 | 47 |
| Project Designer | 51 | 46 | 58 | 63 | 62 | 37 |
| Inspector | 233 | 259 | 192 | 179 | 208 | 145 |
| Inspector/Management Planner | 192 | 166 | 162 | 152 | 138 | 89 |
| GAC (Contractor) | 31 | 42 | 27 | 30 | 35 | 22 |
|  |  |  |  |  |  |  |
| TOTALS | $\mathbf{1 6 7 5}$ | $\mathbf{1 5 8 5}$ | $\mathbf{1 5 0 4}$ | $\mathbf{1 4 7 9}$ | $\mathbf{1 5 8 8}$ | $\mathbf{1 2 5 8}$ |

Any person performing asbestos abatement, conducting a demolition operation, using asbestos for industry or construction, or handling or disposing of asbestos-containing waste material must comply with the regulations regarding permits and notices. Approval notices are issued for non-friable projects above the de minimis levels and for friable projects in non-public access areas. Regulations require notifications for both of the aforementioned conditions but do not require the issuance of a permit. The Division charges a fee to cover the cost of the application review and issuance of approval notice.

Abatement contractors voluntarily submit courtesy notices to the Division. Since these projects register below the de minimis level, contractors are not required to notify the Division.

Table 3 below lists the number of asbestos abatement permits issued in Colorado from 1994 through August 2000.

Table 3
Permits to Perform Asbestos Abatement 1994-August 2000

| Issuing Year | $\mathbf{1 9 9 4}$ | $\mathbf{1 9 9 5}$ | $\mathbf{1 9 9 6}$ | $\mathbf{1 9 9 7}$ | $\mathbf{1 9 9 8}$ | $\mathbf{1 9 9 9}$ | Through <br> $\mathbf{8 / 2 0 0 0}$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 30 Day Permits - \$275 | 689 | 574 | 541 | 617 | 596 | 658 | 539 |
| 90 Day Permits $\mathbf{~ \$ 5 5 0}$ | 56 | 53 | 50 | 45 | 39 | 57 | 48 |
| 1 Year Permits - \$825 | 52 | 36 | 24 | 40 | 34 | 36 | 18 |
| Approval Notices - \$55 | 944 | 828 | 715 | 805 | 938 | 961 | 569 |
| Courtesy Notices <br> No fee required- | 327 | 249 | 195 | 82 | 100 | 74 | 57 |
| Transfer of Ownership of <br> Abatement Permits - \$40 | 24 | 22 | 14 | 10 | 18 | 35 | 30 |
| Demolition Notices -\$55 | 197 | 349 | 382 | 289 | 521 | 730 | 524 |

## Examinations

The Division currently administers five examinations which include worker, supervisor, project designer, building inspector, and management planner. The examinations were originally developed by the Environmental Information Council and Experior Assessments (formerly known as National Assessment Institute).

There are currently five test centers located in Denver, Aurora, Colorado Springs, Fort Collins, and Grand Junction. The Grand Junction test center gives the test once a month, while the other four test centers operate daily from 8:00 a.m. to 3:00 p.m. All centers operate on a walk-in basis. Persons passing the state examination receive identification indicating that they are certified in a specific discipline.

DORA requested information concerning the rate of passage for the examinations administered in the certification program. The Division was unable to provide yearly data on the number of persons passing the various examinations. It was, however, able to compile the total number of tests administered from 19961999 and the failure rate for June 2000.

Tables 4 and 5 below illustrate the examination information submitted to DORA by the Division.

Table 4

| Examination Results for <br> June 2000 |  |
| :--- | :---: |
| Discipline | Failure Rate |
| Worker Examination Given in English | $21.43 \%$ |
| Worker Examination Given in Spanish | $37.9 \%$ |
| Supervisor | $6.6 \%$ |
| Inspector | $9.52 \%$ |
| Management Planner | $0.0 \%$ |
| Project Designer | $0.0 \%$ |
| Regulation 8 Examination | $15.28 \%$ |

Table 5

| Number of Tests Administered <br> 1996-2000 |  |
| :--- | :---: |
| Year | Number of Tests Administered |
| 1996 | 2310 |
| 1997 | 2345 |
| 1998 | 2392 |
| 1999 | 2677 |
| Through July 2000 | 1920 |

## Complaints

One of the responsibilities of the Air Pollution Control Division is the handling of complaints against certified asbestos personnel. The Division routinely screens complaints to make sure that the Division has authority to respond and that the complaint would constitute a violation of the law or the regulations.
According to the Division, complaints generally address work practice violations rather than noncompliance or improper certification of workers. Safety complaints are rare, but they are sometimes received. Since OSHA regulations focus more on safety than the state regulations, these complaints are usually referred to OSHA.

The 1994 Sunset Review recommended that the Division develop and implement a record keeping system for complaints received. The report noted that the lack of such a system could make it difficult to evaluate the effectiveness of the regulatory program. Although the Division now includes complaint data in their database management system, the method that it uses to record complaints does not easily provide the number, nature, and disposition of such complaints. Consequently, this review was also unable to review this information.

The flow chart on the following page illustrates the complaint procedure process.

Complaint Process

## Inspections

To successfully implement the Asbestos Control Program, the Division employs inspectors to enforce compliance with the provisions of the Act and the rules and regulations. The inspection staff of the Division provides surveillance throughout the state through inspection visits. Section 25-7-503 (1)(b)(III), C.R.S., authorizes the Commission to promulgate rules and regulations for procedures for the inspection and monitoring of sites where demolition, renovation, or asbestos abatement occurs. Regulation No. 8, Part B, Section VI authorizes the Division to investigate any actual, suspected, or potential source of air pollution or to ascertain compliance or noncompliance with any requirement of the Act. The Division may enter any asbestos abatement site, copy any record, inspect any monitoring equipment or method, or sample any emissions required by Part 5 of the Act. Inspections are performed during any time or day of the week, not necessarily Monday through Friday 8:00 a.m. to 5 p.m.

The U.S. Environmental Protection Agency requires the Air Pollution Control Division to inspect 100\% of the major asbestos abatement contractors and $50 \%$ of the minor contractors. The Division implemented a risk-based inspection program, "results oriented," that prioritizes sites for inspection. The criteria for determining which site is inspected is based on the following informal criteria. Projects combining two or more of the items below would be given a higher priority.

- Responding to complaints;
- Contractors with a poor enforcement record in Colorado;
- Contractors with a poor enforcement record in another state;
- Contractors with a poor reputation but no prior enforcement record;
- Distance of abatement project from Denver/Metro area (farther away from Denver/Metro area, more likely to be inspected);
- Projects for which the Division was informed were significantly underbid;
- New or out-of-state contractors working in Colorado for the first time;
- Projects using techniques approved under the Division's Variance Request Provision in Regulation 8;
- Large projects (greater than 3,000 ft.);
- Contractors not inspected in last 12 months;
- Contractors doing a large quantity of work in Colorado;
- School projects;
- Major contractors; or
- Minor contractors.

The Division has a contractual arrangement with Denver, El Paso, Jefferson, Larimer, Pueblo, Weld Counties, and the TriCounty Health Department to perform limited types of inspections. Where there is not a deputized county program or the inspections are not included in the contractual agreement, the state inspectors perform the inspection. The remuneration from the Division to these counties changed significantly in 2000. Instead of reimbursing the county inspectors for fifty percent of their time spent on asbestos abatement inspection, the Division currently reimburses $100 \%$ but has reduced the number of inspections expected. Most counties now only respond to emergency situations. The Division utilizes the county inspectors more efficiently by having them perform the emergency inspections.

From January 1995 through May 2000, there have been 8,269 state and county inspections of asbestos projects as illustrated in Table 6 on the following page.

Table 6

| State and County Inspections 1995-1999 |  |  |
| :---: | :---: | :---: |
| CALENDAR YEAR 1995 |  |  |
| State | County | Inspection Type |
| 317 | 868 | $1^{\text {st }}$ inspections |
| 55 | 248 | $2^{\text {nd }}$ inspections |
| 20 | 100 | $3^{\text {rd }}$ inspections |
| 9 | 47 | $4^{\text {th }}$ inspections |
| 401 (Total) | 1,263 (Total) |  |
| CALENDAR YEAR 1996 |  |  |
| State | County | Inspection Type |
| 301 | 881 | $1^{\text {st }}$ inspections |
| 41 | 232 | $2^{\text {nd }}$ inspections |
| 11 | 100 | $3{ }^{\text {rd }}$ inspections |
| 6 | 62 | $4^{\text {th }}$ inspections |
| 359 (Total) | 1,275 (Total) |  |
| CALENDAR YEAR 1997 |  |  |
| State | County | Inspection Type |
| 367 | 697 | $1^{\text {st }}$ inspections |
| 50 | 173 | $2^{\text {nd }}$ inspections |
| 11 | 65 | $3{ }^{\text {rd }}$ inspections |
| 5 | 31 | $4^{\text {th }}$ inspections |
| 433 (Total) | 966 (Total) |  |
| CALENDAR YEAR 1998 |  |  |
| State | County | Inspection Type |
| 291 | 753 | $1^{\text {st }}$ inspections |
| 40 | 203 | $2^{\text {nd }}$ inspections |
| 9 | 79 | $3^{\text {rd }}$ inspections |
| 0 | 43 | $4^{\text {th }}$ inspections |
| 340 (Total) | 1,078 (Total) |  |
| CALENDAR YEAR 1999 |  |  |
| State | County | Inspection Type |
| 488 | 757 | $1^{\text {st }}$ inspections |
| 79 | 169 | $2^{\text {nd }}$ inspections |
| 26 | 59 | $3^{\text {rd }}$ inspections |
| 7 | 31 | $4^{\text {th }}$ inspections |
| 600 (Total) | 1,016 (Total) |  |
| CALENDAR YEAR THROUGH 5/2000 |  |  |
| State | County | Inspection Type |
| 141 | 288 | $1^{\text {st }}$ inspections |
| 23 | 44 | $2^{\text {nd }}$ inspections |
| 10 | 15 | $3^{\text {rd }}$ inspections |
| 8 | 9 | $4^{\text {th }}$ inspections |
| 182 (Total) | 356 (Total) |  |
| Total - State | Total - County | Total-All |
| 2,315 | 5,954 | 8,269 |

