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Asbestos in Schools: The Asbestos Hazard Emergency Response Act and School Asbestos Litigation

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Asbestos in Schools: The Asbestos Hazard Emergency Response Act and School Asbestos Litigation

I. INTRODUCTION	1685
II. BACKGROUND AND HAZARDS OF ASBESTOS.....	1689
III. THE LEGISLATIVE RESPONSE	1691
A. <i>Early Legislation</i>	1691
B. <i>AHERA</i>	1692
1. Substantive Requirements of the Regulations	1692
2. Contractor Accreditation	1695
3. AHERA Remedies	1696
4. Funding	1697
C. <i>The Regulations</i>	1697
D. <i>Problems with AHERA</i>	1699
IV. SCHOOL BOARD LITIGATION	1701
A. <i>Property Damage Suits</i>	1701
B. <i>Breach of Warranty</i>	1703
C. <i>Nuisance</i>	1704
D. <i>Trespass</i>	1705
E. <i>Fraud</i>	1705
F. <i>Restitution</i>	1706
G. <i>Punitive Damages</i>	1707
H. <i>In re School Asbestos Litigation</i>	1708
V. CONCLUSION	1709

I. INTRODUCTION

Over a decade has passed since the Environmental Protection Agency (EPA) first identified asbestos as a health threat to the nation's school children in 1978.¹ The concern over asbestos in schools prompted numerous responses to this problem, including legislative solutions,² lit-

1. See, e.g., H.R. REP. No. 763, 99th Cong., 2d Sess. 15, *reprinted in* 1986 U.S. CODE CONG. & ADMIN. NEWS 5004, 5005; Advance Notice of Proposed Rulemaking for Asbestos in Schools, 44 Fed. Reg. 54,677 (Sept. 20, 1979).

2. See, e.g., Toxic Substance Control Act, Pub. L. No. 94-469, 90 Stat. 2003 (codified as amended at 15 U.S.C. §§ 2601-2654 (1982 & Supp. V 1987)) [hereinafter TSCA]; Asbestos School Hazard Detection and Control Act of 1980, Pub. L. No. 96-270, 94 Stat. 487 (codified as amended

igation,³ and the birth of a new industry to inspect, control, and abate the hazard.⁴ The results have been mixed at best. School officials, legislators, and legal commentators have criticized much of the legislation as ineffective;⁵ the litigation has added cases to a legal docket already overburdened by personal injury suits brought by individuals against asbestos manufacturers and liability insurance suits brought by manufacturers against their insurers.⁶ Furthermore, the abatement industry has often created a greater hazard than previously existed, as "rip and skip" contractors have victimized school districts with improper abatements and cleanups.⁷

The Asbestos Hazard Emergency Response Act of 1986 (AHERA)⁸ is the most recent legislative attempt to address the danger that asbestos-containing material (ACM) poses to an estimated 15 million school children and 1.4 million school employees in the 31,000 schools where ACM is found.⁹ AHERA requires school districts, including private ele-

at 20 U.S.C. §§ 3601-3611 (1982 & Supp. V 1987)) [hereinafter Hazard Detection Act]; Asbestos School Hazard Abatement Act of 1984, Pub. L. No. 98-377, tit. 5, 98 Stat. 1287 (codified as amended at 20 U.S.C. §§ 4011-4022 (Supp. V 1987)) [hereinafter ASHAA]; 40 C.F.R. § 763.100 (1988).

3. See *infra* notes 127-92 and accompanying text.

4. Whitaker, "Monster in the Closet," *TIME*, Feb. 6, 1989, at 53 (noting that the asbestos removal industry has grown from \$200 million in revenue in 1983 to more than \$2.7 billion in 1988).

5. See, e.g., *Asbestos in Schools: Hearing on H.R.J. Res. 153 Before the Subcomm. on Transportation, Tourism, and Hazardous Materials of the House Comm. on Energy and Commerce*, 100th Cong., 1st Sess. 46 (1987) [hereinafter 1987 Hearings]; H.R. REP. No. 763, *supra* note 1, at 15, reprinted in 1986 U.S. CODE CONG. & ADMIN. NEWS at 5006; S. REP. No. 427, 99th Cong., 2d Sess. 3 (1986); 132 CONG. REC. S15,069 (daily ed. Oct. 3, 1986) (statement of Sen. Quentin Burdick); Note, *Asbestos Abatement (the Insurance Crisis): A Solution Is Still up in the Ambient Air*, 38 SYRACUSE L. REV. 1343, 1344, 1349-51 (1987); Comment, *Asbestos in Schools and the Economic Loss Doctrine*, 54 U. CHI. L. REV. 277, 280-82 (1987).

6. See, e.g., *Dayton Indep. School Dist. v. National Gypsum Co.*, 682 F. Supp. 1403 (E.D. Tex. 1988); *Lac D'Amiante du Quebec, Ltee. v. American Home Assurance*, 613 F. Supp. 1549 (D.N.J. 1985).

7. See, e.g., H.R. REP. No. 763, *supra* note 1, at 15, reprinted in 1986 U.S. CODE CONG. & ADMIN. NEWS at 5006. A 1985 EPA survey indicated that up to 75% of all school cleanup work is being done improperly, causing the release of more fibers than if no abatement occurred. *Id.* See generally Whitaker, *supra* note 4, at 53. The EPA has filed suit against New York City and several contractors, charging them with violating the Clean Air Act by failing to give the EPA the required notice that asbestos removal was taking place and for handling the asbestos in a dangerous manner. *EPA's Asbestos Campaign*, NAT'L L.J., Sept. 4, 1989, at 6.

8. Asbestos Hazard Emergency Response Act of 1986, Pub. L. No. 99-519, 100 Stat. 2970 (codified as amended at 15 U.S.C. §§ 2641-2654 (Supp. V 1987) and 20 U.S.C. §§ 4011, 4014, 4021, 4022 (Supp. V 1987)) (amending TSCA, *supra* note 2, 15 U.S.C. §§ 2601-2654 (Supp. V 1987) and ASHAA, *supra* note 2, 20 U.S.C. §§ 4011-4022 (Supp. V 1987)) [hereinafter AHERA]. AHERA amended TSCA by adding provisions governing asbestos in schools. *Id.* sec. 2, § 203, 15 U.S.C. § 2643.

9. H.R. REP. No. 763, *supra* note 1, at 14-15, reprinted in 1986 U.S. CODE CONG. & ADMIN. NEWS at 5005.

mentary and secondary schools, to inspect their buildings for ACM; to prepare management plans by October 12, 1988, describing the actions they will take regarding any friable ACM found;¹⁰ and to carry out appropriate response actions¹¹ necessary to protect human health and the environment.¹² The Act also provides additional appropriations of federal funding to defray abatement costs,¹³ requires the EPA to establish a model contractor accreditation plan that states must adopt,¹⁴ and to conduct a study assessing the problem of asbestos in public and commercial buildings.¹⁵ The National Bureau of Standards is also required to establish a laboratory accreditation program.¹⁶

AHERA and the regulations promulgated pursuant to it¹⁷ represent the most ambitious and comprehensive approach to the school asbestos problem yet. Many commentators, however, question the Act's effectiveness because it fails to address adequately many of the problems that have delayed school officials in responding to the asbestos hazard.¹⁸ Foremost among these problems are the lack of adequate funding for schools to carry out inspections and abatement, and a shortage of qualified contractors to perform these tasks. Although the Act addresses the

10. Friable asbestos-containing material is defined as any ACM "applied on ceilings, walls, structural members, piping, duct work, or any other part of a building which when dry may be crumbled, pulverized, or reduced to powder by hand pressure." AHERA, *supra* note 8, sec. 2, § 202(6), 15 U.S.C. § 2642(6) (Supp. V 1987).

11. "Response actions" are defined as "methods that protect human health and the environment from asbestos-containing material." *Id.* sec. 2, § 202(1), 15 U.S.C. § 2642(11). Two primary response actions are operations and maintenance procedures (monitoring the condition of ACM through regular visual inspections and air sampling and cleaning up any fibers released) and abatement, which consists of three alternative methods: (1) removal (typically involving scraping ACM from ceilings or cutting pipe insulation under carefully controlled conditions designed to protect the workers and the building from contamination); (2) enclosure (the construction of airtight walls and ceilings around the ACM); and (3) encapsulation (the spraying of ACM with a sealant that either binds the fibers together (penetrating or binding encapsulant) or coats the surface of the ACM with an unbroken layer (bridging encapsulant)). EPA, GUIDANCE FOR CONTROLLING ASBESTOS-CONTAINING MATERIALS IN BUILDINGS 3-1 to -6, 5-1 to -10 (1985) [hereinafter EPA GUIDANCE].

12. AHERA, *supra* note 8, sec. 2, § 203, 15 U.S.C. § 2643 (Supp. V 1987).

13. *Id.* sec. 2, § 206(e), 15 U.S.C. § 2646(e); see also H.R. REP. NO. 763, *supra* note 1, at 33-34, reprinted in 1986 U.S. CODE CONG. & ADMIN. NEWS at 5024.

14. AHERA, *supra* note 8, sec. 2, § 206, 15 U.S.C. § 2646 (Supp. V 1987).

15. *Id.* sec. 2, § 213, 15 U.S.C. § 2653. EPA surveys estimate that 733,000 public and commercial buildings in the United States contain ACM. EPA GUIDANCE, *supra* note 11, at S-1. The initial EPA study found that about 500,000 of these buildings contain some friable ACM. *Implementation of the Asbestos Hazard Emergency Response Act: Joint Hearing Before the Subcomms. on Hazardous Wastes and Toxic Substances and Superfund and Environmental Oversight of the Senate Comm. on Environment and Public Works, 100th Cong., 2d Sess. 19 (1988) [hereinafter 1988 Hearings]* (statement of John A. Moore, Assistant Administrator, EPA Office of Pesticide and Toxic Substances).

