



A/C Pipe
Producers Association

Public Affairs Committee

TO

J. F. Welch

J. F. Welch, Director, Public Affairs

FROM

Internal Correspondence

March 26, 1981

DATE:

Legal Article

SUBJECT

ACTION REQUIRED: Review for information

The article "Legal Consequences in New Hampshire from Asbestos Contamination of Drinking Water by Asbestos Cement Pipe" by Scott F. Eaton is forwarded for information only. If you have any questions, please do not hesitate to call.

JFW/ajb

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subject-matter grasp of the judges. One can only praise Judge Friendly for this candor when he writes

I did not find the subject for what for long was my only patent opinion — women's girdles — to be unduly technical. But the courts must also deal today with a great number of patents in the higher reaches of electronics, chemistry, biochemistry, pharmacology, optics, harmonies and nuclear physics, which are quite beyond the ability of the usual judge to understand without the expenditure of an inordinate amount of educational effort by counsel and of attempted self-education by the judge, and in many instances even with it.¹³³

Increasingly, in the years to come, we shall require lawyer-scientists, lawyer-engineers, lawyer-economists, lawyer-statisticians, lawyer-informaticians, and the like, for complex patent, anti-trust, environmental, and other litigation. There would seem to be room for considerable doubt whether our law schools are paying sufficient attention to this need, either in recruiting members of these professions, or in sending signals to prospective students that prior training in them is useful and would be welcomed.¹³⁴ At the very least, the law schools would do well to instill into their students some sense of when it might be helpful to consult a specialist, and not perpetuate the pernicious notion that, once someone is trained as a lawyer, he is equipped to handle all problems and would, therefore, be wasting his time were he to study some substantive specialty.

In *Flork*, however, the failure was not in any esoteric reaches of the philosophy of science, but, rather, in those domains that — or so, in a scientific and technological age, one would have thought — had by now become assimilated as a part of the general culture. That this was not in fact so is not a good sign for the state of that culture.

¹³³ *Op. cit.* footnote 146, *supra*, at 156-157. A footnote (footnote 17, at 156) on the word "girdles" gives the citation of the case as *International Latex Corp. v. Warner Bros. Co.*, 276 F.2d 557 (2d Cir.), *cert. denied*, 364 U.S. 816 (1960).

¹³⁴ The converse progression, from the law into one of the other callings, has, of course, also been known to occur, but, in most of the cases with which the present author is familiar — not a scientifically selected sample — the motivation was not so much to combine several professions as to give up the practice of law.

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LEGAL CONSEQUENCES IN NEW HAMPSHIRE FROM ASBESTOS CONTAMINATION OF DRINKING WATER BY ASBESTOS CEMENT PIPE

SCOTT F. EATON*

I. INTRODUCTION

Nature of the Problem

According to studies by the Environmental Protection Agency (EPA), asbestos cement (A/C) pipe used in many community water systems in the United States may under certain conditions shed asbestos fibers into water supplies.¹ As a result, the consumers of the water transported by such systems may be ingesting asbestos fibers. This article considers the legal treatment of the risk in New Hampshire, where A/C pipe is used in many public water systems.² The problem is by no means limited to New Hampshire, for there are approximately 200,000 miles of A/C pipe carrying water in the United States.³ However, many of the legal aspects of the problem in New Hampshire are shared with other states.

The danger of asbestos contamination of drinking water carried by A/C pipe is in fact part of a larger problem. Water supplies can be contaminated with asbestos fibers from such other sources as asbestos

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¹ J.R. Millette, P.J. Clark & M.F. Pansing, *Exposure to Asbestos from Drinking Water in the United States*, Section 8, p. 8-9 (May, 1979) (Health Effects Research Laboratory, EPA, Office of Research and Development) (Draft Report).

² Memo from Stephen W. Leavenworth, Chief, Water Supply Division, N.H. Water Supply & Pollution Control Commission, to E. Tupper Kinder, N.H. Asst. Atty. Gen. (January 26, 1979) (memo on WSPCC posture toward asbestos contamination of water in N.H. from A/C pipe).

³ Millette, *supra* note 1, at 7.

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waste discharges from iron ore processing near Lake Superior, erosion of asbestos waste piles in Kentucky, natural erosion of asbestos bearing rock formations in California, and the asbestos tile roofs of cisterns used to collect rain for tap water.⁴ One EPA review of 1500 water samples evaluated for asbestos showed that of the 365 United States cities whose drinking water was analyzed, 20.5% had concentrations of asbestos fibers over 1 million fibers per liter (MFL).⁵ A report on this review has commented that "while this group of 365 cities cannot be considered a representative sample...., it suggests that asbestos is a contaminant in a significant number of U.S. water supplies."⁶

Samples of water collected in A/C pipe systems show various levels of contamination. A sample from the system in Dishopville, South Carolina, contained over 500 MFL of chrysotile,⁷ the major type of asbestos used in A/C pipe.⁸ Drinking water in other A/C pipe systems in Florida, Kentucky, Pennsylvania, and South Carolina contained "significant" amounts of chrysotile asbestos, that is, over 10 MFL.⁹

However, "not all A/C pipe leaches (asbestos) fibers into the water."¹⁰ Leaching action may be affected by several variables, including the existence of a lining in the pipe, the corrosivity of the water, pipe tapping for water line connections that puts asbestos debris into the water, and even hydrogen sulfide (H₂S) in well source water that may corrode the pipe.¹¹

The quality of the water is a very important determinant in fiber release, and the corrosive effects can be indicated by means of an equation producing an Aggressiveness Index (A.I.).¹² Lower values of

the index indicate greater corrosivity than higher values. (Note that for any given pH value, a lower value for log₁₀ (A × H) corresponds to an increase in corrosivity. Since A and H refer to total alkalinity and calcium hardness in mg/l, respectively, i.e., dissolved CO₂ = carbonate) and Ca++ (calcium ion), it seems reasonable to postulate that it is the solubilities of these species in water that lead to the deterioration of the pipe. Thus for a given pH, reasonably soft water would be expected to be more "corrosive" due to the enhanced solubilities of the CaCO₃ (calcium carbonate) in the pipe cement.) Where the A.I. value is less than 10, the water is "very aggressive to all types of pipe," whether A/C, cast iron, or another type, whereas the water with an A.I. value more than 12 is "essentially non-aggressive."¹³ In one study water samples were taken and analyzed for more than one year from five A/C pipe systems. "Significant numbers" of fibers were found in the two systems with A.I. values below 10, but "few fibers" were present in the three systems with A.I. values larger than 12.¹⁴ A sample of representative water systems in the United States has indicated that 52% contained water that was "at least moderately aggressive", i.e., the A.I. values were between 10 and 12, and 16.5% had water that was "very aggressive", i.e., the A.I. values were less than 10.¹⁵ An EPA review of this data stated that water supplies with very aggressive water "may have significant corrosion problems with any type of pipe used.... If A/C pipe is used, there exists the potential for

$$A.I. = pH + \log_{10} (A \times H)$$

where pH = index of acidity or alkalinity of the water in standard pH units [i.e. 7 is neutral, the lower the number less than 7, the more acidic. The higher the number, the more alkaline].