During an inspection, the inspectors ensure that engineering controls (i.e. negative air pressure, filtering, and containment) are implemented, determine whether there is a certified supervisor on site, all workers are trained and certified, and whether a project designer is required. They review copies of training certificates, check for valid photo identifications, and determine whether the permit is valid and posted. The ventilation (air filtration) systems are part of a thorough inspection, as is the overall cleanliness of the equipment. The waste storage area is inspected to determine whether there are visible emissions anywhere on the job site, whether proper labeling is visible on the bags, and whether waste is transported to a proper disposal site. Inspectors target final clearances of a building at the conclusion of the asbestos abatement project to ensure that it is safe for human occupancy. Post-abatement requirements are reviewed by inspectors to determine whether dust and debris have been cleaned and removed from the work area, the air monitoring specialist is properly trained and has performed the final clearance procedures, and whether the TEM air sampling falls within an acceptable range. TEM, transmission electron microscopy, is an analytical technique used for the definitive identification of asbestos.

There are several outcomes of a compliance inspection of an asbestos abatement project. Often after an inspection, a Letter of Inquiry (LOI) requesting additional information is sent to the certificant. Quite often the certificant's response to the LOI satisfies the Division and the case is closed. The Division's action is based upon the response of the contractor, and whether or not the response is sufficient to: (1) give the Division the ability to close the case because no real violation is apparent; (2) indicate that, while a violation may have occurred, it is not serious enough to warrant more formal enforcement action, necessitating a Letter of Admonition as detailed in the statute; or (3) provide the Division with information that warrants formal enforcement action.

## Enforcement

A goal of the Asbestos Control Program is to enforce compliance with the provisions of Part 5 of the Act and Regulation 8. The Division may enter, inspect, and monitor any property, premises, or place where demolition, renovation, or the performance of asbestos abatement is taking place, for the purpose of investigating any actual, suspected, or potential source of air pollution or noncompliance with the law.

The Air Pollution Control Division has a variety of disciplinary actions available that are created by statute to assure that the Asbestos Control Program provides for the health, welfare, and safety of the citizens of Colorado. The Division may issue a letter of admonition, suspend, revoke, refuse to renew certification, require corrective education, and issue administrative fines.

Section 25-7-511, C.R.S. authorizes the Division to issue a Notice of Violation and a Cease and Desist Order. The Division recounts that violations are related to the following problems:

- Problems with the construction of the containment or the decontamination unit;
- Improper negative pressure setup which could lead to escape of asbestos fibers into occupied space;
- Inadequate wetting, the single best method of minimizing the amount of fibers that become airborne during removal;
- Problems with the disposal containers (leaking);
- Poor air cleaning, leading to excess levels of asbestos fibers in the air;
- Poor or delayed spill response activities;
- Improper clearance procedures, involving either the visual inspection or the final clearance air monitoring;
- Waste handling and disposal infractions; and
- Uncertified technicians.

Table 7 on page 25 illustrates the number and types of enforcement actions imposed by the Division from 1994 through August 2000. Warning letters generally address a minor violation while "Section 111 Letters" are letters of inquiry requesting further information. "Section 111 Letters" may address the extent of the renovation, the abatement work to be performed, or the record keeping process. The Notice of Violation Letters initiate a formal enforcement action alleging a violation, followed by the Notice of Violation conferences where the Division determines whether an alleged violation can be sustained.

From 1994 through August 2000, a total of 707 enforcement actions were taken. Of these, 99 notices of violations were issued, 63 warning notices were issued, 145 compliance determination letters were issued, and 54 letters of admonition were imposed. Many of these violations were brought into compliance through conferences and settlements, making it unnecessary to issue further compliance orders or cease and desist orders. A total of 8 Cease and Desist Orders occurred between 1995 and August 2000. Examples of instances in which Cease and Desist Orders were issued are listed below.

- Asbestos-containing material possibly distributed through eight apartment units and common areas;
- In a youth outreach center, floor tile containing asbestos had been impacted and rendered friable;
- Asbestos-contaminated disposal chute outside of a vacant office building being used as a conduit for transporting unbagged asbestos-containing waste material to a disposal container was being disassembled without being properly decontaminated;
- Breach in a containment barrier and disassembly of the asbestos-contaminated chute outside containment, outside of a vacant office building;
- Asbestos-containing material and debris found in a partly demolished building was being released into the surrounding neighborhood air; and
- Ceiling texture containing friable asbestos on a floor in an occupied office building had been disturbed during renovation activities.


## Table 7

| Enforcement Actions        <br> 1994-2000        |  |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| ENFORCEMENT <br> ACTIONS | $\mathbf{1 9 9 4}$ | $\mathbf{1 9 9 5}$ | $\mathbf{1 9 9 6}$ | $\mathbf{1 9 9 7}$ | $\mathbf{1 9 9 8}$ | $\mathbf{1 9 9 9}$ | Jan-Aug <br> $\mathbf{2 0 0 0}$ | Total |
| Warning Letters <br> Issued | 1 | 11 | 9 | 13 | 7 | 16 | 6 | 63 |
| "111" Letters <br> Issued | 41 | 57 | 40 | 53 | 26 | 21 | 0 | 238 |
| Letters of <br> Admonition <br> Issued | 32 | 18 | 3 | 1 | 0 | 0 | 0 | 54 |
| Notice of <br> Violation Letters <br> Issued | 9 | 10 | 8 | 16 | 14 | 31 | 11 | 99 |
| Notice of <br> Violation <br> Conferences <br> Held | 6 | 11 | 9 | 17 | 13 | 27 | 17 | 100 |
| Compliance <br> Determination <br> Letters Issued | 9 | 24 | 28 | 26 | 32 | 10 | 16 | 145 |
| Cease and Desist <br> Orders <br> Issued | 3 | 1 | 1 | 0 | 1 | 0 | 2 | 8 |
| TOTAL | 101 | 132 | 98 | 126 | 93 | 105 | 52 | 707 |

## Civil Penalties

The Air Pollution Control Division has outlined strategies and procedures for calculating the asbestos abatement penalties imposed on violators in accordance with §25-7-511 (4), C.R.S., which reads as follows:
"...[T]he division may assess a penalty of up to twenty-five thousand dollars per day of violation or such lesser amount as may be required by applicable federal law or regulation. In determining the amount of the penalty to be assessed, the Division shall consider the seriousness of the danger to the public's health caused by the violation, whether or not the violation was willful, the duration of the violation, and the record of the persons committing such violation."

Evaluation of the threat to the public when determining a penalty requires the Division to quantify the actual or potential threat of asbestos fibers released into the environment. The Division quantifies the "seriousness of the danger to the public's health" by considering the potential for fiber release and the likelihood of exposure to members of the public as a result of the violation. The longer the activities occur, the greater the potential impact on public health.

There are two additional factors that the Division utilizes to determine the extent of seriousness of the danger to the public's health. They are 1) size of the project, and 2) proximity to the public. The closer the abatement project is to an area of public access, the greater the potential for exposure to the general public.

In addition, when considering the imposition of a penalty, the Division considers how cooperative the violators are with the Division in resolving the problem(s). If the Division determines that the violator is cooperative in responding to the instructions for remediation, the Division may reduce the penalty by a certain percentage.

The Division encourages all parties against whom civil penalties are imposed to pursue the possibility of settlement. According to the Division, portions of any monetary penalties may be suspended in exchange for the violator's agreement to prevent or reduce the potential for future violations of the regulation. Table 8 on the following page illustrates the number of fines imposed, assessed, negotiated, and dismissed from 1995 through June 2000.

The Division imposed a total of $\$ 487,203.69$ non-negotiated fines from 1995-1999; of that amount, $\$ 23,053.75$ was collected (4.7\% of fines imposed). For the fines that were negotiated in the five years from 1995-1999, the Division imposed a total of $\$ 1,307,726.08$ in fines. Through negotiation, that amount was reduced to a total of $\$ 266,218.39$ ( $20 \%$ of the original fines). Of the negotiated fines, $\$ 208,883.89$ was collected ( $78 \%$ of the negotiated fines).