16. AHERA, *supra* note 8, sec. 2, § 206(d), 15 U.S.C. § 2646(d) (Supp. V 1987).

17. EPA Asbestos Containing Materials in Schools, 40 C.F.R. pt. 763 (1988).

18. See *supra* note 5. See generally 1988 Hearings, *supra* note 15.

funding problem by increasing federal funding,¹⁹ a number of school districts continue to resort to litigation against asbestos manufacturers and installers to recover abatement costs. While AHERA responds to concerns about contractor accreditation by providing criteria making it easier for school officials to locate qualified asbestos contractors,²⁰ the response actions that the Act requires have drastically increased the demand for accredited contractors. This increased demand and the fact that many contractors cannot afford the high cost of liability insurance, have caused a shortage of contractors.²¹ As a result, many school districts have been unable to meet the statutory deadlines for developing and implementing management plans.²²

This Note discusses the problem of asbestos in schools in the context of AHERA, and the theories of recovery used in school board litigation. Part II presents a brief discussion of the hazards of asbestos. Part III examines AHERA and the regulations promulgated under it, devoting particular attention to the actions required of school authorities and changes in industry practice that the Act mandates. Part IV discusses the various theories of recovery used by school districts in litigation to recover abatement costs from manufacturers. Part V concludes that while AHERA supplies schools with much needed guidance for responding to the presence of asbestos and should enhance the quality of the abatement work performed by setting contractor accreditation standards, an even greater response is needed. AHERA relies too heavily on an industry the legislators blamed for much of the asbestos threat in schools—the asbestos abatement industry. The government should not force schools to rely on many of the same contractors deemed incapable of properly performing abatements and on litigation to provide funding for this problem.

19. Section 5 of AHERA creates an asbestos trust fund. AHERA, *supra* note 8, § 5, 20 U.S.C. § 4022 (Supp. V 1987). The trust fund will contain amounts repaid to the Treasury Department under ASHAA, *supra* note 2, § 505, 20 U.S.C. § 4014 (Supp. V 1987), and will contain proceeds from the sale of interest-bearing obligations of the United States purchased with excess funds in the trust. AHERA, *supra* note 8, § 5, 20 U.S.C. § 4022; *see also* H.R. REP. No. 763, *supra* note 1, at 13; *infra* notes 91-95 and accompanying text.

20. Section 206 of AHERA requires schools to use accredited contractors in inspections and abatements. The EPA is required to develop a model contractor accreditation plan. AHERA, *supra* note 8, sec. 2, § 206, 15 U.S.C. § 2646 (Supp. V 1987).

21. *See* 1988 Hearings, *supra* note 15, at 3, 8. *But see id.* at 23.

22. *Id.* at 3; *see also* *Broad Violations of School Asbestos Law Found*, N.Y. Times, Mar. 21, 1989, at 21, col. 1 (nat'l ed.) (reporting that the EPA estimated 20% of all schools failed to complete inspections and devise management plans by the Oct. 12, 1988 deadline mandated by AHERA). In response to concerns by local educational agencies that they would be unable to meet the October 12, 1988 statutory deadline, Congress amended TSCA, *supra* note 2, to extend the deadline until May 9, 1989 for agencies requesting a deferral. Act of July 18, 1988, Pub. L. No. 100-368, 102 Stat. 829 (1988).

II. BACKGROUND AND HAZARDS OF ASBESTOS

Asbestos is a generic term referring to several fibrous silicate minerals.²³ Noted for its incombustibility and flexibility as early as the first century, scientists and architects have considered asbestos ideal for fireproofing and insulating.²⁴ The modern asbestos industry began in the 1870s and expanded tremendously during the next century to the point that almost one half of the buildings erected in the United States from 1940 to 1970 contained asbestos.²⁵

The health hazards of asbestos have been recognized for nearly as long as people have used the mineral.²⁶ In the early 1900s medical researchers attributed a variety of lung diseases to asbestos.²⁷ There is evidence that as early as the 1930s asbestos manufacturers were aware of the health threats that the mineral posed to their workers.²⁸ Despite the growing knowledge of the asbestos hazard, production and use of the mineral continued until the EPA began banning it in 1973.²⁹

The earliest medically documented cases of asbestos-caused diseases involved asbestos factory workers exposed to high concentrations

23. See C. HURLBUT & C. KLEIN, *MANUAL OF MINERALOGY* 389, 401 (19th ed. 1977). There are six types of asbestos: chrysotile, amosite, crocidolite, anthophyllite, tremolite, and actinolite. Of these, only three, chrysotile, amosite, and crocidolite, were commonly used in insulation, with chrysotile used in 95% of all asbestos insulation. While there is no conclusive medical evidence, studies have indicated that crocidolite and amosite are more deadly than other types of asbestos. See Occupational Exposure to Asbestos, Tremolite, Anthophyllite, and Actinolite, 51 Fed. Reg. 22,626-30 (1986).

24. B. CASTLEMAN, *ASBESTOS: MEDICAL AND LEGAL ASPECTS* 1-2 (2d ed. 1986).

25. Fried, *Asbestos Regulation, Removal, and Prohibition*, in 322 P.L.I. LITIGATION AND ADMINISTRATIVE PRACTICE 115 (1987).

26. Pliny, the ancient Roman historian, wrote of slaves working around asbestos using bladder skins as respirators, apparently in response to the deaths of many slaves who had breathed the dust without protection. P. BRODEUR, *OUTRAGEOUS MISCONDUCT* 10 (1985); B. CASTLEMAN, *supra* note 24, at 1.

27. P. BRODEUR, *supra* note 26, at 11; B. CASTLEMAN, *supra* note 24, at 2-6.

28. See *Borel v. Fibreboard Paper Prods.*, 493 F.2d 1076, 1083 (5th Cir. 1973), *cert. denied*, 419 U.S. 869 (1974); P. BRODEUR, *supra* note 26, at 5; B. CASTLEMAN, *supra* note 24, at 461-527.

29. See *Hazardous Asbestos Abatement: Hearing on S. 2083 and S. 2300 Before the Subcomm. on Toxic Substances and Environmental Oversight of the Senate Comm. on Environment and Public Works*, 99th Cong., 2d Sess. 101 (1986) [hereinafter *1986 Hearings*]. The EPA banned the use of sprayed-on asbestos insulation and fireproofing containing more than 1% asbestos in buildings in 1973, and banned asbestos-containing pipe wrapping in 1975. See National Emission Standards for Hazardous Pollutants, 40 Fed. Reg. 48,292 (1975); National Emission Standards for Hazardous Air Pollutants, 38 Fed. Reg. 8826 (1973). The EPA extended the ban in 1978 to cover decorative and other applications of sprayed-on asbestos. National Emission Standards for Hazardous Pollutants, 43 Fed. Reg. 26,372 (1978). In 1986 the EPA banned the importation, manufacture, and processing of asbestos roofing and flooring felts, vinyl-asbestos floor tile, asbestos cement pipe and fittings, and asbestos clothing. The EPA also proposed to phase out all remaining uses of asbestos over the next 10 years. See *1986 Hearings*, *supra*, at 101; see also B. CASTLEMAN, *supra* note 24, at 586-88. The final rule imposed a three-stage ban on these products. 54 Fed. Reg. 29,460 (July 12, 1989).

of asbestos over long periods of time.³⁰ Medical researchers extrapolated downward from epidemiological studies performed on these workers to estimate the potential health effects on persons exposed to lower concentrations of asbestos.³¹ Several studies have indicated that smokers, children, and young adults face greater risks to asbestos-related diseases.³² The general view among medical experts is that there is no safe level of exposure to asbestos.³³

Asbestos-caused diseases are generally manifested as asbestosis, lung cancer, or mesothelioma.³⁴ Asbestosis, the most common asbestos-related disease, typically results from long-term exposure to high concentrations of asbestos and is characterized by a scarring of the lung tissue.³⁵ A less frequent exposure to lower concentrations of asbestos is believed to be capable of causing lung cancer after a typical latency period of fifteen to thirty-five years.³⁶ Mesothelioma, a rare but deadly cancer of the membrane that lines the chest and abdominal cavity, may have a longer latency period and may result from a very low-level exposure to asbestos.³⁷

Although asbestos insulation in an undamaged, undisturbed, friable state and nonfriable asbestos in good condition may not seem to present an immediate health hazard, the potential liability should concern any owner of a building containing ACM. Whether the owner chooses to take temporary protective measures, such as establishing an operations and maintenance program, encapsulation or enclosure, or chooses to remove the asbestos, the risk of liability and potentially tremendous costs

30. See, e.g., *Karjala v. Johns-Manville Prods.*, 523 F.2d 155 (8th Cir. 1975); *Borel*, 493 F.2d at 1081.

31. See, e.g., *Asbestos Information Ass'n v. OSHA*, 727 F.2d 415, 418-20 (5th Cir. 1984); EPA GUIDANCE, *supra* note 11, at 1-2. Many commentators have criticized this extrapolation as scientifically unreliable. See, e.g., *ASBESTOS IN BUILDINGS 194-98* (L. Hoyle, Jr. & S. Levy eds. 1989).