A. = total alkalinity in mg/l as CaCO₃

H = calcium hardness in mg/l as CaCO₃

... The recommendations of AWWA Standard C402-77 are:

(a) where A.I. > 12.0 use either Type I (not autoclaved) or Type II (autoclaved) pipe.

(b) where A.I. > 10, use Type II.

(c) where A.I. < 10, consult the manufacturer.

Id. at 7-8. (footnote omitted)

A report was noted by the EPA in Millette, *supra* note 1, at 9 "that the majority of A/C pipe sold in the U.S. in the last 35 years has been Type II - autoclaved and therefore more resistant to corrosion [than Type I]."

¹² *Id.* at 7-8.

¹³ *Id.* at 8.

¹⁴ *Id.*

⁴ I.J. McCabe & J.R. Millette, *Health Effects and Prevalence of Asbestos Fibers in Drinking Water*, 4 *Proceedings of the American Water Works Assoc. Annual Conference*, June 24-29, 1979.

⁵ Millette, *supra* note 1, at 1.

⁶ McCabe, *supra* note 4, at 4.

⁷ Millette, *supra* note 1, at 7.

⁸ McCabe, *supra* note 4, at 2.

⁹ Millette, *supra* note 1, at 2-4, 7.

¹⁰ Millette, *supra* note 1, at 7.

¹¹ Leavenworth, *supra* note 2, and Millette, *supra* note 1, at 7-9.

¹² Millette, *supra* note 1, at 7.

The Aggressiveness Index (A.I.) is given in the American Water Works Assoc. (AWWA) Standard C402-77 for A/C transmission and pressure pipe. The aggressiveness of the water transported through the pipe within the temperature range of 40-80°F. is determined by the formula:

consumers to be exposed to significant concentrations of asbestos in their drinking water.¹⁵

Given the variables affecting asbestos leaching action and the available results of fiber analyses, the EPA review cited above concluded that the majority of persons receiving water from A/C pipe systems "are not exposed to significant long-term concentrations" of fibers.¹⁶ However, "many residents" using A/C pipe may be exposed to "intermittent concentrations" of up to 500 MFL as the result of pipe tapping; a device to flush the debris out of the pipe instead of allowing it to enter is only a recent innovation.^{16a} In areas of aggressive water "the consumer may be exposed to asbestos fiber concentrations of from less than 1 million to over 100 million fibers per liter depending on length of pipe and flow rate."¹⁷

Health Risk

It is stated that there is "no doubt" that the inhalation of airborne asbestos fibers "significantly increases the risk of lung cancer and pleural mesothelioma."¹⁸ There is evidence to indicate the ingestion of asbestos fibers is also a health hazard, but the evidence is not as conclusive as for airborne asbestos. It is known that "generally fibers from [A/C] pipe are longer than those from natural erosion," and that "longer fibers are considered more hazardous."¹⁹ In EPA's view, "higher than expected incidence rates of peritoneal mesothelioma and of gastric, kidney, and colon cancer among workers occupationally exposed to airborne asbestos suggest that ingested asbestos may be a hazard" because many inhaled particles are ultimately swallowed at a rate estimated to be equivalent to 45 MFL contamination of water.²⁰ The Occupational Safety and Health Administration (OSHA) has recommended a lower occupational limit for airborne asbestos equivalent to 3 to 15 MFL concentration in water.²¹ Because the latency period for occupationally-induced cancer from asbestos is 20 to

30 years,²² the relationship between asbestos ingestion and disease is difficult to establish.

Several studies have been done or are under way, including a federally-sponsored animal feeding study,²³ on the health risk of ingested asbestos. EPA also has an ongoing study relating cancer rates with water-borne asbestos in Duluth, Minnesota and other communities affected by amphibole asbestos fibers from mine tailings in Lake Superior. Earlier studies were not conclusive.²⁴ A report on an EPA grant analyzing cancer incidence and chrysotile asbestos fiber concentrations in drinking water in five California counties indicated that little of the cancer was associated with asbestos exposure. However, there was a "statistically significant association."²⁵ A similar preliminary study in the Puget Sound region was inconclusive, but a more precise study is underway. Another is being conducted in Pensacola, Florida.²⁶

The EPA has established water quality criteria for 65 toxic pollutants, including asbestos, pursuant to the requirement of Section 304(a)²⁷ of the Clean Water Act (CWA).²⁸ The water quality criteria for those toxic pollutants that are carcinogens or suspected carcinogens, like asbestos, are given as concentrations in water corresponding to incremental risks of cancer.²⁹ However, since there is no known safe concentration of a carcinogen, "the recommended concentration of asbestos in water for maximum protection of human health is zero."³⁰ Primarily based on occupational studies of airborne asbestos that is swallowed, the concentration and risk levels for asbestos, assuming a lifetime exposure from drinking water, are 300,000 fibers/liter for a "probability of one additional case of cancer

²² *Id.* at 8.

²³ *Id.* at 2.

²⁴ *Id.* at 8.

²⁵ *Id.* at 9.

²⁶ *Id.*

²⁷ 33 U.S.C.A. §1314(a) (1978).

²⁸ 33 U.S.C.A. §§1251 et. seq. (1978).

²⁹ 44 Fed. Reg. 56,628, 56,634 (1979). Such criteria are not regulations, although they may be used to develop enforceable standards under the CWA. 44 Fed. Reg. 15,922 (1979). The CWA does not regulate drinking water tap standards, however, and the criteria are not to be viewed as such standards. 44 Fed. Reg. 15,926, 15,927 (1979). The CWA itself is thus not available to address the contamination of drinking water from A/C pipe. The list of toxic pollutants is to be codified in 40 C.F.R. 301.15.

³⁰ 44 Fed. Reg. 56,628, 56,634 (1979).

¹⁵ *Id.*

¹⁶ *Id.* at 9.

^{16a} *Id.*

¹⁷ *Id.*

¹⁸ McCabe, *supra* note 4, at 1.

¹⁹ *Id.* at 11.

²⁰ *Id.* at 1-2.