Table 8

| Civil Penalties 1995 - June 2000 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Fines Imposed without Negotiation | Fines Dismissed | Negotiated Fines |
| Year | Total Number of Fines Imposed | Total Number of Fines Imposed Without Negotiation (Total Dollar Amount) <br> Total Number of Fines Paid (Total Dollar Amount Collected) | Total Number of Fines Imposed and Dismissed (Total Dollar Amount) | Total Number of Fines Negotiated (Total Dollar Amount of Fines Initially Imposed) - Total Dollar Amount of Negotiated Fines <br> Total Number of Fines Paid (Total Dollar Amount Collected) |
| 1995 | 34 | $\begin{aligned} & 15(\$ 154,422.50) \\ & 6(\$ 6,375.00)(4 \%) \end{aligned}$ | 8 (\$56,975.75) | 11 (\$241,017.38) - \$30,942.00 (12\% of Initial Fines) 10 (\$29,970) (97\% of Negotiated Fines) |
| 1996 | 28 | $\begin{aligned} & 4(\$ 22,118.75) \\ & 3(\$ 9,125.00)(41 \%) \end{aligned}$ | 6 (\$95,580.63) | 18 (\$533,268.95) - \$99,514.13 (18\% of Initial Fines) <br> 11 (\$55,614.13) (56\% of Negotiated Fines) |
| 1997 | 36 | $\begin{aligned} & 6(\$ 26,603.75) \\ & 3(\$ 5,353.75)(20 \%) \\ & \hline \end{aligned}$ | 9 (\$49,167.50) | $\begin{aligned} & 21 \text { (\$396,148.75) - \$68,724.24 (17\% of Initial Fines) } \\ & 17 \text { (\$57,849.24) (84\% of Negotiated Fines) } \end{aligned}$ |
| 1998 | 28 | $\begin{aligned} & 10(\$ 173,856.69) \\ & 1(\$ 1,500.00)(.08 \%) \end{aligned}$ | 2 (\$3,600.00) | 16 (\$131,550.50) - \$63,478.02 (48\% of Initial Fines) <br> 14 (\$62,390.52) (98\% of Negotiated Fines) |
| 1999 | 11 | $\begin{aligned} & 9(\$ 110,202.00) \\ & 1(\$ 700.00)(.06 \%) \end{aligned}$ | 0 | 2 (\$5,740.50) - \$3,560.00 (62\% of Initial Fines) <br> 1 (\$3,060.00) (86\% of Negotiated Fines) |
| 2000 | 1 | $\begin{aligned} & 1(\$ 49,412.50) \\ & 1(\$ 49,412.50)(100 \%) \end{aligned}$ | 0 | 0 |

## Analysis and Recommendations

## Should the Asbestos Control Program be Continued?

Asbestos is a naturally occurring mineral that is fibrous and virtually indestructible. Asbestos becomes a human health hazard when fibers are released into the air. The potential for the release of fibers depends on the friability of the asbestos. The aerodynamic properties of the fiber allow it to drift indefinitely. When the fibers settle on objects in a room such as books or chairs, disturbing the objects will cause fibers to be released and become airborne again.

Asbestos is found in a variety of products (see Appendix C), including asbestos cement pipes and steel products, asbestos spray on ceiling materials or acoustical ceilings, vinyl asbestos floor tile, gaskets and packings for equipment, coatings and sealants, automobile brakes, clutches and other friction products, textiles, transite board, asphalt roofing felts and coatings, insulation products and asbestos reinforced plastics. Renovation, demolition operations, and maintenance work and asbestos abatement procedures disturb the asbestos that has previously been installed.

Harm to human health from asbestos exposure occurs from inhaling fibers, and once past the body's defense system, the fibers lodge themselves in the lung or other areas of the body. Because the fibers are indestructible, they are potentially carcinogenic. There is no way to reverse the effects of exposure. When in the human body, the fibers remain latent for 10 to 40 years.

Exposure may result in asbestosis, lung cancer, mesothelioma, and other types of cancer. Generally speaking, asbestosis has the shortest latency period and mesothelioma the longest ( 20 to 40 years).

A more critical area of concern is the low-level effect of asbestos exposure on the general public. This would be exposure that is limited, such as a one-time exposure or a lower-level exposure such as that experienced by an office worker, student, or a frequent visitor to a building where friable asbestos is a problem. The EPA has attempted studies on building occupants exposed to low levels of asbestos, but its studies have been hampered because there is limited data available on prevailing fiber levels in public and other buildings and schools. In addition, it is difficult to quantify the number of persons exposed.

For persons in the general public who enter buildings with asbestos problems and breathe fibers, the effects of exposure are irreversible. Unlike documentation for asbestos industry workers and their families, documentation on persons who contact asbestos-related diseases from low-level exposure is not readily available.

## Effectiveness of the Certification Program

The certification of contractors, supervisors, inspectors, abatement workers, project designers, and management planners is necessary to ensure that there are at least minimal qualifications for those working in an area where an unsuspecting public could be placed at substantial risk. If the state certification requirements are abolished, OSHA and EPA could still impose penalties for violations, but these are directed towards work practices and asbestos hazard responses in the work place not towards the general public's safety.

It is the conclusion of this review that the asbestos control program serves to protect the public health and the environment by ensuring that persons involved in asbestos abatement activities meet minimum standards of competency. Due to potential health risks associated with the improper removal or encapsulation of asbestos, the Division's regulatory activities serve to protect the public health and safety and the environment. Asbestos is a known carcinogen that is harmful to humans when its fibers become airborne and are inhaled. Therefore, the Asbestos Control Program should continue. The training requirements are not unduly burdensome and trained personnel can be a factor in saving members of the general public from undue exposure to airborne asbestos.

Recommendation 1: The General Assembly Should Continue the Asbestos Control Program in the Air Pollution Control Division of the Department of Public Health and Environment and Establish a New Sunset Date of 2006

## OTHER STATUTORY FINDINGS AND RECOMMENDATIONS

If the General Assembly decides to continue the Asbestos Control Program administered by the Air Pollution Control Division of the Colorado Department of Public Health and Environment, the following statutory and administrative recommendations are offered to clarify the statute and to improve the regulatory performance of the Division.

## Recommendation 2: Revise the Term "Friable AsbestosContaining Material"

The current definition of "friable asbestos-containing material" specifies that the material must contain more than one-percent asbestos by weight ( $\$ 25-7-502$ (6), C.R.S.) There is currently no approved method to quantify bulk asbestos samples by weight. All the methods approved by EPA and recognized nationally are methods that measure asbestos by area/volume. Therefore, no one in the industry can perform analysis according to the statutory definition that materials must contain more than onepercent asbestos by weight. The recommended revised definition would read as follows (new language added in bold letters):
"Friable asbestos-containing material" means any material that contains asbestos and when dry can be crumbled, pulverized, or reduced to powder by hand pressure and which contains more than one percent asbestos by weight or area/volume.

## Recommendation 3: Amend § 25-7-503 (1)(b)(I), C.R.S. to

 Decrease the De minimis Level of Asbestos Abatement to Which the Provisions of the Act ApplyFrom the inception of the Asbestos Control Program in 1986 until the amendments made to the Act in 1996, the minimum level where asbestos abatement projects qualified for regulatory oversight was not less than 50 linear feet on pipes or 32 square feet on other materials or the equivalent of a 55 -gallon drum. The 55 -gallon drum is a volumetric level that is sometimes used for measuring when linear or square feet are not feasible. During the 1996 legislative session, the requirements were changed to conform to the federal NESHAP requirements of not less than 260 linear feet on pipes or 160 feet on other materials (260/160).

DORA reviewed permitted projects from 1993-1995 in which the amount of asbestos abated fell below the current minimum scope of asbestos abatement to which the provisions of the Act apply (260/160). The hundreds of permits issued during 1993-1995 included elementary, middle, and high schools; military medical centers; correctional facilities; cancer centers; hospitals; office buildings; local, state, and federal government buildings; apartment buildings; fire houses; churches; museums; and university buildings (Please see Appendix D for the complete list). Today, these permitted projects would not be subject to regulatory oversight with respect to the State's regulations regarding abatement work practices. There may be some OSHA requirements for worker protection but they do not apply to members of the general public. However, waste disposal requirements are still governed by the federal RCRA (Resource Conservation Recovery Act).

According to the National Conference of State Legislatures, the regulatory de minimis level for asbestos abatement projects in the 50 states reveals that 31 states have regulatory levels below the NESHAP level of 260/160. Arkansas, Illinois, Montana, Nebraska, Utah, West Virginia, and Wisconsin have established a level of three linear feet on pipes or three square feet of asbestos containing material on other materials. The state of Kentucky requires regulatory authority for the abatement of any level of asbestos containing material. The other states regulatory requirements vary from $3 / 12$ to $10 / 10$ to $10 / 15$ to 25/10.