32. See, e.g., *1986 Hearings*, *supra* note 29, at 31 (statement of Roberta R. Coffin, Commissioner, Vermont Department of Health); *Occupational Exposure to Asbestos, Tremolite, Anthophyllite, and Actinolite: Final Rules*, 51 Fed. Reg. 22,612 (1986) [hereinafter *Exposure to Asbestos*]; EPA GUIDANCE, *supra* note 11, at 1-2.

Some studies have indicated a synergistic relationship between smoking and asbestos exposure in causing lung cancer; smokers exposed to asbestos stand a much greater chance of developing cancer than persons who either only smoke or are only exposed to asbestos. Hammond, Selikoff & Seidman, *Asbestos Exposure, Cigarette Smoking and Death Rates*, 330 ANNALS N.Y. ACAD. SCI. 473 (1979).

33. S. REP. NO. 427, *supra* note 5, at 2; Englund, *Based on Available Data, Can We Project an Acceptable Standard for Industrial Use of Asbestos? No*, 330 ANNALS N.Y. ACAD. SCI. 219 (1979).

34. E.g., EPA GUIDANCE, *supra* note 11, at I-1.

35. See, e.g., B. CASTLEMAN, *supra* note 24, at 11.

36. I G. PETERS & B. PETERS, *SOURCEBOOK ON ASBESTOS DISEASES: MEDICAL, LEGAL AND ENGINEERING ASPECTS B8* (1980).

37. See, e.g., *Exposure to Asbestos*, *supra* note 32, at 22,616.

to negate this risk are still present.³⁸ Furthermore, regulations under the Clean Air Act require removal of any asbestos present in a building before the building can be demolished.³⁹

The potential health risk to school children, the lack of reliable and qualified abatement contractors, and the potential liability and financial burden faced by school authorities in abating that risk created a need for effective, uniform, federal regulation. Until AHERA the government's response had been grossly inadequate.

III. THE LEGISLATIVE RESPONSE

A. Early Legislation

Congress responded initially to the school asbestos problem by enacting the 1980 Asbestos School Hazard Detection and Control Act.⁴⁰ This Act authorized funding for inspection and abatement in schools through the Department of Education, but no money was ever appropriated by Congress.⁴¹ The 1980 Act also required the Attorney General to prepare a report addressing whether the federal government could recover any amounts appropriated under the Act from liable parties.⁴²

In 1984 Congress passed the Asbestos School Hazard Abatement Act (ASHAA), which created a program to provide financial assistance to schools that were unable financially to respond to asbestos problems requiring immediate abatement.⁴³ ASHAA authorized appropriations of up to 50 million dollars in 1984 and 1985, and 100 million dollars for each of the next five years.⁴⁴ This Act established a priority system for federal assistance based on the seriousness of the threat that the asbestos posed to school children.⁴⁵

38. See, e.g., EPA Asbestos-Containing Materials in Schools: Final Rule and Notice, 52 Fed. Reg. 41,825, 41,845 (1987). The EPA estimates costs of inspections ranging from \$1144 to \$1627 per school for schools having both surfacing and thermal systems asbestos insulation; \$25 to \$47 per sample for bulk sample analysis; \$110 to \$270 per school for mapping ACM; \$1025 to \$1420 to develop a management plan where friable ACM is present; \$50 to \$640 per person for employees to attend various asbestos training courses; \$3800 to \$51,100 annually to carry out an operations and maintenance program; and \$950 to \$1400 for initial cleaning. Costs for removal of ACM vary greatly; for example, \$51,300 to remove 4000 sq. ft. of surfacing material and \$30,900 to remove 900 sq. ft. of boiler wrapping. *Id.*; see also Whitaker, *supra* note 4, at 53 (estimating the total cleanup cost for all asbestos in buildings at over \$100 billion over the next 25 years).

39. 40 C.F.R. § 61.147(a) (1988).

40. Hazard Detection Act, *supra* note 2, 20 U.S.C. §§ 3601-3611 (1982 & Supp. V 1987).

41. See ASBESTOS IN BUILDINGS, *supra* note 31, at 14.

42. Hazard Detection Act, *supra* note 2, § 8(b), 20 U.S.C. § 3607(b) (1982). The resulting report has proved influential by suggesting several theories of recovery that school districts and building owners may pursue. U.S. DEP'T OF JUSTICE, THE ATTORNEY GENERAL'S ASBESTOS LIABILITY REPORT TO THE CONGRESS (Sept. 21, 1981).

43. ASHAA, *supra* note 2, 20 U.S.C. §§ 4011-4022 (Supp. V 1987).

44. *Id.* § 512(a)(1), 20 U.S.C. § 4021(a)(1).

45. *Id.* § 505(c)(2), 20 U.S.C. § 4014(c)(2).

B. AHERA

In 1986 Congress enacted the Asbestos Hazard Emergency Response Act in response to the concern that the federal government's attempts to address the problem of asbestos in schools did not give school officials sufficient guidance in identifying and acting upon the asbestos health hazards.⁴⁶ The Act has three purposes: (1) to provide federal regulations requiring inspection for ACM and the implementation of response actions where ACM is found; (2) to require periodic reinspections of schools following response actions in cases when reinspection is appropriate; and (3) to require the EPA to conduct studies to determine if similar measures are needed in other public and commercial buildings.⁴⁷

1. Substantive Requirements of the Regulations

AHERA required the EPA Administrator to promulgate regulations within 360 days of the passage of the Act, which occurred on October 22, 1986.⁴⁸ Congress specified that these regulations must meet the statutory standard of "protect[ion of] human health and the environment,"⁴⁹ which "requires the agency to determine what actions will protect human health and the environment from actual or potential asbestos hazards."⁵⁰ The EPA, however, is not required to find a quantitative relationship between the physical condition or location of the ACM and the health risks posed by the ACM.⁵¹ The requirement that the Administrator must consider potential adverse health effects in establishing levels of protection from asbestos is a strict standard because no safe level of exposure to asbestos has ever been established.⁵² Although the legislative history referred to using the "least burdensome" methods necessary to achieve this standard, Congress clearly intended the "protection of human health and the environment" standard to

46. AHERA, *supra* note 8, 15 U.S.C. §§ 2641-2654 (Supp. V 1987).

47. *Id.* sec. 2, § 201(b), 15 U.S.C. § 2641(b); H.R. REP. NO. 763, *supra* note 1, at 14, reprinted in 1986 U.S. CODE CONG. & ADMIN. NEWS at 5004-05.

48. AHERA, *supra* note 8, sec. 2, § 203(a), 15 U.S.C. § 2643(a) (Supp. V 1987).

49. *Id.*

50. 132 CONG. REC. S15,065 (daily ed. Sept. 13, 1985). The "protection of human health and the environment" standard is the same as the standard under the Resource Conservation and Recovery Act, Pub. L. No. 94-580, 90 Stat. 2795 (codified as amended at 42 U.S.C. §§ 6901-6987 (1982 & Supp. V 1987)). This standard differs from the more lenient "unreasonable risk" standard applicable under section 6 of TSCA, *supra* note 2, 15 U.S.C. §§ 2601-2654 (1982 & Supp. V 1987). See *generally* Safe Bldgs. Alliance v. EPA, 846 F.2d 79 (D.C. Cir. 1988) (rejecting a challenge to the EPA's definition of response actions under the regulations without first determining safe exposure levels).

51. 132 CONG. REC. S15,065 (daily ed. Sept. 13, 1985).

52. See *supra* note 33.

control.⁵³

Congress intended for the AHERA regulations to cover seven areas in which the prior government response was considered inadequate.⁵⁴ First, the regulations must prescribe inspection procedures that use accredited personnel to locate any ACM present and must require that these inspections actually take place. If a school was adequately inspected prior to the passage of the Act, reinspection is not required.⁵⁵ Second, the regulations must define the appropriate response actions that schools must take when the ACM is damaged,⁵⁶ significantly damaged,⁵⁷ subject to potential damage,⁵⁸ or subject to potential significant damage.⁵⁹ The third requirement specifies that the regulations describe and require particular response actions for each type of damage. Schools are given the option of establishing an operations and maintenance program or of abating the hazard if the ACM is merely damaged or subject to potential damage.⁶⁰ Schools must perform abatement, however, if there is actual or potential significant damage.⁶¹

Fourth, the regulations must contain procedures for the safe implementation of response actions, including requirements setting standards for the protection and education of workers and building occupants.⁶² In addition, clearance standards and other postresponse measures are required to determine the completion of a response action.⁶³ The fifth requirement mandates regulations to govern repair programs and operations and maintenance programs. These programs involve regular inspections to determine changes in the condition of ACM, education of school employees regarding the location of ACM, and use of proper safety procedures when working near asbestos.⁶⁴ Sixth, the regulations must set standards for the transportation and disposal of asbestos-containing waste, including standards governing the loading and unloading of waste transportation vehicles and assuring the physical integrity of

53. 132 CONG. REC. S15,065 (daily ed. Sept. 13, 1985).

54. H.R. REP. NO. 763, *supra* note 1, at 22, reprinted in 1986 U.S. CODE CONG. & ADMIN. NEWS at 5013.

55. AHERA, *supra* note 8, sec. 2, § 203(b)(1), 15 U.S.C. § 2643(b)(1) (Supp. V 1987).

56. *Id.* § 203(c)(1)(A), 15 U.S.C. § 2643(c)(1)(A). Damage to insulation occurs when friable ACM or its covering becomes deteriorated or delaminated. *Id.*

57. *Id.* § 203(c)(1)(B), 15 U.S.C. § 2643(c)(1)(B).