²¹ *Id.* at 3, 11. "The general population exposures are usually kept well below the occupational exposure by a factor of 10 to 100." *Id.* at 11.

for every 100,000 people exposed," 30,000 fibers/liter for a probability of one in one million, and 3,000 fibers/liter for a probability of one in 10 million.³² Multiplying or dividing these figures by multiples of 10 can produce concentrations related to other levels of risk.^{32c}

The Response of the Federal Government

The EPA and the Consumer Product Safety Commission (CPSC) are beginning to consider generally the problem of asbestos in the environment. The EPA has begun an investigation of asbestos-containing products and has requested public comments³³ on proposed regulatory approaches under the Toxic Substances Control Act (TSCA), which gives the Agency authority to regulate the manufacture, processing, distribution, use, and disposal of a chemical substance or mixture found to pose an unreasonable risk to health and the environment.³⁴ Pursuant to its authority over consumer products, which apparently include A/C pipe, the CPSC is following the same procedure of requesting public comment on its proposed regulatory approach.³⁵ However, the EPA is focusing initially on asbestos-containing paper and friction products, stating that if A/C pipe were studied now, the promulgation of regulations for the former two categories would be delayed.³⁶ The EPA believes that the background information which the Agency has begun to gather will be relevant to the A/C pipe problem in any case.³⁷ It is considering a ban on nonessential uses of asbestos and an essential use exemption to a ban.³⁸ The CPSC is committed to avoiding conflict with EPA authority in regulating asbestos.³⁹ The request of the CPSC for public comment seems in any event to be directed more toward household products containing asbestos.⁴⁰

³² 44 Fed. Reg. 56,628, 56,634, 56,635 (1979).

^{32c} *Id.*

³³ 44 Fed. Reg. 50,061 (1979). Public comment period extended, 44 Fed. Reg. 73,127 (1979).

³⁴ 15 U.S.C.A. §85601 et. seq. (Supp. 1979).

³⁵ 44 Fed. Reg. 60,057 (1979). Public comment period extended, 44 Fed. Reg. 73,121 (1979). In the original request for public comment, A/C pipe was included in a list of consumer products containing asbestos, 44 Fed. Reg. 60,057, 60,061 (1979).

³⁶ 44 Fed. Reg. 60,155, 60,156 (1979).

³⁷ 44 Fed. Reg. 60,155, 60,157 (1979).

³⁸ 44 Fed. Reg. 73,127 (1979).

³⁹ 44 Fed. Reg. 60,056 (1979).

⁴⁰ See 44 Fed. Reg. 60,057 (1979).

The EPA has the authority under Section 1412³² of the Safe Drinking Water Act (SDWA)³⁷ to promulgate, as required to protect the public health, revised national primary drinking water regulations that establish maximum contaminant levels or require appropriate treatment techniques to control drinking water contaminants. The EPA has proposed an amendment to the National Interim Primary Drinking Water Regulations (NIPDWR) to direct community water supply systems to implement corrosion control programs, but the controls are not specified.³⁸ The Agency has not established a maximum contaminant level for asbestos in drinking water. However, it has proposed to establish the A.I. index or other indices as a maximum contaminant level and is considering the establishment of revised national primary drinking water regulations to control asbestos.³⁹ As indicated in a memorandum of understanding with the Food and Drug Administration (FDA), the EPA intends to study health risks posed by direct and indirect additives to drinking water, including those from pipe.⁴⁰ The NIPDWR contain turbidity standards⁴¹ that relate indirectly to asbestos contamination by requiring filtration systems. However, the systems reduce only natural-occurring asbestos in drinking water.⁴²

The Problem in New Hampshire and the State's Response

The total amount of A/C pipe in New Hampshire is not known. Because no records of its use are kept at the state level, questioning the persons responsible for each public water system would be necessary to obtain the answer.⁴³ Some estimate of the use is possible, however. The state has approximately 120 large municipal water

³⁶ 42 U.S.C.A. §300g-1 (Supp. 1978).

³⁷ 42 U.S.C.A. §300f et seq. (Supp. 1978).

³⁸ 44 Fed. Reg. 42,246, 42,258 (1979) (to be codified in 40 C.F.R. 141.30). However, the EPA has promulgated secondary maximum contaminant levels for corrosivity and pH value that are designed, as part of the National Secondary Drinking Water Regulations established pursuant to Section 1412 of the SDWA, to protect the "public welfare", i.e. the color, taste, and odor of drinking water. These levels are not enforceable by the EPA and are only guidelines for the states, which may establish higher or lower levels depending upon local conditions. The level for corrosivity is simply that which is "noncorrosive", and the level for pH value is 6.5 to 8.5. 44 Fed. Reg. 42,195, 42,198 (1979) (to be codified in 40 C.F.R. 143.3).

³⁹ 44 Fed. Reg. 60,155, 60,156 (1979).

⁴⁰ 44 Fed. Reg. 42,775, 42,777 (1979).

⁴¹ 40 C.F.R. 141.13 (1979).

⁴² 44 Fed. Reg. 60,155, 60,156 (1979).

⁴³ Leavenworth, *supra* note 2.

supplies.⁴¹ In the last 20 years most of the new installations and repairs of water mains have used either cast iron pipe with Portland cement or bituminous linings or asbestos cement pipe with a bituminous lining.⁴² The A/C pipe has been popular because of its low cost.⁴³

The New Hampshire Water Supply and Pollution Control Commission (WSPCC), charged with the duty to protect the public health⁴⁴ and to require any treatment necessary to ensure the safety and fitness of public water supplies,⁴⁵ has required since 1958 that all new A/C pipe laid in the state be coated with an inner protective lining, originally a bituminous seal coat, in order to prevent corrosion caused by leaching action upon the lime constituents contained in the pipe.⁴⁶ However, the WSPCC does not know how much pipe in New Hampshire is lined or unlined.⁴⁷ The water in New Hampshire is soft and acid.⁴⁸ The pH value has been estimated at 6.0 to 6.5, but the actual A.L. index has not been calculated for the water in the state.⁴⁹ An acidic pH value is an indicator of aggressiveness.