The goal of the Asbestos Control Program is to keep the contamination levels in the air as low as possible by minimizing the number of fibers released into the air. The statute currently designates that the maximum allowable asbestos level for the protection of the general public is .01 fibers per cubic centimeter of air. It does not take very much asbestos containing material being disturbed in an uncontrolled manner to release enough fibers to be above the .01 standard.

The intent of the Asbestos Control Program is to control the exposure of the general public to friable asbestos. Fibers released into a small area will yield a higher concentration of fibers than the same number of fibers released into a large area. While not regulating below 260/160 may make sense in a very large building, the potential for harm to the public in a smaller area is considerable. Therefore, the Department of Regulatory Agencies recommends that §25-7-503 (1)(b)(I), C.R.S., the determination of the minimum scope of asbestos abatement, be amended to "but not less than 50 linear feet on pipes or 32 square feet on other materials or the equivalent of a 55 -gallon drum."

Recommendation 4: Extend the Asbestos Control Program to Include Single Family Residences Where Abatement is Being Performed by Anyone Other than the Occupant/Owner and Make it an Exception to the "Area of Public Access" Definition.

Under the present statutory construction, §25-7-504 (3), C.R.S., individuals who perform asbestos abatement on a single-family dwelling that is their primary residence are exempt from regulations regarding certification requirements. In addition, §25-7-503 (1)(a)(IV) and §25-7-503 (1)(b)(II), C.R.S., basically exempt single-family homes from acquiring air pollution permits for asbestos abatement or notifying the Air Pollution Control Division of an asbestos abatement project. Regulation No. 8, Part B, Section III(C)(1)(e) specifically states, "Air pollution permits are not required for asbestos abatement projects in single family residential dwellings."

Pursuant to the statutory criteria, the Air Pollution Control Division does not require owners of single-family dwellings to obtain a permit for asbestos removal, although 8-10\% of asbestos abatement projects are being performed in homes.

The goal of the Asbestos Control Program is to keep the contamination levels in the air as low as possible by minimizing the number of fibers released into the air. Fibers released into a small area will yield a higher concentration of fibers than the same number of fibers released into a large area.

An environmental scientist/enforcement officer from the U.S. Environmental Protection Agency Region V has recently stated that there is doubt that the EPA will ever have the evidence to take the position that the amount of asbestos in residences doesn't present a health risk. If anything, past surveys stating that the amount of asbestos in a typical home is fairly small, seem to be proven wrong on a regular basis. Furthermore, many past surveys did not include vermiculite and vermiculite products in the assessment of asbestos-containing materials. Plaster and paint were also left out of many of the old surveys. While some of these materials may contain only small amounts of asbestos, the cumulative total becomes larger as one adds them together. The exemption of homes in the NESHAP regulations was based on information and assumptions that might not withstand scrutiny if re-evaluated today. In addition, the old NESHAP was developed before some of the risk assessment tools were available that are available today.

For this sunset review, the Division submitted examples of case studies of non-regulated asbestos removal in single-family homes. The following brief case studies illustrate actual cases of potential harm to Colorado citizens

## CASE 1 - METRO AREA HOMEOWNER

The Division received a telephone call from a general contractor inquiring about the requirements for asbestos removal in singlefamily homes (SFH). He was informed that this was a nonregulated area as long as the house was not used as a business. The only requirement was for proper disposal. Later that same day, the Division received a call from the homeowner stating that his house may have been contaminated with asbestos by renovation activities performed by the general contractor who had previously telephoned the Division. The homeowner was also informed that this was a non-regulated area due to the SFH exemption. The homeowner became extremely upset at the fact that his home was beyond regulatory assistance and that a contractor could possibly contaminate their home without any repercussion or responsibility for the cleanup.

## CASE 2 - TRIPLEX

A Florida-based owner of a Colorado rental triplex visited the triplex to conduct some furnace and general facility repairs. During the repairs, approximately 300 feet of nine-inch heat duct insulated with asbestos-containing paper was improperly removed from the basement of the three units and stacked in the rear parking area. The asbestos-containing insulation paper had been torn and scattered from the basements out to the rear yards. A proper containment area was not erected during the dry removal of the furnace ducts and no decontamination facility was available to prevent the distribution of asbestos-containing materials. The residents had no recourse or regulatory assistance because these units are considered a SFH.

## CASE 3 - MOUNTAIN CONDOMINIUM

Timeshare condominiums in mountain resort towns are undergoing asbestos abatement removal with no asbestos work practice controls because these units are considered to be SFH. The condominiums are rented to the general public for short term or extended stays. The unsuspecting occupants are potentially exposed to high airborne asbestos fiber counts from the abatement removal. The occupants may suffer extended exposure and the risk of transporting asbestos-contaminated materials to their vehicles and/or homes.

## Recommendation 5: Require Certification for Air Monitoring Specialists

Air monitoring specialists sample air for asbestos fibers for purposes of background air monitoring (normal ambient air in a building), asbestos abatement project monitoring (contaminated air during the actual abatement of asbestos before renovation begins), and final clearance of an asbestos abatement project.

Regulation No. 8, Part B, Section II(B)(1)(c) outlines the requirements for certification and training of air monitoring specialists that includes a Division-approved air monitoring specialist course and a Division-approved asbestos abatement supervisor course, project designer course, or inspector/management planner course. A 4-year college degree in industrial hygiene, a degree in environmental health with a major concentration in industrial hygiene, or the possession of a certified industrial hygienist (CIH) certification may be substituted for the above courses.

Regulation No. 8 specifies requirements for air monitoring specialists; however, there is no authority granted to the Division to certify or subsequently suspend or revoke any certificate of these specialists. Inspectors, management planners, workers, supervisors, and project designers are all required by Regulation No. 8 to obtain a certificate to practice.

An example of the limitations of the current law is illustrated by the Public Health Order issued by the Department of Public Health and Environment that closed a Colorado high school in February 2000. The Order was issued because airborne asbestos fiber concentrations exceeded the maximum allowable level by more than 8 times the permitted level. The excessive concentration of asbestos fibers was a result of an abatement project performed during the summer of 1999. Subsequently, the Division revoked the asbestos abatement supervisor's certificate, suspended the general abatement certificate of the asbestos abatement company, and issued a civil penalty to the independent abatement consultant. However, the Division could not suspend or revoke the certificate of the air monitoring specialist involved because there is currently no certificate required.

To ensure that there are at least minimal qualifications for air monitoring specialists, Regulation No. 8 has addressed requirements. To better regulate the practice of air monitoring specialists, DORA recommends amending the Act to require certification and the ability to suspend, revoke, and refuse to issue or renew the certificate.

Recommendation 6: Amend the Statute to Require the Air Pollution Control Division to Develop and Implement a Procedure to Require Notification that an Asbestos Inspection has Been Performed Prior to Renovation of a Building

Currently, Regulation No. 8, Part B, Section III(C)(6)(b) requires the owner or operator of a demolition or renovation activity, prior to the commencement of the demolition or renovation, to thoroughly inspect the affected facility or part of the facility where the operation will occur for the presence of asbestos. The inspection, sampling, and assessment of suspected asbestos materials must be performed to the standards designated in Regulation No. 8.

If a threshold amount of asbestos will be disturbed during the demolition activity, then the owner or operator must submit a Demolition Notification to the Air Pollution Control Division that the building has been inspected and suspect materials have been sampled in accordance with AHERA and analyzed for the presence of asbestos. Furthermore, this Notification acknowledges that no asbestos exists anywhere in the building, and that all asbestos-containing material found has been completely removed from the building.

The Division can not currently require a notice for renovation projects pursuant to §25-7-503(1)(b)(II), C.R.S. There are not enough resources to inspect the current workload, nor be responsible for all renovation projects. In reality, there are thousands of renovation projects and the Division does not have sufficient staff to inspect every renovation project.

Since there is no notification procedure for renovations, the Division depends on the contractor to initiate an asbestos inspection prior to construction. There is no affirmative way that the Division can determine whether asbestos inspections are being performed. The Division reports that many renovation projects are being accomplished without any prior asbestos inspection.

DORA recommends that each county or municipality issuing building permits for renovation require an approved Renovation Notification from the Division similar to the one submitted by demolition contractors. This recommendation does not expand the authority of the Division in regards to asbestos control, but rather attempts to enhance enforcement of the current law and regulations.

## ADMINISTRATIVE RECOMMENDATIONS

## Administrative Recommendation 1: Clarify the Definition of "Area of Public Access"

The current definition of "area of public access" [(\$25-7-502 (1), C.R.S.)] is ambiguous and complex and could prevent enforcement of public health provisions in Regulation No. 8. The definition lends itself to interpretation instead of providing a framework of specificity for the regulating agency. There have been many challenges to the law from condominium and apartment building owners, as well as owners of hotels and museums. Research reveals that no other state differentiates between public and non-public access in respect to state asbestos rules and law.