58. *Id.* § 203(c)(1)(C), 15 U.S.C. § 2643(c)(1)(C). Potential damage to ACM is likely in areas regularly used by building occupants. *Id.*

59. *Id.* § 203(c)(1)(D), 15 U.S.C. § 2643(c)(1)(D).

60. *Id.* § 203(d)(2), (4), 15 U.S.C. § 2643(d)(2), (4).

61. *Id.* § 203(d)(3), (5), 15 U.S.C. § 2643(d)(3), (5).

62. *Id.* § 203(e), 15 U.S.C. § 2643(e).

63. *Id.*

64. *Id.* § 203(f), (g), 15 U.S.C. § 2643 (f), (g).

the waste containers.⁶⁵

Finally, the regulations must require schools to develop an asbestos management plan containing: (1) a description of the inspections and response actions carried out prior to the enactment of AHERA; (2) a description of the locations inspected and the results of inspections that the Act mandates; (3) a detailed description of any contemplated response actions including, at a minimum, a description of the location where the action will occur, the methods to be used, and a schedule for beginning and completing the actions; (4) a detailed description of the location of any ACM not removed during the response actions; (5) a plan for operations and maintenance activities; (6) a statement that the contractors inspecting the school and carrying out any response actions are accredited under an approved contractor accreditation plan of the state where the school is located or of any other state with an approved plan; (7) a list of laboratories that analyzed bulk or air samples⁶⁶ taken from the school and proof of their accreditation; (8) the name of each consultant contributing to the management plan and a statement of accreditation; and (9) an evaluation of the resources needed to complete response actions.⁶⁷

Local educational agencies must make management plans available for public inspection⁶⁸ and must submit the plans to the state Governor,⁶⁹ although school districts may submit a plan in stages.⁷⁰ The plan may contain a statement that an accredited asbestos contractor has prepared, assisted in preparing, or has reviewed the plan for compliance with the applicable law. To prevent conflicts of interest, however, any contractor involved in implementing the plan is not allowed to prepare or review the plan.⁷¹

65. *Id.* § 203(h), 15 U.S.C. § 2643(h).

66. The EPA has suggested that air monitoring cannot take precedence over visual inspections in determining a particular response action. EPA Asbestos Containing Materials in Schools: Final Rule and Notice, 52 Fed. Reg. 41,838 (1987) (to be codified at 40 C.F.R. pt. 763).

67. AHERA, *supra* note 8, sec. 2, § 203(i), 15 U.S.C. § 2643(i) (Supp. V 1987).

68. *Id.* § 203(i)(5), 15 U.S.C. § 2643(i)(5). Schools must notify parents, teachers, and employee organizations of the availability of the plan. *Id.*

69. *Id.* § 203(i)(6), 15 U.S.C. § 2643(i)(6); *see also id.* § 205(b), 15 U.S.C. 2645(b) (permitting governors to establish administrative procedures for reviewing management plans, and setting forth grounds for disapproval of the plans).

70. *Id.* § 203(i)(4), 15 U.S.C. § 2643(i)(4).

71. *Id.* § 203(i)(2), 15 U.S.C. § 2643(i)(2). The regulations must also require schools to attach warning labels to ACM in areas subject to routine maintenance, such as boiler rooms. *Id.* § 203(i)(3), 15 U.S.C. § 2643(i)(3).

A fallback provision was included in AHERA stating the requirements schools were to follow if the administrator failed to promulgate the regulations. Under the fallback provision, the current EPA guidance document would govern the inspections, management plans, and transportation of waste. *Id.* § 204, 15 U.S.C. § 2644. This section is now obsolete because the required regulations have been promulgated. The fallback provision allowed scanning electron microscopy (SEM) to

2. Contractor Accreditation

A cornerstone of the Act is the section requiring states to accredit all contractors who conduct inspections for ACM, propose management plans, or design or conduct response actions under state accreditation plans or pursuant to an EPA Administrator approved course.⁷² The Act requires the Administrator to develop a model contractor accreditation plan to aid states in designing contractor accreditation plans.⁷³ The plan must require contractors to participate in asbestos-related continuing education and pass an examination that may require the ability to recognize ACM, knowledge of the health hazards of asbestos, assessment of potential risks posed by asbestos in various locations, use of wet cleaning methods in response actions, proper use of respirators, and proper work practices and engineering controls. Contractors also may be examined on the proper preparation of an asbestos abatement work area, including decontamination procedures, emergency responses, air monitoring, medical surveillance requirements, proper transportation and disposal procedures, and proper housekeeping and personal hygiene practices.⁷⁴

The Administrator is also required to ensure that any EPA approved asbestos training course is consistent with the model plan.⁷⁵ A contractor may be accredited by passing a qualified course.⁷⁶ Under a grandfather provision a contractor may be accredited by having completed a qualified course and passing a qualifying test before the enactment of AHERA.⁷⁷ This grandfathered accreditation, however, expires one year after the date on which the state establishes an accreditation program.⁷⁸ AHERA also requires the National Bureau of Standards to develop an accreditation program for laboratories that analyze bulk samples of ACM and air samples.⁷⁹ A school must use accredited contractors and laboratories to receive federal funding for asbestos response actions.⁸⁰

determine ambient interior concentrations, *id.*, but the adopted regulations disallow SEM. Instead, the more expensive but more accurate transmission electron microscopy (TEM) was adopted as the preferred method of air sample analysis. 40 C.F.R. § 763.90(h)(2)(ii) (1988).

72. AHERA, *supra* note 8, sec. 2, § 206(a), 15 U.S.C. § 2646(a) (Supp. V 1987).

73. *Id.* § 206(b)(1)(A), 15 U.S.C. § 2646(b)(1)(A). The model plan is described in the regulations. See 40 C.F.R. subpt. E, app. C (1988).

74. AHERA, *supra* note 8, sec. 2, § 206(b)(1)(B), 15 U.S.C. § 2646(b)(1)(B) (Supp. V 1987).

75. *Id.* § 206(c)(1), 15 U.S.C. § 2646(c)(1).

76. *Id.* § 206(c)(2), 15 U.S.C. § 2646(c)(2).

77. *Id.*; see H.R. REP. No. 763, *supra* note 1, at 28, reprinted in 1986 U.S. CODE CONG. & ADMIN. NEWS at 5019.

78. AHERA, *supra* note 8, sec. 2, § 206(c)(2), 15 U.S.C. § 2646(c)(2) (Supp. V 1987).

79. *Id.* § 206(d), 15 U.S.C. § 2646(d).

80. *Id.* § 206(e), 15 U.S.C. § 2646(e).

3. AHERA Remedies

AHERA provides for civil penalties of up to 5000 dollars per day for violations, including failure to inspect for asbestos, submission of false information to the governor in a management plan, or failure to develop a management plan.⁸¹ The Administrator has discretion in assessing the fine and may consider the significance of the violation, the culpability of the violator, the violator's ability to pay, and the violator's ability to continue providing educational services if forced to pay a fine.⁸²

The Act provides for citizen complaints concerning violations of the Act,⁸³ for citizen petitions requesting the Administrator to issue, amend, or repeal any regulation or order under the Act,⁸⁴ and for citizen civil actions to compel the Administrator to meet deadlines in proposing rules or regulations.⁸⁵ Furthermore, the Administrator or a state Governor is authorized to take response actions if asbestos in any school "poses an imminent and substantial endangerment to human health or the environment," and the local education agency has not undertaken sufficient response actions.⁸⁶ If necessary, injunctive relief is available to respond to the hazard.⁸⁷ If forced to respond, the Administrator or Governor may seek reimbursement for costs by bringing suit in federal district court.⁸⁸

AHERA does not preempt any other state or federal law and does not preclude any court from awarding costs for abatement.⁸⁹ This provision is significant because it allows school districts to maintain suits against the manufacturers of asbestos products installed in their school buildings while allowing the school districts to seek funding from the federal government.⁹⁰

81. *Id.* § 207(a), 15 U.S.C. § 2647(a).

82. *Id.* § 207(c)(1), 15 U.S.C. § 2647(c)(1).

83. *Id.* § 207(d), 15 U.S.C. § 2647(d).

84. *Id.* § 207(e), 15 U.S.C. § 2647(e).

85. *Id.* § 207(f), 15 U.S.C. § 2647(f).

86. *Id.* § 208(a)(1), 15 U.S.C. § 2648(a)(1).

87. *Id.* § 208(b), 15 U.S.C. § 2648(b).

88. *Id.* § 208(a)(4), 15 U.S.C. § 2648(a)(4).

89. *Id.* § 209(a), (b), 15 U.S.C. § 2649(a), (b). AHERA requires the EPA to conduct a study on the availability of liability insurance for schools and asbestos contractors. *Id.* § 210(a)(1), 15 U.S.C. § 2650(a)(1). The EPA also was required to assess the problem of ACM in public and commercial buildings and report on whether Congress should subject these buildings to the same inspection and response act requirements as school buildings. *Id.* § 213, 15 U.S.C. § 2653. The EPA concluded that a major federal regulatory program like AHERA for public and commercial buildings is not presently needed. See 1988 Hearings, *supra* note 15, at 65-76 (statement of John A. Moore, Assistant Administrator, EPA Office of Pesticides and Toxic Substances). See generally Whitaker, *supra* note 4, at 53 (noting an "epidemic of fear" among the owners and tenants of a number of public and commercial buildings where ACM is present).