The addition to the water supply of so-called "sweetening" agents like lime or sodium hydroxide can raise the pH level and lower the degree of acidity in the water, thus lessening the leaching action and corrosion.⁵⁰ The towns of Berlin, Concord, Dover, and Durham have taken this step. The primary purpose, however, may not be to reduce asbestos leaching from A/C pipe but instead to guard against the release of iron from cast iron pipe used in the towns' systems. Iron se-

questration by the addition of phosphate compounds in the water and filtration to remove iron are also used in towns in the state.⁵¹

Pursuant to Section 1413(a)⁵² of the SDWA, the WSPCC has had the primary enforcement responsibility since late August of 1978⁵³ to enforce the EPA regulations and standards of the SDWA. The state agency may also set up its own regulations and standards under Section 1414.⁵⁴ It has not done so for asbestos. Instead the Commission is waiting for the EPA to act, believing, on the one hand, that "there is too little data to demonstrate a level of asbestos particles in drinking water which should be established," and, on the other hand, that it does not have the budget or laboratory facilities to perform "proper and complete analysis for asbestos particles."⁵⁵ The EPA has provided no grants to states to study the asbestos contamination problem.⁵⁶ Finally, the WSPCC believes that any information they would obtain would be of "questionable value" and could be "misleading."⁵⁷

II. COMMON LAW CAUSES OF ACTION

Potential common law causes of action against asbestos contamination are limited. Their usefulness is at best confined to suits against the individual officials responsible for local water supplies. At the state and federal levels statutory grounds for suit provide a sounder basis for legal action.

Suing in negligence would be likely to founder on two points. The first is inability to prove an injury caused by the leaching action upon A/C pipe, and the second is inability to prove a lack of reasonable care on the part of the officials in selecting and continuing to use the pipe. Proving an injury caused by asbestos fibers would be an insurmountable hurdle inasmuch as even the EPA has not determined the effects of ingestion of asbestos fibers beyond stating that there is evidence of a danger to health. (The significance of absence of such causal connection in suits against the state or federal government is separately dealt with below.) Similarly, showing lack of due care on the part of officials would likely prove impossible. Since the dangers from airborne asbestos, much less water-borne asbestos, were not commonly

⁴⁴ Harris, *Asbestos in Drinking Water*, New Hampshire Times, January 24, 1979, at 22.

⁴⁵ Interview with Stephen W. Leavenworth, Chief, Water Supply Division, N.H. Water Supply & Pollution Control Commission, and the author, in Concord, N.H., January 6, 1980.

⁴⁶ Leavenworth, *supra* note 2.

⁴⁷ N.H.R.S.A. §148-B:7 (Supp. 1979).

⁴⁸ N.H.R.S.A. §145:22 (Supp. 1979).

⁴⁹ Letter from W.A. Healey, Director, Sanitary Engineering, to Dr. Mary M. Atchison, Secretary, N.H. State Board of Health (May 22, 1958) (memo on rule pertaining to protective coating for water supply pipe). The requirement is to be codified as a regulation WS 30702 Leavenworth, *supra* note 45.

⁵⁰ Leavenworth, *supra* note 45.

⁵¹ Healey, *supra* note 49. "... most supplies in [New Hampshire] tend to be soft and acid, a combination of course resulting in a leaching action upon the lime constituents contained in the pipe lining." *Id.*

⁵² Leavenworth, *supra* note 45.

⁵³ *Id.*

⁵⁴ *Id.*

⁵⁵ 42 U.S.C.A. §300g-2(a) (Supp. 1978).

⁵⁶ [1978] 9 *Envir. Rep.* (BNA) 844.

⁵⁷ 42 U.S.C.A. §300g-3 (Supp. 1978).

⁵⁸ Leavenworth, *supra* note 2. The laboratory facilities can identify only larger particles, *id.*

⁵⁹ Leavenworth, *supra* note 45.

⁶⁰ Leavenworth, *supra* note 2.

known until recently. Water supply officials could probably defend easily against an attack on their reasonable care in the selection and use of the pipe. The lack of conclusive data to show injury or even exposure to an abnormal or serious harm would defeat a suit for injury based on strict liability in tort.

An injunction to abate or stop a continuous, private nuisance is predicated on "an unreasonable interference with the use and enjoyment of another's property."⁶¹ The contamination of public drinking water may interfere with that enjoyment. However, one must show a substantial harm in order to prevail in such a suit. The degree of injury must be objectively measured,⁶² nearly an impossibility unless the plaintiff has already suffered a measurable health detriment. Given the long time between exposure to contaminants and the onset of asbestos-induced cancer, the injury is not likely to be evident now. The requirements that the interference be either "intentional and unreasonable" or "unintentional and otherwise actionable" under principles of negligence or "abnormally dangerous conditions or activities" could not be satisfied for the same reasons they could not be satisfied in a negligence or strict liability action: the absence of conclusive data showing that ingested asbestos fibers cause disease and the absence of data on asbestos levels in New Hampshire water supplies.

A public nuisance has been defined as an "unreasonable interference with a right common to the general public," such as the health and safety of the community.⁶³ Normally the doctrine requires that an individual claimant prove harm of a kind different from that suffered by other members of the public protected by the right. An injunction brought against town water supply officials to abate the public nuisance could avoid this requirement.⁶⁴ A court could order "sweeteners" to be added to the water to raise the pH level and lessen the leaching problem. However, the difficulty of making the necessary causal connections, as discussed above, pertains here as well.

III. STATE STATUTORY REMEDIES

The New Hampshire Water Supply and Pollution Control Commission (WSPCC) has the authority to investigate the sanitary condi-

⁶¹ *Robbie v. Lillis*, 112 N.H. 492, 495, 299 A.2d 155, 158 (1972).

⁶² *W. Rodgers, Environmental Law* 107 (1977).

⁶³ *Id.* at 107, n.2 *Restatement (Second) of Torts* §922, at 22 (Tent. Draft No. 17, 1971).

⁶⁴ *Robbie v. Lillis*, *supra* note 61.

⁶⁵ *Robbie v. Lillis*, *supra* note 62, at 105, 106 referring to *Restatement (Second) of Torts* §922(1), (2).

tion and methods pertaining to the distribution of any New Hampshire public water supplies for domestic use and to require any treatment necessary to ensure their fitness and safety.⁶⁶ The WSPCC also has the duty to adopt regulations to ensure compliance with drinking water standards and to protect the public health.⁶⁷

Although New Hampshire has primary enforcement responsibility for the EPA's drinking water standards and regulations under §1413(a)⁶⁸ of the Safe Drinking Water Act (SDWA), the State is not required to act on water-borne asbestos without some standard or requirement to enforce. Section 1414(e)⁶⁹ of the Act allows the State to set up regulations other than those the EPA has promulgated, provided they are no less strict than the federal standards.

By its intra-agency memorandum of 1958 and subsequent requirement that all new A/C pipe laid in New Hampshire have an interior lining, the WSPCC has indicated it agrees there is a problem of pipe decay if not a potential health problem. Thus one avenue of public action is to request the Commission to promulgate a rule⁷⁰ that all community water systems in New Hampshire with A/C pipe use a "sweetener" to lower the degree of acidity of the water, citing the EPA's statement that the "release of fibers... can be controlled by conditioning the water,"⁷¹ if the Commission denies the request, a petition for rehearing can be made⁷² on the ground that the denial

⁶⁶ N.H.R.S.A. §148:22 (Supp. 1979).