A leading factor in the current definition of "area of public access" was a Colorado power company's view that they should not be subject to Colorado's asbestos Regulation No. 8 following a Division inspection and subsequent enforcement action at a power plant facility. The power company argued that OSHA already protected the health of workers and that public health regulations were superfluous in cases where only workers, as opposed to the general public, were exposed.
There is merit to this statement, but the current definition of "area of public access" does not capture the intent of the legislature because of its ambiguity. For instance, because of the ambiguous phrase "without limitation or restriction" in the definition, some people have concluded that portions of public buildings can be considered non-public access areas simply because they post signs in these areas stating "employees only." Unfortunately, air in these areas is free to circulate throughout the entire building. Consequently, the general public in other areas of the building could be exposed to asbestos fibers even though the activities that disturbed the asbestos occurred in areas "restricted" to employees.

The problem is that asbestos is an insidious airborne hazard. Once airborne, asbestos fibers can stay suspended in the air for days, weeks, or even months before settling out of the air, only to become airborne again because of some minor disturbance. Moreover, asbestos fibers can easily migrate through the air and, because of their microscopic size, ignore barriers like locked doors. Since the air in buildings can move from room to room as a result of many factors, fibers can and will migrate to other areas of a building. Hence, preventing the enforcement of public health standards simply by posting a sign in a file room of a public office building that states "restricted access-employees only" cannot be the intent of the General Assembly because the public could be exposed to asbestos fibers being generated in that "restricted area."

Renovation projects or non-regulated abatement projects that disturb asbestos can cause latent asbestos hazards that may expose people to asbestos in the future long after the renovation activity occurred. For example, removal of asbestos texturing without proper containment may allow asbestos residues to accumulate in cracks, crevices, storage cabinets, lockers, lighting fixtures, door and window frames, ventilation ducts, radiators, vents, etc. This asbestos residue may not release fibers until it is disturbed by future occupants who turn on the airconditioner, open a window or door, or replace a light fixture. The airborne asbestos fiber concentrations resulting from this disturbance may result in a significant exposure to the new building occupants.

The Division should take appropriate measures, including citizen and industry input, to clarify the definition of "area of public access" and seek to implement legislation in the next regular session of the Colorado General Assembly.

## Administrative Recommendation 2: Develop and Implement a Record Keeping System for Complaints Received.

The 1994 Sunset Review of the Asbestos Control Program reported that "complaints are not tallied as complaints, rather they are given priority in terms of follow-up investigations." Therefore, there were no statistics available for the number and types of complaints. DORA made an administration recommendation that the Division should develop and implement a record keeping system for complaints received.

For the 2000 Sunset Review, DORA was once again unable to analyze the complaint process because no specific statistics were submitted by the Division. Since 1994, the Division has implemented a very effective database management system that includes information on inspections and enforcement actions that was presented for this review. Although the database system now includes complaint data, the method it uses to record complaints does not easily provide the information requested by DORA.

DORA recommends that the Division incorporate into their database management system a procedure to easily track complaints and the disposition of such complaints. The analysis of complaints is an important component used to evaluate a program's effectiveness.

## Administrative Recommendation 3: Issue Notices Regarding Possible Violations in a Timely Manner

During the interview phase of this review, DORA convened meetings with the regulated community to solicit recommendations to improve the effectiveness of the program. Although many notices are issued in a timely manner, several individuals expressed concern with the time frame in which the Division issues some Notices of Violations. An instance was cited whereby during an inspection the Division noted that there was a probable violation and cited the specifics. The company did not receive an official Notice of Violation for over 6 months from the inspection date. However, a person adversely affected by an action taken by the Division has only 30 days to contest the action by requesting a hearing before the Division of Administrative Hearings.

Granted, the criteria for the statute of limitations for penalty assessments (§25-7-123.1 (1) (b)) that governs the Department of Public Health and Environment states that any action must commence within 18 months of the date upon which the Division discovers the alleged violation. It is in the public and company's best interest to address violations in a timely manner and resolve the issue.

## Administrative Recommendation 4: Compile Yearly Statistics to Reflect the Percentage of Persons Passing the Examinations

According to §25-7-505.5 (1), the Division has the authority to develop or purchase examinations for certification under the Act and determine passing scores on all examinations based on a minimum level of competency in the procedures to be followed in asbestos abatement. The Division has purchased examinations developed by the Environmental Information Council and Experior Assessments (formerly known as the National Assessment Institute).

The information concerning the rate of passage for the examinations administered in the certification program was not available from the Division. DORA recommends that the Division coordinate with Experior Assessments to receive yearly statistical data on passage and failure rates for each category of examination given. This recommendation would assist the Division in assessing the continued need for the test and to determine whether certain testing patterns exist.

## Administrative Recommendation 5: Improve the Tracking of the Nonpayment of Civil Penalties Imposed by the Division.

Regulation No. 8, Part B, Section III(C)(1)(g) specifically stipulates that if an individual fails to pay a Division assessed penalty for violating any provision of Regulation 8, no permit to conduct asbestos abatement will be issued.
Currently, the Air Pollution Control Division assesses a penalty to violators and instructs them to remit payment to the Asbestos Control Program within 30 days. Amounts remitted to the Program are submitted to CDPHE accounting and credited to General Fund revenue. The Division does not have a systematized program in place to determine on a regular basis whether fines have been remitted. The Division needs to implement a tracking system that allows them to be cognizant of nonpayment of civil penalties. In turn, they should not issue a permit to anyone negligent in paying their fine.
As illustrated by Table 8 on page 27, the percentage of the total dollar amount of fines collected varies greatly. This is partly due to the lack of an effective tracking system and the reluctance of individuals to pay fines imposed. The successful completion of this process should allow the Division to record that the fine has been paid.

Administrative Recommendation 6: Clarify the Rule Addressing Conflict of Interest Between Asbestos Building Inspectors and Asbestos Abatement Contractors.

To prevent any real or potential conflict of interest between the identification of asbestos-containing materials and the abatement of such materials in public and commercial buildings is the intent of Regulation No. 8, Part B, Section III(3)(C)(6)(b)(v). This regulation requires that asbestos building inspectors be independent of the abatement contractor and not receive remuneration from the contractor that will subsequently abate the asbestos-containing material (ACM) identified.

However, because of the way in which the rule is written, there has been some confusion whether an asbestos building inspector, who is often a consultant, may hire or joint venture with an asbestos abatement company. Since technically the asbestos abatement company is not paying the consultant, the rule may be interpreted to allow this occurrence.

DORA recommends clarifying the rule during the next rulemaking session to reflect the intent of the rule to prohibit a conflict of interest between entities identifying ACM and entities abating asbestos.

## Appendix A -

 Sunset Statutory Evaluation Criteria(I) Whether regulation by the agency is necessary to protect the public health, safety and welfare; whether the conditions which led to the initial regulation have changed; and whether other conditions have arisen which would warrant more, less or the same degree of regulation;
(II) If regulation is necessary, whether the existing statutes and regulations establish the least restrictive form of regulation consistent with the public interest, considering other available regulatory mechanisms and whether agency rules enhance the public interest and are within the scope of legislative intent;
(III) Whether the agency operates in the public interest and whether its operation is impeded or enhanced by existing statutes, rules, procedures and practices and any other circumstances, including budgetary, resource and personnel matters;
(IV) Whether an analysis of agency operations indicates that the agency performs its statutory duties efficiently and effectively;
(V) Whether the composition of the agency's board or Commission adequately represents the public interest and whether the agency encourages public participation in its decisions rather than participation only by the people it regulates;
(VI) The economic impact of regulation and, if national economic information is not available, whether the agency stimulates or restricts competition;
(VII) Whether complaint, investigation and disciplinary procedures adequately protect the public and whether final dispositions of complaints are in the public interest or self-serving to the profession;
(VIII) Whether the scope of practice of the regulated occupation contributes to the optimum utilization of personnel and whether entry requirements encourage affirmative action; and
(IX) Whether administrative and statutory changes are necessary to improve agency operations to enhance the public interest.

# Appendix B - <br> Asbestos Control Statute 

## PART 5

## ASBESTOS CONTROL

25-7-501. Legislative declaration. (1) The general assembly hereby declares that it is in the interest of the general public to control the exposure of the general public to friable asbestos. It is the intent of the general assembly to ensure the health, safety, and welfare of the public by regulating the practice of asbestos abatement in locations to which the general public has access for the purpose of ensuring that such abatement is performed in a manner which will minimize the risk of release of asbestos. However, it is not the intent of the general assembly to regulate occupational health practices which are regulated pursuant to federal laws or to grant any authority to the department of public health and environment to enter and regulate work areas where general public access is limited. It is the intent of the general assembly that the Commission may adopt regulations to permit the enforcement of the national emission standards for hazardous air pollutants as set forth in 42 U.S.C.A. sec. 7412.
(2) Therefore, the general assembly determines and declares that the enactment of this part 5 is a matter of statewide concern to achieve statewide uniformity in the regulation of such asbestos abatement practices and uniformity in the qualifications for and certification of persons who perform such abatement.