90. ASHAA, *supra* note 2, 20 U.S.C. §§ 4011-4022 (Supp. V 1987), provides federal funding

4. Funding

Finally, the Act increases the amounts loaned under ASHAA by twenty-five million dollars each year from 1987 through 1990, and creates an asbestos trust fund that the Secretary of the Treasury will administer.⁹¹ Amounts repaid to the Treasury for loans made to eligible school districts under ASHAA will be used to fund the trust.⁹² Because school districts have twenty years to repay the loans, money for the asbestos trust fund is not available immediately. To remedy this problem, the Treasury will advance the money for the increased authorizations each year from 1987 through 1990.⁹³ The trust fund will repay these advances to the U.S. Treasury with interest, thereby making the trust fund cost free.⁹⁴ Amounts loaned from the trust fund are available only to eligible school districts for abatement.⁹⁵

C. The Regulations

The EPA published the required AHERA regulations on October 30, 1987.⁹⁶ Though an in-depth analysis of these regulations is beyond the scope of this Note, several features of the new regulations deserve comment.

The regulations set two important deadlines for school districts. First, school districts were required to submit management plans to the state by October 12, 1988.⁹⁷ Next, the regulations set a July 9, 1989, deadline for schools to begin implementing these plans and required completion "in a timely fashion."⁹⁸ These deadlines, however, have posed problems for school districts,⁹⁹ which caused Congress to enact legislation in July 1988 extending the deadline for management plans until May 9, 1989, for school districts requesting a deferral.¹⁰⁰

The regulations require visual inspections to determine the pres-

to school districts for asbestos abatement; *see supra* notes 43-45 and accompanying text.

91. AHERA, *supra* note 8, § 5, 20 U.S.C. § 4022 (Supp. V 1987).

92. *See* H.R. REP. No. 763, *supra* note 1, at 34, *reprinted in* 1986 U.S. CODE CONG. & ADMIN. NEWS at 5024-25.

93. *Id.*

94. *Id.* at 34, *reprinted in* 1986 U.S. CODE CONG. & ADMIN. NEWS at 5025.

95. AHERA, *supra* note 8, sec. 2, § 206(e), 15 U.S.C. § 2646(e) (Supp. V 1987).

96. *See* 40 C.F.R. subpt. E (1988). The regulations were developed through the process of regulatory negotiations in which interested individuals and groups are involved with the EPA in developing the regulations.

97. 40 C.F.R. § 763.93(a)(1) (1988); *see also Broad Violations of School Asbestos Law Found, supra* note 22.

98. 40 C.F.R. § 763.93(c) (1988).

99. *See 1988 Hearings, supra* note 16, at 1-17; *Broad Violations of School Asbestos Law Found, supra* note 22.

100. Act of July 18, 1988, Pub. L. No. 100-368, § 1, 102 Stat. 829 (to be codified at 15 U.S.C. § 2645); *see also 1988 Hearings, supra* note 15, at 1-17.

ence and condition of ACM,¹⁰¹ unless the school falls under one of five exclusions,¹⁰² and require reinspections at least once every three years if friable or nonfriable asbestos is not removed.¹⁰³ School districts have the option of assuming that any friable or nonfriable insulation material is ACM, but if this assumption is not made, bulk sampling is required to determine the presence of ACM.¹⁰⁴ The number of samples required depends on the amount of insulation present.¹⁰⁵ Samples must be analyzed by polarized light microscopy (PLM).¹⁰⁶

The regulations also specify that proper completion of any abatement is determined by a visual inspection and aggressive air sampling,¹⁰⁷ using transmission electron microscopy (TEM) for sample analysis except following certain small-scale jobs when phase contrast microscopy (PCM) is still allowed.¹⁰⁸ Because of TEM's limited availability, high cost, and longer sample analysis turnaround time, its use as the required method of analysis will be phased in over a three year period.¹⁰⁹ The preference for TEM analysis represents a significant shift because TEM is far more expensive but also far more accurate than

101. 40 C.F.R. § 763.85(a)(4)(i) (1988).

102. *Id.* § 763.99. The five exclusions are: (1) no initial inspection is required in specified areas where ACM has previously been identified through bulk sampling; (2) no inspection is required if previous sampling of a specific area done in substantial compliance with the final rule indicated that no ACM was present; (3) no inspection is required where documentation indicates that all ACM was removed; (4) no inspection is required for schools built after October 12, 1988, if no ACM was specified for use in the school; and (5) schools performing previous inspections substantially complying with the rule may be granted exclusion by states receiving waivers from inspection requirements. *Id.*

103. *Id.* § 763.85(b).

104. *Id.* § 763.86(a).

105. *Id.*

106. *Id.* § 763.87. PLM is based on principles of optical mineralogy using a light microscope with polarizing filters. Identification of asbestos contained in the samples derives from the determination of optical properties displayed when the sample is treated with various dispersion staining liquids. Fiber morphology also may provide a means of identification under PLM. *Id.* § 763, subpt. F, app. A.

107. Aggressive air sampling involves the generation of air currents that dislodge free fibers to create a worst-case scenario for sampling. The EPA suggests using a leaf blower to initially dislodge the fibers, prior to starting the sampling pumps, then using a fan to keep the fibers suspended during sampling. EPA GUIDANCE, *supra* note 11, at M-3.

108. 40 C.F.R. § 763.90(i)(2) (1988). TEM uses an electron beam focused onto a thin section of the sample. As the beam passes or transmits through each area of the sample, an image resulting from the varying density of the sample is projected onto a fluorescent screen. The analyst can detect a variety of characteristics of the fiber and can determine whether the fiber is asbestos. *Id.* § 763, subpt. E, app. A.

PCM uses a light microscope equipped to provide enhanced contrast between the fibers and the background. PCM does not provide the analyst with the ability to determine if the fiber observed is asbestos or not. If the fiber fits certain criteria relating to morphology and length-to-width ratio, it is assumed to be asbestos. NAT'L INSTITUTE FOR OCCUPATIONAL SAFETY & HEALTH, MANUAL OF ANALYTICAL METHODS (3d ed. & 2d Supp. 1987).

109. 40 C.F.R. § 763.90(i)(6), (7) (1988).

PCM.¹¹⁰ TEM analysis will lengthen the time required to complete abatement projects because of the greater turnaround time and because clearance tests may fail more frequently, necessitating additional tests. This increase is because TEM is able to detect small fibers that would go undetected using PCM.¹¹¹ Thus, many areas that would test "clean" under PCM will not pass TEM, and more time and money will be spent recleaning and retesting the work area.¹¹²

D. Problems with AHERA

Although AHERA is the federal government's most comprehensive response to the problem of asbestos in schools and supplies much needed guidance to school districts, several problems undercut its effectiveness. Perhaps the most serious problem facing AHERA is a lack of accredited contractors to perform inspections, design management plans, and conduct abatements.¹¹³ A lack of qualified contractors has put many school districts hopelessly behind schedule in meeting the statutory deadlines for inspection and implementation of management plans.¹¹⁴ The problem will not be solved by any further congressional extension of these deadlines.¹¹⁵

AHERA only superficially addresses the primary cause of the lack of qualified contractors—the liability insurance crisis.¹¹⁶ AHERA requires the EPA Administrator to conduct a study of the availability of liability insurance, but the due date for the report, October 1, 1990, is over a year after the deadline to begin abatements, July 9, 1989.¹¹⁷ To adequately respond to this crisis, more aggressive measures are needed, including federal funding to offset the insurance costs and either legislative or judicial intervention to determine the proper standard of liability for asbestos contractors. Determination of the standard of liability would give the insurance industry the stability insurers claim they need to set reasonable rates.

These steps are not likely to occur in the near future. Indeed, President Reagan proposed drastic cuts in the existing level of funding

110. 52 Fed. Reg. 41,839 (1987).

111. *Id.* at 41,833. TEM is also able to distinguish asbestos fibers from other fibers, unlike PCM. This testing should improve the adequacy of the cleanup, and in some circumstances may actually reduce the need to retest areas that would show artificially high fiber counts under PCM because of the presence of non-ACM fibers. *Id.*

112. The EPA estimated the costs of compliance with the regulation to be 3.145 billion dollars. *Id.* at 41,845.

113. See 1988 Hearings, *supra* note 15, at 3, 8-9.

114. See *id.*; *Broad Violations of School Asbestos Law Found*, *supra* note 22.

115. See 1988 Hearings, *supra* note 15, at 2.

116. See Note, *supra* note 5, at 1350-51.

117. See *id.*

under ASHAA,¹¹⁸ and the courts have been unable to develop a reliable standard for contractor liability. The scope of the problem becomes apparent when one combines these factors with the fact that a great deal of uncertainty still remains about the accreditation requirements¹¹⁹ and the fact that many accredited contractors refuse to provide services to schools, opting to continue what they believe is a more lucrative service to the private sector.¹²⁰

Another weakness of AHERA is its assignment of responsibility for carrying out its mandate. Ironically, AHERA delegates responsibility to an industry that the authors of the Act blamed for the problems that led to the need for new legislation—the asbestos abatement industry.¹²¹ AHERA charges the abatement industry with the responsibility for inspections, response plans, and removals.¹²² While AHERA and the accompanying regulations provide stricter accreditation standards for contractors, many of the contractors blamed for increasing the hazard with inadequate abatements are able to satisfy comparable standards in the states where they work. It does not seem likely that the new standards will prove any more effective in excluding incompetent contractors. This increases the likelihood that some future abatements will leave the asbestos-containing school building with an even greater hazard than was present originally. Even when response actions are undertaken, disagreement over the inspection standards¹²³ and the allowable level of exposure in a “safe environment”¹²⁴ undermine the Act’s goal of providing an effective and consistent response to the asbestos hazard.