⁶⁷ N.H.R.S.A. §148-B:7 (Supp. 1979).

⁶⁸ 42 U.S.C.A. §300g-2(a) (Supp. 1978). The federal regulations were adopted by New Hampshire pursuant to N.H.R.S.A. 148-B:5 (Supp. 1979), which mandates identification of contaminants and creation of maximum contaminant levels or treatment techniques as well as monitoring procedures.

⁶⁹ 42 U.S.C.A. §300g-3(e) (Supp. 1978).

⁷⁰ N.H.R.S.A. §541-A:8 (1974). "An interested person may petition an agency requesting the promulgation, amendment, or repeal of a rule... Within thirty days after submission of a petition, the agency shall either deny the petition in writing, stating its reasons for the denial, or shall initiate rule-making proceedings." *Id.*

⁷¹ McCabe, *supra* note 4, at 12. See the EPA guidelines to states on corrosivity and pH value in drinking water, note 38.

⁷² N.H.R.S.A. §541:3 (1974).

Within twenty days after any order or decision has been made by the commission, any party to the action or proceeding before the commission or any person directly affected thereby, may apply for a rehearing in respect to any matter determined in the action or proceeding, or covered or included in the order, specifying in the motion for rehearing the ground therefor, and the commission may grant such rehearing if in its opinion good reason therefor is stated in said motion. *Id.*

was unreasonable. Further appeal can be taken from the Commission's decision to the state Supreme Court.⁷³ Although the state statutes on judicial review do not specifically address standing, a rehearing petitioner must be a party to the original action or "directly affected thereby,"⁷⁴ and any person whose rights may be "directly affected" by the appeal may join and become a party.⁷⁵ Presumably an allegation of injury, a traditional requirement of standing, would be necessary in an appeal before the Court. The requirements of proof state that the order of the Commission will be upheld unless "by a clear preponderance of the evidence... such order is unjust or unreasonable."⁷⁶ The current data on asbestos in water makes it difficult to clear these evidentiary hurdles. The decision to open rule-making is discretionary, as it is a matter of judgment of the Commission. The decision to deny a petition for rule-making must be unreasonable, that is, an abuse of discretion, before the court will overrule the agency.⁷⁷

The WSPCC could also be petitioned to institute a ruling banning the installation of A/C pipe entirely. However, by weighing the economic costs against the lack of conclusive evidence of the effects of asbestos in drinking water the Commission could deny the petition without risk of a judicial overruling for unreasonableness.

A third petition could be made that the WSPCC at least begin a monitoring program for asbestos. Although the Commission is currently waiting for EPA action and has stated that sampling information would be of questionable value, the state agency's duty does not allow it to remain passive in the face of a potentially serious problem. As stated in an EPA report, "elaborate electron microscope counts of fibers are not necessary to know that a problem exists."⁷⁸ A court

⁷³ N.H.R.S.A. §143-B:11 (Supp. 1979) allows appeal specified in N.H.R.S.A. §541:6 (1974).

⁷⁴ N.H.R.S.A. §541:3 (1974), *supra* note 72.

⁷⁵ N.H.R.S.A. §541:8 (1974).

⁷⁶ N.H.R.S.A. §41:13 (1974).

Upon the hearing the burden of proof shall be upon the party seeking to set aside any order or decision of the commission to show that the same is clearly unreasonable or unlawful, and all findings of the commission upon all questions of fact properly before it shall be deemed prima facie lawful and reasonable, and the order of decision appealed from shall not be set aside or vacated except for errors of law, unless the court is satisfied, by a clear preponderance of the evidence before it, that such order is unjust or unreasonable. *Id.*

⁷⁷ *Id.* *See, e.g.,* *Administrative Law* 689-610 (1976).

⁷⁸ *Id.* *See, e.g.,* *supra* note 4, at 12.

reviewing the reasonableness of agency action should consider this factor.

IV. FEDERAL STATUTORY REMEDIES

The remaining bases on which to initiate action are at the federal level, particularly under the Toxic Substances Control Act (TSCA)⁷⁹ and the Safe Drinking Water Act (SDWA).⁸⁰

Toxic Substances Control Act

The fact that the EPA has now begun a broad investigation of the asbestos problem and is requesting information and considering various regulatory approaches⁸¹ under TSCA presents both opportunities and problems for the citizen seeking action to prevent contamination of drinking water from A/C pipe.

The EPA has admitted that "many sources of exposure to asbestos may present unreasonable health risks because of serious adverse health effects and the large numbers of people subject to exposure."⁸² The EPA feels that under TSCA the Agency has authority "to weigh overall risks presented by the entire asbestos life cycle, from mining to final disposal," and intends to use this authority "to assess whether exposure to asbestos throughout its life cycle presents an unreasonable risk to human health."⁸³ Under Section 6(a)⁸⁴ of the Act, the EPA may prohibit the "manufacturing, processing, or distribution in commerce" of a chemical substance that "presents or will present an unreasonable risk of injury to health or the environment." The Agency may prohibit certain uses, limit the amount of such substance that is manufactured, processed, or distributed, and require appropriate labels and record keeping.⁸⁵ Under Section 5(a)⁸⁶ the EPA can require manufacturers to submit pre-manufacturing notification for significant new uses of a chemical. The EPA anticipates that "most asbestos regulatory action" will be under Section 6(a) of TSCA, although Section 5(a) may be used where "appropriate."⁸⁷

⁷⁹ 15 U.S.C.A. §2601 et seq. (Supp. 1979).

⁸⁰ 42 U.S.C.A. §300f et seq. (Supp. 1978).

⁸¹ 44 Fed. Reg. 60,061 (1979).

⁸² 44 Fed. Reg. 60,061, 60,062 (1979).

⁸³ *Id.*

⁸⁴ 15 U.S.C.A. §2605 (a) (Supp. 1979).

⁸⁵ *Id.*

⁸⁶ 15 U.S.C.A. §2604 (a) (Supp. 1979).

⁸⁷ 44 Fed. Reg. 60,061, 60,063 (1979).