25-7-502. Definitions. As used in this part 5, unless the context otherwise requires:
(1) "Area of public access" means any building, facility, or property, or only that portion thereof, which any member of the general public can enter without limitation or restriction by the owner or lessee under normal business conditions; except that "area of public access" includes any facility which charges the general public a fee for admission, such as any theater or arena. For purposes of this subsection (1), "general public" does not include employees of the entity which owns, leases, or operates such building, facility, or property, or such portion thereof, or any service personnel or vendors connected therewith.
(2) "Asbestos" means abestiform varieties of chrysotile, amosite, crocidolite, anthophyllite, tremolite, and actinolite.
(3) "Asbestos abatement" means any of the following:
(a) The wrecking or removal of structural members that contain friable asbestos-containing material;
(b) The following practices intended to prevent the escape of asbestos fibers into the atmosphere:
(I) Coating, binding, or resurfacing of walls, ceilings, pipes, or other structures for the purpose of minimizing friable asbestoscontaining material from becoming airborne;
(II) Enclosing friable asbestos-containing material to make it inaccessible;
(III) Removal of friable asbestos-containing material from any pipe, duct, boiler, tank, reactor, furnace, or other structural member.
(4) "Commission" means the air quality control Commission created by section 25-7-104.
(5) "Division" means the division of administration in the department of public health and environment.
(6) "Friable asbestos-containing material" means any material that contains asbestos and when dry can be crumbled, pulverized, or reduced to powder by hand pressure and which contains more than one percent asbestos by weight. The term includes nonfriable forms of asbestos after such previously nonfriable material becomes damaged to the extent that when dry it can be crumbled, pulverized, or reduced to powder by hand pressure.
(7) "Person" means any individual, any public or private corporation, partnership, association, firm, trust, or estate, the state or any department, institution, or agency thereof, any municipal corporation, county, city and county, or other political subdivision of the state, or any other legal entity which is recognized by law as the subject of rights and duties.
(7.5) "Project manager" means a person who has satisfied the experience and academic training requirements set forth by the Commission.
(8) (a) "School" means any institution that provides elementary or secondary education.
(b) (I) The term "school" shall not apply to those institutions operated and controlled by the department of human services.
(II) The exclusion provided for in this paragraph (b) shall terminate on July 1, 1989, unless the capital development committee approves the plan filed by the department of human services in accordance with paragraph (c) of this subsection (8).
(c) The department of human services shall file a report with the capital development committee prior to July 1, 1989, detailing their plan for asbestos abatement.
(9) "State-owned or state-leased buildings" means structures occupied by any person which are either owned by the state or utilized by the state through leases of one year's duration or longer.
(10) "Structural member" means any beam, ceiling, floor, or wall.
(11) "Trained supervisor" means an individual certified by the division to supervise asbestos abatement pursuant to section 25-7506.

25-7-503. Powers and duties of the Commission - rules and regulations - delegation of authority to division. (1) The Commission has the following powers and duties:
(a) To promulgate rules and regulations pursuant to section 24-4-103, C.R.S., regarding the following, as are necessary to implement the provisions of this part 5 only for areas of public access:
(I) Performance standards and practices for asbestos abatement which are not more stringent than 29 CFR 1910.1001 and 1926.58;
(II) (A) Determination of a maximum allowable asbestos level which shall be the highest level of airborne asbestos under normal conditions which allows for protection of the general public; except that, until the Commission adopts by regulation a level, the maximum allowable asbestos level for the protection of the general public shall be 0.01 fibers per cubic centimeter of air, measured during normal occupancy and calculated as an eight-hour time-weighted average, in accord with 29 C.F.R. part 1910.1001, appendix a, protocols for phase contrast microscopy (PCM).
(B) In the event that airborne asbestos fiber levels exceed such a level, a second test of samples may be collected during normal occupancy, analyzed by transmission electron microscopy (TEM) analysis, and calculated as an eight-hour time-weighted average in accord with 29 C.F.R. part 1910.1001, appendix a, before any order of abatement is issued.
(C) Notwithstanding the provisions of sub-subparagraph (A) of this subparagraph (II), if the asbestos level in the outside ambient air which is adjacent to an asbestos project site or area of public access exceeds 0.01 fibers per cubic centimeter of air, the existing asbestos level in such air shall be the maximum allowable asbestos level.
(III) Exemptions in emergency situations from the requirements of section 25-7-505 regarding the certificate to perform asbestos abatement;
(IV) Requirements for air pollution permits which shall be required for asbestos abatement projects in any building, facility, or structure, or any portion thereof, having public access;
(V) Fees for air pollution permits, site inspections, and any necessary monitoring for compliance with this part 5;
(VI) Fees for certification as a trained supervisor;
(VII) Fees for certification which is required under federal law to engage in the inspection of schools, the preparation of asbestos management plans for schools, and the performance of asbestos abatement services for schools;
(VIII) Fees for a certificate to perform asbestos abatement;
(IX) Assessment procedures which determine the need for response actions for friable asbestos-containing materials. Such procedures shall include, but not be limited to, visual inspection and air monitoring which shows an airborne concentration of asbestos during normal occupancy conditions in excess of the maximum allowable level established by the Commission in state-owned or state-leased buildings. Nothing in this subparagraph (IX) shall be construed to require that such assessments be made in state-owned or state-leased buildings; however, such procedures shall be followed in the event any such assessment is made.
(X) Requirements for asbestos management plans to be submitted and implemented by schools;
(XI) Fees to be collected from schools for review and evaluation of asbestos management plans;
(b) To promulgate rules and regulations pursuant to section 24-4-103, C.R.S., regarding the following, as are necessary to implement the provisions of this part 5, as required by the federal "Clean Air Act", 42 U.S.C. section 7412, et. seq., as amended:
(I) Determination of the minimum scope of asbestos abatement to which the provisions of this part 5 shall apply, but not less than two hundred sixty linear feet on pipes or one hundred sixty square feet on other materials or the equivalent of a fifty-five-gallon drum;
(II) Requirements of notification, as consistent with the federal act, to demolish, renovate, or perform asbestos abatement in any building, structure, facility, or installation, or any portion thereof, which contains asbestos, except within such minimum scope of asbestos abatement or when otherwise exempt;
(III) Procedures for the inspection and monitoring of sites where demolition, renovation, or the performance of asbestos abatement is taking place, including rules assuring that aggressive air monitoring shall be utilized only in the context of conducting final clearance of an abatement project as outlined in the "Asbestos Hazardous Emergency Response Act" and pursuant to the regulations found at 40 C.F.R. part 763. Specifications as listed in "measuring airborne asbestos following an abatement action", published by the environmental protection agency in 1985, shall be adopted by the Commission as criteria for aggressive sampling.
(IV) (A) Fees for notifications to demolish, renovate, or perform asbestos abatement and for any associated site inspections or necessary monitoring for compliance with this part 5.
(B) Fees pursuant to this subparagraph (IV) shall be paid on an annual basis for large contiguous facility complexes and on an individual notification basis for small noncontiguous facilities.
(V) Requirements to prevent any real or potential conflict of interest between the identification of asbestos-containing materials and the abatement of such materials in public and commercial buildings, including requirements that project managers be used on projects of a certain size, that project managers be independent of the abatement contractor and work strictly on behalf of the building owner to the extent feasible, and that building owners may seek waivers from the project manager requirements.
(c) To approve the examination administered to applicants for certification as a trained supervisor pursuant to section 25-7-506;
(d) To authorize the division to:
(I) Establish procedures regarding applications, examinations, and certifications required under this part 5;
(II) Enforce compliance with the provisions of this part 5, the rules and regulations promulgated thereunder, and any order issued pursuant thereto.
(e) To promulgate rules and regulations setting minimum standards for sampling the asbestos in the air and standards for persons engaging in such sampling and to seek injunctive relief under section 25-7-511.5, including relief against any asbestos air sampler who acts beyond his level of competency. In promulgating rules and regulations setting such standards, the Commission shall not use the term "air sampling professional" in such standards and shall amend said term in rules III.C.7.a. (i), (i)(A), and (iv) of part B of regulation 8 of the rules and regulations of the Commission, concerning measuring asbestos levels (5 CCR 1001-10), to conform to the requirements of this paragraph (e).
(f) (I) To adopt rules pursuant to section 24-4-103, C.R.S., setting out required training for persons applying for certification, recertification, or renewal of certificates as required by regulations promulgated by the federal environmental protection agency or the occupational safety and health administration.
(II) Training required pursuant to this paragraph (f) shall not be unduly duplicative or excessive.
(III) Refresher courses shall be required annually.
(2) Notwithstanding any other provisions of this section to the contrary, neither the Commission nor the division shall have the authority to enforce standards more restrictive than the federal standards set forth in the "Occupational Safety and Health Act", on asbestos abatement projects which are subject to such federal standards; except that, nothing in this subsection (2) shall be construed to prevent the application and enforcement of the maximum allowable asbestos level prescribed in subparagraph (II) of paragraph (a) of subsection (1) of this section as a clearance level and a condition of reentry by the general public upon completion of the project.