Lack of adequate funding may ultimately spell defeat for AHERA. The responses required under the Act are expensive,¹²⁵ and it seems unlikely that federal funding can compensate all schools needing financial assistance. Many schools will continue to resort to litigation against deep-pocket defendants, especially asbestos manufacturers,¹²⁶ but these deep pockets are not bottomless pits; these defendants simply do not have enough money to compensate both building owners and personal injury plaintiffs.

118. See 1987 Hearings, *supra* note 5, at 1 (statement of Rep. Thomas A. Luken) (noting that President Ronald Reagan proposed no funds for schools to clean up asbestos in 1988, and requested rescission of \$47.5 million of the \$50 million appropriated for fiscal year 1987).

119. See 1988 Hearings, *supra* note 15, at 8-9.

120. See *id.*

121. See *supra* note 7.

122. See *supra* notes 54-71 and accompanying text.

123. See 1988 Hearings, *supra* note 15, at 47 (statement of John F. Welch, President, Safe Buildings Alliance) (reporting that inspectors “couldn’t agree 67 percent of the time whether the materials were in ‘good’ or ‘significantly damaged’ condition”).

124. *Id.*

125. See *supra* note 38.

126. See *infra* notes 127-92 and accompanying text.

IV. SCHOOL BOARD LITIGATION

Faced with high abatement costs and little or no financial assistance from the government, many school districts are turning to litigation to recover inspection and abatement costs. AHERA's mandate that schools respond to asbestos problems will create an unprecedented demand for costly inspection, testing, and abatement services. The cost of these services will also rise because of the shortage of qualified contractors.¹²⁷ Some school districts needing federal funding will not receive it, even if the full amounts authorized by Congress under ASHAA and AHERA were available. Plaintiffs are naming the asbestos manufacturers as defendants, most of whom are already near the point of bankruptcy because of personal injury claims from former asbestos workers.¹²⁸ This section will survey the theories of recovery in these suits, with particular attention given to the reasons each theory has succeeded or failed.

A. *Property Damage Suits*

The most common and successful theory of recovery used by school authorities is a tort action against manufacturers to recover the cost of removal and replacement of the "defective" ACM. These actions are usually based on products liability claims under theories of negligence or strict liability.¹²⁹ Products liability claims for property damage caused by asbestos present a conceptual problem because recovery for the removal and replacement of a defective product usually is categorized as an economic loss, recoverable only in a contract warranty action.¹³⁰ School authorities could seldom recover in a contract action,

127. See, e.g., 1988 Hearings, *supra* note 15, at 3, 8; Whitaker, *supra* note 4, at 53.

128. See, e.g., P. BRODEUR, *supra* note 26, at 283-320; B. CASTLEMAN, *supra* note 24, at 620-21.

129. See, e.g., *City of Greenville v. W.R. Grace & Co.*, 827 F.2d 975 (4th Cir. 1987) (suit by city against manufacturer of asbestos fireproofing installed in city hall); *Adams-Arapahoe School Dist. v. Celotex Corp.*, 637 F. Supp. 1207 (D. Colo. 1986); *City of Manchester v. National Gypsum Co.*, 637 F. Supp. 646 (D.R.I. 1986) (dismissing several claims against the defendant manufacturer because plaintiff was unable to prove that defendant's asbestos products were actually installed in plaintiff's schools); *Town of Hooksett School Dist. v. W.R. Grace & Co.*, 617 F. Supp. 126 (D.N.H. 1984); *County of Johnson v. United States Gypsum Co.*, 580 F. Supp. 284 (E.D. Tenn. 1984), *vacated in part*, 664 F. Supp. 1127 (E.D. Tenn. 1985); *Cinnaminson Township Bd. of Educ. v. United States Gypsum Co.*, 552 F. Supp. 855 (D.N.J. 1982); *Board of Educ. v. A, C & S, Inc.*, 171 Ill. App. 3d 737, 525 N.E.2d 950 (1988).

130. See, e.g., *Seely v. White Motor Co.*, 63 Cal. 2d 9, 403 P.2d 145, 45 Cal. Rptr. 17 (1965); W. PROSSER & P. KEETON, *THE LAW OF TORTS* § 95A, at 680 (5th ed. 1984); Arness & Eliason, *Insurance Coverage for "Property Damage" in Asbestos and Other Toxic Tort Cases*, 72 VA. L. REV. 943, 945 (1986); Note, *Economic Loss in Products Liability Jurisprudence*, 66 COLUM. L. REV. 917, 918 (1966); Note, *Economic Losses and Strict Products Liability: A Record of Judicial Confusion Between Contract and Tort*, 54 NOTRE DAME LAW. 118 (1978); Comment, *Issues in School Asbestos Hazard Abatement Litigation*, 16 ST. MARY'S L.J. 951, 966-67 (1985) [hereinafter, Com-

however, because in almost every case the statute of limitations for breach of warranty would have expired, barring recovery.¹³¹

To avoid this result, most school boards have stated causes of action in tort, allowing them to use the discovery rule in many jurisdictions to delay the tolling of the statute of limitations.¹³² To recover in tort, a school must establish that the injury caused by the asbestos constitutes a physical injury rather than a mere economic loss.¹³³ This requires the school to allege that the asbestos has damaged collateral property¹³⁴ or poses a continuing injury to persons.¹³⁵ Although conceptually these allegations should not allow a school to recover for damage to the asbestos insulation, many courts have allowed such a recovery.¹³⁶ Courts have justified recovery on three grounds: (1) by noting that asbestos was only one of several products comprising the insulation, and therefore damaged the surrounding insulation;¹³⁷ (2) by describing ACM as unreasonably dangerous and defective, and thus falling outside the realm of mere economic loss;¹³⁸ or (3) by relying on public policy.¹³⁹

ment, *Issues in School Abatement*]; Comment, *supra* note 5, at 277. *But see* Santor v. A&M Karagheusian, Inc., 44 N.J. 52, 207 A.2d 305 (1965) (noting that recovery in tort is possible for economic loss).

131. *See* Comment, *supra* note 5, at 283. The Uniform Commercial Code, U.C.C. § 2-725(1) (1977), imposes a four-year statute of limitations on any action for breach of a contract for sale. A breach of warranty occurs when tender of delivery is made. Comment, *supra* note 5, at 283. Because asbestos insulation was installed in most schools prior to the 1973 EPA ban on sprayed-on asbestos, most breach of warranty actions would be barred. *But see infra* notes 145-55 and accompanying text.

132. The discovery rule delays tolling the statute of limitations until the time the plaintiff learns, or using reasonable diligence should have learned, of its cause of action against the defendant. Comment, *supra* note 5, at 284; *see, e.g.*, Corporation of Mercer Univ. v. National Gypsum Co., 24 Env't Rep. Cas. (BNA) 1953, 1956 (M.D. Ga. 1986); *Town of Hooksett*, 617 F. Supp. at 129; *Cinnaminson Township*, 552 F. Supp. at 858.

133. *See, e.g.*, *Mercer Univ.*, 24 Env't Rep. Cas. (BNA) at 1955. "In cases such as the present one where only the defective product is damaged, the majority approach is to identify whether a particular injury amounts to economic loss or physical damage. In drawing this distinction, the items for which damages are sought, such as repair costs, are not determinative. Rather, the line between tort and contract must be drawn by analyzing interrelated factors such as the nature of the defect, the type of risk, and the manner in which the injury arose." *Id.* (quoting *Pennsylvania Sand Glass Corp. v. Caterpillar Tractor Co.*, 652 F.2d 1165, 1173 (3d Cir. 1981)); Comment, *Issues in School Abatement*, *supra* note 130, at 967.

134. *See, e.g.*, *Town of Hooksett*, 617 F. Supp. at 130-32.

135. *See, e.g.*, *Cinnaminson Township*, 552 F. Supp. at 859.

136. *See, e.g.*, *City of Greenville*, 827 F.2d at 978; *City of Manchester*, 637 F. Supp. at 651; *Board of Educ.*, 171 Ill. App. 3d at 751-52, 525 N.E.2d at 959.

137. *Town of Hooksett*, 617 F. Supp. at 131.

138. *City of Greenville*, 827 F.2d at 979.

139. *See, e.g.*, *Mercer Univ.*, 24 Env't Rep. Cas. (BNA) at 1955 (suggesting that manufacturers are better able to bear the risk or to take action to correct dangerous defects in their products). *But see* Comment, *supra* note 5, (arguing that abatement costs should be classified as economic losses and that courts should not find manufacturers liable in tort because manufacturers were not aware of the risks associated with asbestos in schools when the products were manufactured and

These tort actions have been based on theories of negligence,¹⁴⁰ strict liability,¹⁴¹ or both.¹⁴² Negligence actions require schools to prove foreseeability, which requires that the manufacturers knew or should have known of the risks posed by asbestos insulation.¹⁴³ Strict liability claims are less difficult to maintain because proof of knowledge is not required. The schools must prove instead that the defect in the asbestos made the product unreasonably dangerous.¹⁴⁴

B. Breach of Warranty

Claims for breach of express or implied warranties of fitness or merchantability also are common in school asbestos litigation.¹⁴⁵ Courts have held that express warranties arise from advertisements placed by asbestos manufacturers and insulators that emphasized the strengths of asbestos, its safety, and its particular suitability for use in schools.¹⁴⁶ The implied warranties arise under the Uniform Commercial Code.¹⁴⁷ Although many school districts decline to add these contract claims because the applicable four-year statute of limitations has run,¹⁴⁸ occasionally courts have refused to bar the claims on the theory that the discovery rule applies to delay tolling the statute until the plaintiff learns of its cause of action,¹⁴⁹ or on the theory that the defendant manufacturer has fraudulently concealed the cause of action.¹⁵⁰

Manufacturers can also assert a similar defense, based on failure of the buyer school districts to give notice of any breach of warranty within a reasonable time,¹⁵¹ which has proven effective when a court has

should not be held morally responsible for failing to eliminate the hazard).