In June of 1979 a citizen petitioned the EPA as allowed under Section 21(a)⁸⁸ of the Act to request that the Agency initiate a proceeding for the issuance of a rule under Section 6(a) of TSCA "to prohibit further manufacture and distribution" of A/C pipe.⁸⁹ The EPA under Section 21(b)⁹⁰ must either grant or deny such petitions within 90 days and, if denial occurs, publish the reasons for the denial. The EPA granted the petition but only by stating that it plans to investigate A/C pipe as part of the Agency's broad asbestos regulatory program, and it noted that "granting a petition to initiate a proceeding to issue a rule does not mean" that the Agency "will promulgate or even propose a rule."⁹¹

The response of the EPA to the citizen's petition and its announcement of its approach to asbestos regulation indicate that the risks of A/C pipe have no higher standing with the Agency than the risks with any other asbestos product. Indeed, EPA believes that analyzing the A/C pipe problem now would delay its investigation's current focus on asbestos-containing paper and friction products.⁹² EPA feels that the background information it has begun to gather on asbestos, such as on the health risk associated with ingested asbestos, will be relevant to the control of asbestos cement products.⁹³ However, this general approach does not attack the A/C pipe problem directly. For example, it does not address the pipe's propensity to shed asbestos fibers under aggressive water conditions and other circumstances. "Detailed scientific and socio-economic analyses related to A/C pipe" will not be completed until after the first rules on asbestos regulation tones concerning asbestos-containing paper and friction products) have been proposed.⁹⁴

Within the statutory discretion of the EPA the A/C pipe questions may remain unanswered for some time. The Agency can legitimately respond to any new petition requesting action on A/C pipe under Section 21 of TSCA that the Agency is pursuing the matter, as it has judged that a broad approach to asbestos regulation is better than one geared to specific asbestos products.⁹⁵ Yet EPA has in the past held

that some existing asbestos products, such as asbestos insulation in schools and other buildings, are amenable to specific evaluation and control, including, under Section 5(a) (5)⁹⁶ of TSCA, a proposal to remove the insulation if necessary to safeguard the health of building occupants.⁹⁷

Under Section 21 (b) (4) (A)⁹⁸ of TSCA a citizen may commence a civil action in federal district court to compel the EPA to initiate a rule-making proceeding, such as one directed specifically to A/C pipe for which the EPA has denied a petition filed pursuant to Section 21 (a). The judicial process is a *de novo* proceeding. According to Section 21 (b) (4) (B)⁹⁹ the petitioner will prevail in requiring the EPA to initiate a proceeding for the issuance of a rule under Section 6 (a) if he can show by a preponderance of the evidence that there is a reasonable basis for concluding that issuing such a rule is "necessary to protect health or the environment against an unreasonable risk of injury." But if the risk to health or environment is less than that with respect to which the EPA is taking action under TSCA and if the EPA's resources are "insufficient" to do what the petitioner requests the court may permit the Agency to defer initiating the requested action.

The person who petitions the Agency to initiate a proceeding for the issuance of a rule specifically on A/C pipe will almost certainly fail, given the current state of information about A/C pipe containing drinking water and the fact of ongoing EPA investigations of asbestos. However, the existence under Section 21 of the Act of the right to petition and to contest the denial of the petition gives the citizen the means continually to spur the Agency to address A/C pipe issues and to defend its posture as the investigation of asbestos progresses and the volume of information available to the Agency increases. It must be remembered that under TSCA, as EPA has stated, "the risk presented by a chemical may be considered unreasonable if its potential adverse health and environmental effects outweigh the effects of contemplated regulatory action on the benefit of the substance."¹⁰⁰

The citizen-suit provisions of Section 201⁰¹ allow any person to commence a civil action against any person violating a provision

⁸⁸ 15 U.S.C.A. §2065 (a) (5) (Supp. 1979).

⁸⁹ 44 Fed. Reg. 54,676, 54,677 (1979).

⁹⁰ 15 U.S.C.A. §2620 (b) (4) (A) (Supp. 1979).

⁹¹ 15 U.S.C.A. §2620 (b) (4) (B) (Supp. 1979).

⁹² 44 Fed. Reg. 60,155 (1979).

⁹³ 15 U.S.C.A. §2619 (Supp. 1979).

⁸⁸ 15 U.S.C.A. §2620 (a) (Supp. 1979).

⁸⁹ 44 Fed. Reg. 60,155 (1979).

⁹⁰ 15 U.S.C.A. §2620 (b) (Supp. 1979).

⁹¹ 44 Fed. Reg. 60,155 (1979).

⁹² 44 Fed. Reg. 60,155, 60,156, 60,157 (1979).

⁹³ 44 Fed. Reg. 60,155, 60,156, 60,157 (1979).

⁹⁴ *Id.*

⁹⁵ 44 Fed. Reg. 60,061, 60,062 (1979).

the Act and against the Administrator of EPA to compel him to perform any act or duty under TSCA that is not discretionary. Rule-making is discretionary as it is within the Administrator's judgment and is thus outside the bounds of a citizen suit under Section 20. However, the Administrator may be required to enforce existing rules and regulations.

The comment period on EPA's initiation of the regulatory process on asbestos was extended an additional 60 days beyond the original 60-day period while the EPA also solicited comment on a proposed ban on non-essential uses of asbestos.¹⁰² Similar extensions are not unlikely in the months ahead as more rules on asbestos are proposed. In the extension announcement the EPA stated that in proposing a rule it would consider "all relevant information to the extent possible even if that information is submitted after the close of the comment period."¹⁰³ Comments on rule-making proposals are the easiest way for citizens to propose advice and supply information on the A/C pipe problem. If the EPA continues to accept relevant information on proposed rules after comment periods have expired, the opportunity for citizen input on the regulation of asbestos will be effectively continuous.

The SDWA and Judicial Environmental Standards of Risk

Except for the unlikely alternative of ordering the removal of existing A/C pipe, as contemplated by EPA for asbestos insulation in schools, TSCA does not provide ways to address the problem of continuing contamination of drinking water by A/C pipe already in the ground. The SDWA may fill this gap and thus give petitioners some relief outside of TSCA. However, the corrosion control rule proposed by EPA¹⁰⁴ as an amendment to the National Interim Primary Drinking Water Regulations under Section 1412¹⁰⁵ of the SDWA has not been promulgated, and, in any case, does not require designation of corrosive waters by the states and implementation of corrosion control measures (as yet unspecified) until 18 months after promulgation.¹⁰⁶

¹⁰² 43 Fed. Reg. 73,127 (1978).

¹⁰³ *Id.*

¹⁰⁴ 43 Fed. Reg. 42,246, 42,256 (1978) to be codified in 40 C.F.R. 141.30.

¹⁰⁵ 42 U.S.C.A. §300g-1 (Supp. 1978).

¹⁰⁶ 44 Fed. Reg. 42,258 (1979). By Section 1412 (b) (5) of the SDWA, 42 U.S.C.A. §300g-1 (b) (5), revised national primary drinking water regulations cannot take effect until 18 months after the date of promulgation.