25-7-504. Asbestos abatement project requirements certification required for schools - certificate to perform asbestos abatement - certified trained persons. (1) (a) Any person who inspects schools for the presence of friable asbestos, prepares asbestos management plans for schools, or conducts asbestos abatement services in schools shall obtain certification pursuant to section 25-7-507.
(b) Any person who inspects public or commercial buildings for the presence of asbestos, prepares management plans for public and commercial buildings, designs abatement actions in public and commercial buildings, or conducts abatement actions in public and commercial buildings shall obtain certification pursuant to section 25-7-507.
(2) (a) Any person who conducts asbestos abatement in any building, other than a school, shall obtain a certificate to perform asbestos abatement pursuant to section 25-7-505 unless such abatement project is exempt from the requirement for certification pursuant to rules and regulations promulgated by the Commission.
(b) Unless otherwise exempt, asbestos abatement shall be performed under the supervision of an individual certified by the division as a trained supervisor pursuant to section 25-7-506, who shall be at the project site at all times that work is in progress.
(3) The requirements of this section shall not apply to any individual who performs asbestos abatement on a single-family dwelling which is his primary residence.

25-7-505. Certificate to perform asbestos abatement application - approval by division - suspension or revocation of license. (1) Any person may apply to the division for a certificate to perform asbestos abatement by submitting an application in the form specified by the division and by paying a fee set by the Commission. Such application shall include, but shall not be limited to:
(a) A description of the applicant's employee training program for asbestos abatement;
(b) A statement identifying all individuals employed by the applicant who are certified as trained supervisors pursuant to section 25-7-506.
(2) No applicant shall be certified to perform asbestos abatement unless the applicant, or at least one of the applicant's employees, is certified as a trained supervisor pursuant to section 25-7-506.
(3) Within fifteen days after receiving an application pursuant to this section, the division shall acknowledge its receipt and notify the applicant as to whether the application is complete. Within thirty days after receiving a completed application, the division shall issue a certificate to the applicant if the division finds that, in addition to all other requirements, the employee training program for asbestos abatement described in the application is acceptable. A certificate issued by the division pursuant to this section shall be valid for three years from the date of issuance.
(4) A certificate issued pursuant to this section may be suspended or revoked for the failure to implement the employee training program for asbestos abatement described in the application submitted pursuant to this section.

25-7-505.5. Testing for certification under part 5. (1) The division shall develop or purchase the examinations administered pursuant to this part 5 for certification under sections 25-7-506 and 25-7-507 and shall set the passing scores on all such examinations based on a minimum level of competency in the procedures to be followed in asbestos abatement. The division shall administer such examinations at least twice each year or more frequently if demand so warrants and shall administer such examinations at various locations in the state if demand so warrants. The purpose of the examinations required pursuant to this section is to ensure minimum competency in asbestos abatement procedures. If a person fails to achieve a passing score on any such examination, retesting of such person shall be with a different examination and after such person has completed remedial training as determined to be satisfactory to the division for minimum competency in asbestos abatement procedures. Prior to such reexamination, an applicant shall file a new application as specified in section 25-7-506 (1), and such individual shall pay a fee set by the division. Such fee shall be no greater than the amount paid for the original examination.
(2) Notwithstanding the provisions of sections 25-7-506 and 25-7-507, the division may certify an individual under this part 5 by endorsement if such individual possesses in good standing a valid license, certificate, or other registration from any other state or territory of the United States or from the District of Columbia, if the applicant presents proof satisfactory to the division that at the time of application for a Colorado certificate by endorsement the applicant possesses qualifications substantially equivalent to those of this part 5 as determined by the division.

25-7-506. Certificate of trained supervisors - application approval by division - responsibilities of trained supervisors renewal of a certificate. (1) Any individual may apply to the division to be certified as a trained supervisor by submitting an application in the form specified by the division and paying a fee set by the Commission. Within fifteen days after receiving an application, the division shall notify the applicant as to whether the application is complete.
(2) Within thirty days after receiving a completed application and the results of the examination administered pursuant to paragraph (b) of this subsection (2), the division shall issue a certification valid for a one-, three-, or five-year period from the date of issuance upon a finding:
(a) That the applicant has, within twelve months prior to the date of the application, completed a training course on safe asbestos abatement procedures which has been approved by the division; and
(b) That the applicant has passed an examination administered by the division pursuant to section 25-7-505.5 on the procedures to be followed in asbestos abatement.
(3) An individual acting as a trained supervisor pursuant to this section shall be responsible for supervising a specific asbestos abatement project in such a manner as to assure that asbestos abatement is performed in compliance with the provisions of this part 5 and the rules and regulations promulgated thereunder.
(4) (Deleted by amendment, L. 92, p. 1232, § 37, effective July 1, 1992.)
(5) (Deleted by amendment, L. 95, p. 22, § 3, effective July 1, 1995.)

25-7-507. Certification required under federal law for asbestos projects in schools, public, and commercial buildings. Pursuant to the federal "Asbestos Hazard Emergency Response Act of 1986" (Public Law 99-519) and the federal "Asbestos School Hazard Abatement Reauthorization Act of 1990" (Public Law 101-637), the division shall certify, in the manner required under the federal law, all persons engaged in the inspection of schools or public or commercial buildings, the preparation of management plans for schools or public or commercial buildings, the design of abatement actions in schools or public or commercial buildings, or the conduct of abatement actions in schools or public or commercial buildings.

25-7-507.5. Renewal of certificates - recertification. (1) Any certificate issued pursuant to this part 5 that has lapsed shall be deemed to have expired.
(2) (a) A certificate issued pursuant to this part 5 may be renewed prior to expiration upon payment of a renewal fee set by the Commission.
(b) Renewal of a certificate may be made for time periods of one, three, or five years pursuant to rules promulgated by the Commission.
(3) An individual may reinstate an expired certificate within one year after such expiration upon payment of a reinstatement fee in an amount set by the Commission.
(4) An individual whose certificate has lapsed for a period longer than one year after expiration shall apply to the division for certification as required by this part 5 and shall not be recertified until the division determines that such individual has fully complied with the requirements of this part 5 and any rules promulgated pursuant thereto.
(5) (a) Any individual whose certificate has lapsed because such individual has not completed the refresher course required pursuant to section 25-7-503 (1) (f) may complete such refresher course within one year after the date the certificate lapses.
(b) Completion of the refresher course shall be a requirement for recertification.
(c) (I) The Commission shall promulgate rules governing refresher training programs for persons in both school and nonschool asbestos abatement. Such programs shall not exceed the requirements of refresher training mandated under the federal "Asbestos Hazard Emergency Response Act of 1986" (Public Law 99-519) and any rules promulgated pursuant to such federal law.
(II) In adopting rules the Commission shall ensure that refresher training requirements are related to ensuring continuing competency in asbestos abatement procedures.
(III) The division shall implement a system of testing to measure the knowledge obtained by certified persons attending the refresher training programs. Such testing shall not exceed the requirements of refresher training mandated pursuant to federal law.