140. See, e.g., *City of Greenville*, 827 F.2d at 977; *Mercer Univ.*, 24 Env't Rep. Cas. (BNA) at 1954-55.

141. See, e.g., *County of Johnson v. United States Gypsum Co.*, 580 F. Supp. 284, 292 (E.D. Tenn. 1984), *vacated in part*, 664 F. Supp. 1127 (E.D. Tenn. 1985).

142. See, e.g., *City of Manchester*, 637 F. Supp. at 649; *Town of Hooksett*, 617 F. Supp. at 129.

143. See Comment, *supra* note 5, at 285.

144. See *id.*

145. See, e.g., *City of Greenville*, 827 F.2d at 976; *Spartanburg School Dist. v. National Gypsum Co.*, 805 F.2d 1148, 1149 (4th Cir. 1986); *Adams-Arapahoe School Dist.*, 637 F. Supp. at 1210; *Town of Hooksett*, 617 F. Supp. at 128.

146. *Town of Hooksett*, 617 F. Supp. at 131.

147. See U.C.C. § 2-314 (1977) (implied warranty of merchantability); *id.* § 2-315 (implied warranty of fitness for a particular purpose).

148. *Id.* § 2-725(1). See generally Comment, *supra* note 5, at 283.

149. See, e.g., *Town of Hooksett*, 617 F. Supp. at 131.

150. See *id.*

151. U.C.C. § 2-607(3)(a) (1977). "Where a tender has been accepted . . . the buyer must within a reasonable time after he discovers or should have discovered any breach notify the seller of breach or be barred from any remedy. . . ." *Id.*

refused to bar the claim under the statute of limitations.¹⁵² One case, however, held that the filing of the lawsuit provided sufficient notice to the defendant.¹⁵³ The court noted that the purpose of the notice requirement is to prevent commercial bad faith, not to prevent a good faith customer from recovering damages. The court also noted that defendant manufacturers have been on notice of the defects of their asbestos products for years through prior litigation and research, thus obviating the need for further notice.

Manufacturers have also asserted the state of the art defense in response to breach of warranty claims.¹⁵⁴ State of the art, however, is irrelevant in breach of warranty cases because the cause of action is based on what the defendant manufacturer actually knew about the hazards of asbestos, not what others in the industry knew or should have known.¹⁵⁵

C. Nuisance

Plaintiff school districts in a number of cases have alleged a cause of action under a nuisance theory.¹⁵⁶ Courts have invariably dismissed these claims. Nuisance is defined as "an activity which results in unreasonable interference with the use and enjoyment of another's property."¹⁵⁷ If a nuisance arises from the use of property in an unreasonable manner, the creator of the nuisance is responsible in his capacity as a property owner.¹⁵⁸ A basic element of the tort of nuisance is that the defendant must have the power and opportunity to abate the nuisance.¹⁵⁹ Because the defendant manufacturers in these cases are not property owners and have no control of the property or instrumentality creating the nuisance, however, they cannot be charged with the nui-

152. *Town of Hooksett*, 617 F. Supp. at 131-32.

153. *Adams-Arapahoe School Dist.*, 637 F. Supp. at 1210.

154. See, e.g., *Spartanburg County School Dist.*, 805 F.2d at 1149; *City of Greenville v. W.R. Grace & Co.*, 640 F. Supp. 559, 565 (D.S.C. 1986), *aff'd*, 827 F.2d 975 (4th Cir. 1987). See generally *Beshada v. Johns-Manville Prods. Corp.*, 90 N.J. 191, 447 A.2d 539 (1982) (holding that the state of the art defense is not allowable in personal injury asbestos suits based on the manufacturer's failure to warn of the hazards of asbestos).

155. *City of Greenville*, 640 F. Supp. at 564-66.

156. See, e.g., *City of Manchester*, 637 F. Supp. at 656; *Mercer Univ.*, 24 Env't Rep. Cas. (BNA) at 1957-58; *Town of Hooksett*, 617 F. Supp. at 133; *County of Johnson*, 580 F. Supp. at 294.

157. *Town of Hooksett*, 617 F. Supp. at 133 (quoting *Robbie v. Lillis*, 112 N.H. 492, 494, 299 A.2d 155, 158 (1953)). Nuisance has also been defined as "everything that endangers life or health, gives offense to the senses, violates the laws of decency, or obstructs the reasonable or comfortable use of property." *County of Johnson*, 580 F. Supp. at 294 (quoting *State ex rel. Swann v. Pack*, 527 S.W.2d 99, 113 (Tenn.), *cert. denied*, 424 U.S. 954 (1975)).

158. *Town of Hooksett*, 617 F. Supp. at 133.

159. *City of Manchester*, 637 F. Supp. at 656.

sance.¹⁶⁰ Manufacturers have no independent authority to enter school buildings to abate the hazard and as a result, the nuisance claim must fail.¹⁶¹ Courts have supported the dismissal of nuisance claims with the policy argument that to allow a plaintiff to proceed under a nuisance theory would convert almost every products liability action into a nuisance claim.¹⁶²

D. Trespass

Courts analyze and dispose of claims based on trespass in much the same manner as nuisance claims.¹⁶³ Trespass claims arise from an alleged intentional violation of the plaintiff's property from the release of asbestos fibers. These claims are dismissed because the plaintiff schools are unable to prove any intentional invasion of their property. The school, rather than the manufacturer, was responsible for the presence of the ACM in the buildings.¹⁶⁴ Therefore, the manufacturer is no longer in control of the asbestos after it is sold and cannot be held liable in trespass.¹⁶⁵

E. Fraud

Plaintiff school boards have generally been successful in proceeding against manufacturers on claims of fraud, either as a separate cause of action,¹⁶⁶ in seeking punitive damages,¹⁶⁷ or in alleging civil conspiracy.¹⁶⁸ Proof of fraud requires the plaintiff to establish that the defendant made fraudulent misrepresentations with the intent or for the purpose of causing the plaintiff to act upon them.¹⁶⁹ Fraud also may include a manufacturer's silence, which constitutes a breach of the duty

160. *County of Johnson*, 580 F. Supp. at 294. "[A]s an elementary principle of tort law, a nuisance claim may only be alleged against one who is in control of the nuisance creating instrumentality." *Id.*

161. *Id.*

162. *See, e.g., Mercer Univ.*, 24 Env't Rep. Cas. (BNA) at 1958; *County of Johnson*, 580 F. Supp. at 294.

163. *See, e.g., City of Manchester*, 637 F. Supp. at 656; *Mercer Univ.*, 24 Env't Rep. Cas. (BNA) at 1958-59; *Town of Hooksett*, 617 F. Supp. at 133.

164. *City of Manchester*, 637 F. Supp. at 656.

165. *Id.*

166. *See, e.g., Mercer Univ.*, 24 Env't Rep. Cas. (BNA) at 1959; *Town of Hooksett*, 617 F. Supp. at 133; *County of Johnson*, 580 F. Supp. at 293-94; *Board of Educ. v. A, C & S, Inc.*, 171 Ill. App. 3d 737, 755-56, 525 N.E.2d 950, 961-62 (1988) (holding that trial court erred in dismissing claims for fraudulent misrepresentation and negligent misrepresentation).

167. *See, e.g., City of Greenville v. W.R. Grace & Co.*, 827 F.2d 975, 983 (4th Cir. 1987); *County of Johnson*, 580 F. Supp. at 294.

168. *See, e.g., Adams-Arapahoe School Dist. v. Celotex Corp.*, 637 F. Supp. 1207, 1209 (D. Colo. 1986); *Town of Hooksett*, 617 F. Supp. at 133 (dismissing civil conspiracy count because plaintiff failed to allege the essential elements of the cause of action.)

169. *Town of Hooksett*, 617 F. Supp. at 132.

to warn of danger posed by asbestos.¹⁷⁰

These requirements are met in school asbestos cases when manufacturers have represented that asbestos products were safe for use in schools,¹⁷¹ but have failed to disclose data within their knowledge since the 1930s about the relationship between asbestos exposure and disease.¹⁷² Fraud also has been found when manufacturers have discouraged research and publication concerning the relationship between asbestos and cancer, beginning in the 1950s.¹⁷³ This fraudulent concealment has generally been enough to overcome a manufacturer's defense that it was unaware of any danger from exposure to low concentrations of asbestos such as those typically found in schools.¹⁷⁴ This defense has obvious merit, but the culpability of asbestos manufacturers in suppressing the evidence they had concerning the dangers of asbestos and in deterring further research into health risks from lower exposure calls into question the manufacturer's ability to assert such a defense in good faith.