The EPA originally promulgated maximum contaminant levels and treatment techniques for contaminants in drinking water under Subdivisions (1) through (3) of Section 1412(b).¹⁰⁷ Under Section 1412(b) (4)¹⁰⁸ the EPA may also revise the regulations "whenever changes in technology, treatment techniques, and other means permit greater protection of the health of persons."

A great advantage of citizen action on the federal level is the relatively more relaxed standards of proof of risk or harm or injury that might be available to the citizen there than on the common law or state statutory levels. The difference is especially important because of the inconclusiveness to date of EPA studies of water-borne asbestos. It could be helpful in gaining relief under the SDWA, for example in petitioning for rule-making on A/C pipe contamination of drinking water.

In *Reserve Mining Co. v. Environmental Protection Agency*,¹⁰⁹ the Eighth Circuit Court of Appeals considered the health effects of airborne and water-borne asbestos particles from iron ore mining near the shores of Lake Superior.¹¹⁰ The case arose under the Federal Water Pollution Control Act (FWPCA).¹¹¹ The data on airborne asbestos introduced in the case indicated that a relatively short exposure could cause lung cancer. However, the evidence connecting human illness to asbestos in drinking water was uncertain.¹¹² The court balanced the economic benefits of the mining operation against the dangers it created. The mining company was given a "reasonable time" to abate the emissions, but since there was a more certain causal connection between inhalation of asbestos fibers and lung disease than between ingestion of asbestos fibers and human illness, the "reasonable time" was shorter for abatement of airborne asbestos emissions than for abatement of water-borne asbestos discharges.¹¹³

The court stated that, inasmuch as proof of harm with certainty would be impossible, the concepts of potential harm, whether assessed

¹⁰⁷ 42 U.S.C.A. §300g-1 (b) (1) through (3) (Supp. 1978).

¹⁰⁸ 42 U.S.C.A. §300g-1 (b) (4) (Supp. 1978).

¹⁰⁹ 514 F.2d 492 (8th Cir. 1975).

¹¹⁰ For one author's review of the question on scientific uncertainty in this extensively litigated case, see Pruter, *Reserve Mining v. Environmental Protection Agency: Scientific Uncertainty and Environmental Threats to Human Health*, 1975 Utah L. Rev. 581.

¹¹¹ 33 U.S.C. §81151 et seq. (1970), current version generally known as the Clean Water Act at 33 U.S.C.A. §§1251 et seq. (1978).

¹¹² 514 F.2d 492, 515-20 (8th Cir. 1975).

¹¹³ *Id.* at 516-538. See Pruter, *supra* note 110, at 589.

as "probabilities and consequences" or "risk and harm," must apply in a determination of whether any relief should be granted.¹¹⁴ The court concluded:

In assessing probabilities in this case, it cannot be said that the probability of harm is more likely than not. Moreover, the level of probability does not readily convert into a prediction of consequences.... The best that can be said is that the existence of this asbestos contaminant in air and water gives rise to a reasonable medical concern for the public health. The public's exposure to asbestos fiber in air and water creates some health risk. Such a contaminant should be removed.... The existence of this risk to the public justifies an injunction decree requiring abatement of the health hazard on reasonable terms as a precautionary and preventive measure to protect the public health.¹¹⁵

Thus, applying the standard of "endangering the health and welfare of persons,"¹¹⁶ required for action under the FWPCA at that time, the court found the asbestos to be potentially harmful and the potential harm to be covered by the "endangering" standard.¹¹⁷

Another case of great importance in analyzing risk and harm is *Ethyl Corp. v. Environmental Protection Agency*.¹¹⁸ Petroleum and chemical companies appealed the EPA's order requiring annual reductions in the lead content of gasoline. The order was made pursuant to Section 211(c) (1) (A)¹¹⁹ of the Clean Air Act (CAA) authorizing the EPA Administrator to regulate gasoline additives whose emission products "will endanger the public health or welfare." The court concluded that the "will endanger" standard was "precautionary in nature" and did not "require proof of actual harm" before regu-

¹¹⁴ *Id.* at 520.

¹¹⁵ *Id.*

¹¹⁶ 33 U.S.C. §1162 (a) (1) (1970) (current version at 33 U.S.C.A. §1364 (a) (1978)). The "endangering" standard has now been replaced. Since the 1972 amendments to the FWPCA, the EPA Administrator has had emergency powers to sue for an immediate injunction where pollution is "presenting an imminent and substantial endangerment to the health of persons." 33 U.S.C.A. §1346(a) (1978). The court commented in *Reserve Mining* that the term "endangering" indicates a "lesser risk of harm" than that posed by "imminent and substantial endangerment." 514 F.2d at 528. But it is still in the judgment of the trier of fact as to what degree of risk is "imminent and substantial." See *Prater, supra* note 110, n. 21, at 583.

¹¹⁷ 514 F.2d 403, 528 (5th Cir. 1975).

¹¹⁸ 541 F.2d 1 (D.C. Cir. 1976), cert. denied, 426 U.S. 941 (1976).

¹¹⁹ 42 U.S.C. §1857c-6(e) (1) (A) (1970). (Current version at 42 U.S.C.A. §7545 (e) (1) (A) (Supp. 1975)). The 1977 amendments to the CAA changed this provision so that the Administrator can now regulate gasoline additives "if in the judgment of the Administrator any emission products of such... fuel additive causes, or contributes to air pollution which may reasonably be anticipated to endanger the public health or welfare." 42 U.S.C.A. §7545 (e) (1) (A) (Supp. 1977).

lation was "appropriate."¹²⁰ The Administrator was "authorized to assess risks of harm" and, where the risk was "found to be significant, to act to prevent the harm from happening."¹²¹ Thus, "the regulatory action under this precautionary statute should precede" — and prevent — the perceived harm.¹²²

Citing with approval the analysis of the court in *Reserve Mining*, the court in *Ethyl Corp.* stated that *Reserve Mining* demonstrates that "the magnitude of risk sufficient to justify regulation is inversely proportional to the harm to be avoided."¹²³ The Administrator found a "significant" risk of harm to health by lead poisoning that was "more certain" than the risk of cancer death that justified regulation in *Reserve Mining*.¹²⁴ "Danger... is not set by a fixed probability of harm, or but rather is composed of reciprocal elements of risk and harm, or probability and severity."¹²⁵

Regarding the scientific evidence of the danger of lead poisoning, the court stated:

As we have indicated above, we need not decide whether [the Administrator's] decision is supported by the preponderance of the evidence, nor, for that matter, whether it is supported by substantial evidence. To the contrary, we must sustain it if it has a rational basis in the evidence. Keeping in mind the precautionary "will endanger" standard, we have no difficulty in terms of his decision rational.