25-7-508. Grounds for disciplinary action - letters of admonition - denial of certification - suspension, revocation, or refusal to renew - requirement for corrective education - administrative fines. (1) When an application for certification pursuant to section $25-7-505,25-7-506$, or 25-7-507 is denied by the division, the applicant may contest the decision of the division by requesting a hearing before the division of administrative hearings. A request for a hearing must be made within thirty calendar days after the division has issued a denial of the application in writing to the applicant. Such hearing shall be held pursuant to section 25-7-119.
(2) (a) The division may take disciplinary action in the form of the issuance of a letter of admonition or, in conformity with the provisions of article 4 of title 24, C.R.S., the suspension, revocation, or refusal to renew certification pursuant to section 25-7-505, 25-7506 , or 25-7-507 should the division find that a person certified under this part 5:
(I) Has violated or has aided and abetted in the violation of any provision of this part 5 or any rule or regulation or order of the division or Commission promulgated or issued under this part 5;
(II) (A) Has been subject to a disciplinary action relating to a certification or other form of registration or license to practice asbestos abatement under this part 5 or any related occupation in any other state, territory, or country for disciplinary reasons, which action shall be deemed to be prima facie evidence of grounds for disciplinary action, including denial of certification by the division.
(B) This subparagraph (II) shall apply only to disciplinary actions based upon acts or omissions in such other state, territory, or country substantially similar to those set out as grounds for disciplinary action pursuant to this part 5.
(C) A plea of nolo contendere or its equivalent to a charge of violating a law or regulation governing the practice of asbestos removal in another state, territory, or country that is accepted by the disciplining body of such other state, territory, or country may be considered to be the same as a finding of guilt for purposes of a hearing conducted by the division pursuant to this subsection (2).
(III) Has been convicted of a felony or has had accepted by a court a plea of guilty or nolo contendere to a felony if the felony is related to the ability to engage in activities regulated pursuant to this part 5. A certified copy of the judgment of a court of competent jurisdiction of such conviction or plea shall be conclusive evidence of such conviction or plea. In considering the disciplinary action, the division shall be governed by the provisions of section 24-5-101, C.R.S.
(IV) Has failed to report to the division a disciplinary action specified in subparagraph (II) of this paragraph (a) or a felony conviction for an act specified in subparagraph (III) of this paragraph (a);
(V) Has failed to meet any permit and notification requirement or failed to correct any violations cited by the division during any inspection within a reasonable period of time;
(VI) Has used misrepresentation or fraud in obtaining or attempting to obtain a certificate under this part 5;
(VII) Has failed to adequately supervise an asbestos abatement project as a certified trained supervisor;
(VIII) Has committed any act or omission which does not meet generally accepted standards of the practice of asbestos abatement;
(IX) Has engaged in any false or misleading advertising.
(b) When a complaint or an investigation discloses an instance of misconduct which, in the opinion of the division, does not warrant suspension or revocation by the division but which should not be dismissed as being without merit, a letter of admonition may be sent by certified mail to the certified person against whom a complaint was made and a copy thereof to the person making the complaint, but, when a letter of admonition is sent by certified mail by the division to a certified person complained against, such certified person shall be advised that such person has the right to request in writing, within twenty days after proven receipt of the letter, that formal disciplinary proceedings be initiated against such person to adjudicate the propriety of the conduct upon which the letter of admonition is based. If such request is timely made, the letter of admonition shall be deemed vacated, and the matter shall be processed by means of formal disciplinary proceedings.
(3) A person aggrieved by an action taken by the division pursuant to subsection (2) of this section may contest the action by requesting a hearing before the division of administrative hearings within thirty days after the applicant is notified in writing of the division's action. Such hearing shall be held pursuant to section $25-$ $7-119$. Any person aggrieved by an action taken by the division of administrative hearings pursuant to subsection (2) of this section may appeal such action to the court of appeals in accordance with section 24-4-106 (11), C.R.S.
(4) In addition to or in lieu of the forms of disciplinary action authorized in subsection (2) of this section, the division, in its discretion, may require corrective education in the area of asbestos abatement as a disciplinary action against a certified person when the situation so warrants, such corrective education to be directed toward weak or problematic areas of a certified person's practice.
(5) Any certified person who violates any provision of this section, in addition to any other enforcement action available under this article, may be disciplined upon a finding of misconduct by the division as follows:
(a) In any first administrative proceeding against a certified person, a fine of not less than one hundred dollars nor more than one thousand dollars;
(b) In a second or subsequent administrative proceeding against a certified person for transactions occurring after a final agency action determining that a violation of this part 5 has occurred, a fine of not less than one thousand dollars nor more than ten thousand dollars.
(6) If a certification is revoked by the division, the person against whom such action was taken shall not apply for recertification for a period of one year after such revocation and shall be required to demonstrate compliance with any disciplinary action imposed by the division and to demonstrate competency in asbestos abatement procedures prior to receiving a new certificate.

25-7-509. Prohibition against local certification regarding asbestos abatement. Inasmuch as uniformity in the regulation of asbestos abatement practices and uniformity in the qualifications and certification of persons performing asbestos abatement is a matter of statewide concern, no certification or licensing of asbestos abatement projects nor any examination or certification of persons certified under this part 5 shall be required by any city, town, county, or city and county; however, any such local governmental authority may impose reasonable registration requirements on any person performing asbestos abatement as a condition of performing such activity within the jurisdiction of such authority. Registration fees charged by any such local governmental authority to any such person shall not exceed those costs associated with such registration requirements and functions.

25-7-510. Fees. (1) (a) The fees required pursuant to this part 5 shall be established pursuant to rules and regulations promulgated by the Commission.
(b) The Commission shall adjust the fees so that the revenue generated from such fees is sufficient to cover the division's direct and indirect costs in implementing the provisions of this part 5.
(2) All fees collected by the division pursuant to this part 5 shall be transmitted to the state treasurer, who shall credit the same to the stationary sources control fund established pursuant to section 25-7-114.7 (2) (b). The general assembly shall appropriate to the department of public health and environment, at least annually, from the fund, an amount sufficient to implement the provisions of this part 5.

25-7-511. Enforcement. (1) Whenever the division has reason to believe that any person has violated any of the provisions of this part 5 or the rules and regulations promulgated thereunder, the division may issue a notice of violation and cease and desist order. The notice of violation shall set forth the provision, rule, or regulation alleged to have been violated and the facts constituting such violation. The cease and desist order shall set forth the measures which the person shall take to eliminate the violation and the time within which these measures shall be performed. The order may require that the person stop work at the asbestos abatement project until the violation has been eliminated or may require a school to submit and implement an asbestos management plan by a date specified by the division.
(2) If the recipient of a cease and desist order issued pursuant to subsection (1) of this section fails to comply with the terms of the order within the time specified, the division may file an action in the district court of the county where the violation is alleged to have occurred requesting that the court order the person to comply with the cease and desist order. When the division alleges that the violation poses a significant danger to the health of any person, the court shall grant such action priority.
(3) Unless the division has filed an action in the district court pursuant to subsection (2) of this section, a recipient of a cease and desist order may request a hearing before the Commission to contest the cease and desist order. Such request shall be filed within thirty days after the cease and desist order has been issued. A hearing on the cease and desist order shall be held pursuant to section 25-7119.
(4) Upon a finding by the division that a person is in violation of any of the provisions of this part 5 or the rules and regulations promulgated thereunder, the division may assess a penalty of up to twenty-five thousand dollars per day of violation or such lesser amount as may be required by applicable federal law or regulation. In determining the amount of the penalty to be assessed, the division shall consider the seriousness of the danger to the public's health caused by the violation, whether or not the violation was willful, the duration of the violation, and the record of the person committing such violation.
(5) A person subject to a penalty assessed pursuant to subsection (4) of this section may appeal the penalty to the Commission by requesting a hearing before the Commission. Such request shall be filed within thirty days after the penalty assessment is issued. A hearing pursuant to this subsection (5) shall be conducted pursuant to section 25-7-119.
(6) All penalties collected pursuant to this section shall be transmitted to the state treasurer, who shall credit the same to the general fund.

25-7-511.5. Injunctive proceedings. (1) The division may, in the name of the people of the state of Colorado, through the attorney general of the state of Colorado, apply for an injunction in any court of competent jurisdiction:
(a) To enjoin any person from committing any act prohibited by the provisions of this part 5;
(b) To enjoin a certified person from practicing the profession for which he is certified under this part 5.
(2) If it is established that the defendant has been or is committing any act prohibited by this part 5 , the court shall enter a decree perpetually enjoining said defendant from further committing said act or from practicing asbestos abatement.
(3) Such injunctive proceedings shall be in addition to and not in lieu of all penalties and other remedies provided in this part 5.
(4) When seeking an injunction under this section, the division shall not be required to allege or prove either that an adequate remedy at law does not exist or that substantial or irreparable damage would result from a continued violation.

25-7-511.6. Refresher training - authorization. The Commission shall promulgate rules and regulations governing refresher training programs for persons in both school and nonschool asbestos abatement. Such programs shall not exceed the requirements of refresher training mandated under the federal "Asbestos Hazard Emergency Response Act of 1986" (Public Law 99-519), as amended, and any rules and regulations promulgated under such federal law. In adopting such rules and regulations, the Commission shall ensure that refresher training requirements are related to ensuring continuing competency in asbestos abatement procedures. The division shall implement a system of testing to measure the knowledge obtained by certified persons attending such programs.

25-7-512. Repeal of part. This part 5 is repealed, effective July 1, 2001. Prior to such repeal, the functions of the division under this part 5 shall be reviewed as provided for in section 24-34-104, C.R.S.

## Appendix C - <br> Asbestos <br> Containing Materials

## COMMON ASBESTOS CONTAINING MATERIALS*

| Adhesives | Mastic |
| :--- | :--- |
| Asphalt products | Mortar |
| Blown-in attic insulation | Oven insulation/lining |
| Blown-in wall insulation | Pipe insulation |
| Boiler insulation | Roofing felts |
| Brake pads/shoes | Roofing flashing |
| Caulking compounds | Roofing coatings |
| Ceiling tile | Plaster |
| Chimney liners | Rope |
| Clutch plates | Siding, transite |
| Concrete products | Spray-on acoustical material |
| Drywall joint compounds | Spray-on fireproofing |
| Duct expansion joints | Stair coverings |
| Duct insulation | Stucco materials |
| Duct covering | Tapes |
| Duct vibration isolators | Tar paper |
| Felt pads/material | Toaster linings |
| Fire brick/refractory | Terrazzo |
| Fire hoses | Textured paints |
| Fireproof blankets | Thermal system insulation |
| Fireproof curtains | Transite panels/pipes/sheets |
| Fireproof gloves | Trowel-on acoustical material |
| Fireproof pads | Trowel-on surfacing material |
| Furnace duct lining | Vinyl floor tile |
| Gaskets | Vinyl floor sheet goods |
| Incinerator insulation | Vinyl wall base |
| Kiln lining | Vinyl wall coverings |
| Laboratory table top | Wallboard |
| Linoleum products | Wallboard spackle compound |
| Lighting socket lining | Wall paper/coverings |
| Masonry units | Wire insulation |
|  |  |

[^0]Appendix D Asbestos Abatement Permits Issued 1993-1995

Because these permitted projects fall below the current 260/160 de minimis level requirement, they would not require a permit today for asbestos abatement.


[^0]:    *U.S. Environmental Protection Agency Region 6 January 6, 2000