F. Restitution

A split of authority has developed on the issue of whether a school district is entitled to restitution in recovering costs of removing asbestos.¹⁷⁵ Recovery of restitution damages is based on the emergency assistance doctrine,¹⁷⁶ which permits restitution in situations when the action taken was immediately necessary for health or other concerns, and the plaintiff undertook the defendant's duty to correct.¹⁷⁷ As applied to school asbestos abatements, the doctrine permits the school districts to recover restitution damages based on the theory that the asbestos insulation manufactured by the defendants created an immediate health hazard giving rise to a duty of the defendant, undertaken by the school, to abate that hazard.

The analysis of a claim under the emergency assistance doctrine seems conceptually similar to that under nuisance, and like most nui-

170. *Board of Educ.*, 171 Ill. App. 3d at 755, 525 N.E. 2d at 961.

171. *See, e.g., Town of Hooksett*, 617 F. Supp. at 132 (addressing representations made by express warranties of safety conveyed through defendant manufacturer's advertisement).

172. *Board of Educ.*, 171 Ill. App. 3d at 755, 525 N.E. 2d at 961. *See generally* P. BRODEUR, *supra* note 26, at 4-5; B. CASTLEMAN, *supra* note 24, at 461-507.

173. *Board of Educ.*, 171 Ill. App. 3d at 755, 525 N.E. 2d at 961. *See generally* B. CASTLEMAN, *supra* note 24, at 461-507.

174. *See generally* Comment, *supra* note 5, at 307.

175. *See, e.g., Adams-Arapahoe School Dist.*, 637 F. Supp. at 1207 (allowing recovery for restitution); *Board of Educ.*, 171 Ill. App. 3d at 754, 525 N.E.2d at 960. *But see Town of Hooksett*, 617 F. Supp. at 126.

176. RESTATEMENT OF RESTITUTION § 115 comment a (1937).

177. *Board of Educ.*, 171 Ill. App. 3d at 754, 525 N.E. 2d at 960.

sance claims, should fail because the defendant manufacturer has no authority to enter a school and abate the hazard. Indeed, courts have denied recovery on grounds that (1) the school district has failed to prove it was performing the defendant's duty to remove the ACM after notifying the defendant of its duty to act, and therefore, the school acted as a volunteer in the abatement,¹⁷⁸ or (2) that the doctrine applies only to quasi-contract situations and not to products liability.¹⁷⁹ Courts also have denied recovery because the school did not begin removal until one year after it learned of the presence of asbestos.¹⁸⁰ This delay has been held to remove the action from the definition of "immediately necessary" action under the emergency assistance doctrine.¹⁸¹

The courts allowing recovery have failed to address these issues and have instead focused solely on the hazard posed by the asbestos and the "emergency" action undertaken to remove it.¹⁸² The better reasoned holding is to deny recovery under the emergency assistance doctrine because an asbestos abatement, while it is a necessary response in certain situations, does not rise to the level of immediate and imperative action contemplated by the doctrine.

G. Punitive Damages

The popularity of punitive damage claims in school asbestos litigation¹⁸³ has fueled the debate over whether such damages are appropriate in mass tort litigation.¹⁸⁴ The school asbestos cases have done little to reconcile the divergent views; recovery has been allowed in some cases, but denied in others with no reason to distinguish the holdings

178. See, e.g., *Town of Hooksett*, 617 F. Supp. at 134.

179. *Adams-Arapahoe School Dist. v. Celotex Corp.*, 637 F. Supp. 1207, 1209 (D. Colo. 1986).

180. *Corporation of Mercer Univ. v. National Gypsum Co.*, 24 Env't Rep. Cas. (BNA) 1953, 1960 (M.D. Ga. 1986).

181. *Id.*

182. See, e.g., *Board of Educ.*, 171 Ill. App. 3d at 754, 525 N.E.2d at 960.

183. See, e.g., *City of Greenville*, 827 F.2d at 983; *In re School Asbestos Litig.*, 789 F.2d 996 (3d Cir.) (denying mandatory class certification for punitive damages), *cert. denied*, 479 U.S. 852, 915 (1986); *Catasauqua Area School Dist. v. Raymark Indus.*, 662 F. Supp. 64, 70 (E.D. Pa. 1987); *Mercer Univ.*, 24 Env't Rep. Cas. (BNA) at 1954; *Town of Hooksett*, 617 F. Supp. at 135; *County of Johnson v. United States Gypsum Co.*, 580 F. Supp. 284, 294 (E.D. Tenn. 1984), *vacated in part*, 664 F. Supp. 1127 (E.D. Tenn. 1985); *Cinnaminson Township Bd. of Educ. v. United States Gypsum Co.*, 552 F. Supp. 855, 863 (D.N.J. 1982).

184. See generally Morris, *Punitive Damages in Tort Cases*, 44 HARV. L. REV. 1173 (1931); Owen, *Problems in Assessing Punitive Damages Against Manufacturers of Defective Products*, 49 U. CHI. L. REV. 1 (1982); Seltzer, *Punitive Damages in Mass Tort Litigation: Addressing the Problems of Fairness, Efficiency and Control*, 52 FORDHAM L. REV. 37 (1983); Surrick, *Punitive Damages and Asbestos Litigation in Pennsylvania: Punishment or Annihilation?*, 87 DICK. L. REV. 265 (1983); Note, *The Constitutionality of Punitive Damages Under the Excessive Fines Clause of the Eighth Amendment*, 85 MICH. L. REV. 1699 (1987); Comment, *Criminal Safeguards and the Punitive Damages Defendant*, 34 U. CHI. L. REV. 408 (1967).

other than the philosophy of the particular jurisdiction towards punitive damages.

School districts base claims for punitive damages on allegations that the defendant manufacturers' failure to notify buyers of the hazards of asbestos products, when the manufacturers had such knowledge, was fraudulent, grossly negligent, or willful misconduct making punitive damages appropriate.¹⁸⁵ Furthermore, the fact that the manufacturer was selling asbestos-free substitutes in response to publicity about the health risks from asbestos at the time the ACM insulation was sold to the school may demonstrate culpable conduct.¹⁸⁶

Courts have occasionally held that the purpose of punitive or exemplary damages is not served in school asbestos litigation.¹⁸⁷ Recovery has been denied on grounds that the purpose of the action is not to punish or make an example of the manufacturer but rather to compensate the school district for costs incurred in the abatement.¹⁸⁸ This result seems appropriate because the banning of ACM in products has eliminated the need to deter future wrongdoing by making an example of the manufacturer.

H. In re School Asbestos Litigation

A number of school districts will be bound by the outcome of a nationwide class action in which the plaintiff class consists of public and private elementary and secondary schools.¹⁸⁹ The Third Circuit upheld an "opt-out" class for compensatory damages,¹⁹⁰ but decertified a mandatory class for punitive damages because the certification was based on insufficient factual findings and was underinclusive, neglecting to include personal injury claimants or nonschool property damage plaintiffs.¹⁹¹ The plaintiff class's claims are based on theories of negligence, strict liability, intentional tort, breach of warranty, concert of action, and civil conspiracy.¹⁹² Resolution of this litigation, if favorable to the school authorities, will provide some of the funding needed to proceed in abating the hazard. Even with additional funds available through government funding, however, many schools will be unable to afford the costs of responding to their asbestos problems. The school

185. See, e.g., *County of Johnson*, 580 F. Supp. at 294.

186. *City of Greenville*, 827 F.2d at 983.

187. See, e.g., *Town of Hooksett*, 617 F. Supp. at 135.

188. *Id.*

189. *In re School Asbestos Litig.*, 104 F.R.D. 422 (E.D. Pa. 1984), *rev'd*, 789 F.2d 996 (3d Cir.), *cert. denied*, 479 U.S. 852, 915 (1986).

190. *In re School Asbestos Litig.*, 789 F.2d at 1009.

191. *Id.* at 1005.

192. *Id.* at 999.

districts opting out of the class action, of course, are still free to seek the potentially greater recovery available through independent litigation, but the deep pocket of manufacturers is not bottomless, and it is possible that not every school district will be able to recover the damages claimed. The probability of this occurring is increased by the fact that many more personal injury suits will be filed against manufacturers by individuals injured from working in the asbestos industry and by the likelihood that public and commercial building owners will try to recover their abatement costs through litigation.

V. CONCLUSION

Though there may never be an end to the debate about the health risks posed by low level exposures to asbestos such as those faced by children in schools with ACM, all parties concerned must agree that the hazard should be minimized as safely and inexpensively as possible. While the asbestos in schools saga contains many success stories, the number of improper abatements and the lack of any response at all by some schools have made asbestos in schools a national tragedy. Obviously, an effective and comprehensive nationwide response is demanded. AHERA is a much needed response and goes far toward solving the problem of schools falling prey to "rip and skip" contractors who create a greater hazard rather than abating a hazard. AHERA's mandate for contractor and laboratory accreditation and the increased guidance provided for school authorities in the regulations are helpful, but the funding provisions fail to supply the amounts needed. Furthermore, the Act fails to respond adequately to the problem of contractor liability insurance.

Schools have generally achieved success in recovering costs of abatements in litigation against manufacturers but the delay and expense involved create an inefficient method of putting funds into the hands of school authorities. The current nationwide class action will bind many school districts with what may be a minimal recovery at best.

A joint commitment to increased funding by both federal and state governments is the first step. Even stricter accreditation procedures for contractors are needed to ensure adequate inspections and abatements so that schools choosing to remove asbestos can be sure that their problem has been solved completely. Stricter contractor standards should also provide a more reliable standard for contractor liability, which in turn should stabilize liability insurance rates and keep abatement costs down.

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