... [W]e need not seek a single, dispositive study that fully supports the Administrator's determination. Science does not work that way; nor, for that matter, does adjudicatory fact finding. Rather, the Administrator's decision may be fully supportable if it is based, as it is, on the inconclusive but suggestive results of numerous studies. By its nature, scientific evidence is cumulative; the more supporting, albeit inconclusive, evidence available, the more likely the accuracy of the conclusion... We must decide whether the cumulative effect of all this evidence, and not the effect of any single bit of it, presents a rational basis for the low-lead regulations.¹²⁶

Although this lower threshold of risk or harm for determining an adequate basis for regulation was applied to sustain agency action, it gives an encouraging indication to the citizen as to how a federal court will weigh evidence supporting regulations and other actions to protect public health. The current EPA studies on asbestos and thos

¹²⁰ 541 F.2d 1, 17 (D.C. Cir. 1976).

¹²¹ *Id.* at 5.

¹²² *Id.*

¹²³ *Id.* at 19.

¹²⁴ *Id.* at 20.

¹²⁵ *Id.* at 18.

¹²⁶ *Id.* at 33-34.

underway should provide enough evidence for a citizen to request from the EPA that it open up rulemaking proceedings under the SDWA pursuant to 5 U.S.C.A. §53(e) (1977)¹²⁶ for the following actions:

1. Creation of an asbestos primary drinking water regulation, as defined in Section 1401 (1)¹²⁷ of the SDWA, specifying a maximum contaminant level for asbestos in drinking water. The original maximum contaminant levels set by the EPA Administrator under Section 1412 (b) (1) (B)¹²⁸ were established for "each contaminant which, in his judgment . . . may have any adverse effect on the health of persons" and at a level so that "no known or anticipated adverse effects on the health of persons occur and which allows an adequate margin of safety." This standard of evidence is broader even than that stated in *Ethyl Corp.*

2. If a maximum contaminant level could not be established, adoption of an EPA primary drinking water regulation specifying the treatment technique of adding "sweeteners" to acidic water conveyed by A/C pipe. Such a regulation could be justified in light of the knowledge of the leaching effect and the injunction allowed in *Reserve Mining* because of a "reasonable medical concern for public health."

¹²⁶ Section 1412(d) of the SDWA, 42 U.S.C.A. §300g-1(d) (Supp. 1978), requires that regulations will be prescribed according to 5 U.S.C. §553. "Each agency will give an interested party the right to petition for the issuance, amendment, or repeal of a rule." 5 U.S.C.A. §553(e) (1977).

¹²⁷ The term "primary drinking water regulation" means a regulation which — (A) applies to public water systems;

(B) specifies contaminants which, in the judgment of the Administrator, may have any adverse effect on the health of persons;

(C) specifies for each contaminant either — (i) a maximum contaminant level, if, in the judgment of the Administrator, it is economically and technologically feasible to ascertain the level of such contaminant in water in public water systems, or (ii) if, in the judgment of the Administrator, it is not economically or technologically feasible to so ascertain the level of such contaminant, each treatment technique known to the Administrator which leads to a reduction in the level of such contaminant sufficient to satisfy the requirements of section 300g-1 [Section 1412 of the Act]; and

(D) contains criteria and procedures to assure a supply of drinking water which dependably complies with such maximum contaminant levels; including quality control and testing procedures to insure compliance with such levels and to insure proper operation and maintenance of the system, and requirements as to (i) the minimum quality of water which may be taken into the system and (ii) siting for new facilities for public water systems. 42 U.S.C.A. §300g-1 (Supp. 1978).

¹²⁸ 42 U.S.C.A. §300g-1 (b) (1) (B) (Supp. 1978).

3. Approval of the proposed corrosion control regulation.¹²⁹

4. Inclusion within federal grant money for public water supervision programs under Section 1443¹³⁰ of the SDWA amounts specifically for the testing of asbestos in the drinking water of all states with acidic, aggressive water in A/C pipe. In New Hampshire, for example, the WSPCC could do much more about contaminated water if it simply had the money to analyze it.

Civil actions by citizens are allowed under Section 1449 (a)(1) of the SDWA to enforce "requirements" of the Act. Without a standard rule of some sort on water-borne asbestos, any suit against the EPA, states, or towns under this section is not possible for asbestos contamination of drinking water. Under this provision the Administrator of the EPA can be sued for an alleged failure to perform any act or duty under the SDWA which is not discretionary. Promulgation of standards or rules is discretionary, as it is a matter within the judgment of the Administrator. There is no provision for a civil action against the Administrator for such failure to open rulemaking on the A/C pipe problem as there is under Section 21 (b) (4)¹³¹ of TSCA.

Other statutory or common law relief is not precluded by the Act as stated in Section 1449 (e).¹³² The more relaxed definition of harm developed in *Reserve Mining*, however, would likely prevail only in case involving a suit under a federal statute, since that case involved construction of the EPA Administrator's authority under the FWPC in a suit brought in a federal court. The private litigant is unlikely to be able to utilize that relaxed definition in a statutory suit in state court or a common law suit insofar as state or common law definition prevail.

Under Section 1448¹³⁴ of the SDWA a citizen can petition in the United States Court of Appeals for the District of Columbia Circuit for judicial review of action of the Administrator in promulgating regulations under Section 1412. Under the judicial review provisions¹³⁵ of the federal Administrative Procedure Act applica-

¹²⁹ 44 Fed. Reg. 42,246, 42,258 (1979) (to be codified in 40 C.F.R. 141.30).

¹³⁰ 42 U.S.C.A. §300g-2 (Supp. 1978).

¹³¹ 42 U.S.C.A. §300g-8(a) (Supp. 1978).

¹³² 15 U.S.C.A. §2620(b) (4) (Supp. 1979).

¹³³ 42 U.S.C.A. §300g-8 (e) (Supp. 1978).

¹³⁴ 42 U.S.C.A. §300g-7 (Supp. 1978).

¹³⁵ 5 U.S.C.A. §701 et. seq. 1977. "A person suffering legal wrong because of agency action, or adversely affected or aggrieved by agency action within the meaning of a relevant statute, is entitled to judicial review thereof." 5 U.S.C. § 502 (1).

to federal agencies one can appeal "agency action."¹³⁶ including denial of a rule-making proceeding or the failure of the agency to act. To prevail, however, one must show that the action was arbitrary, capricious, or an abuse of discretion.¹³⁷ Any allegation of abuse of discretion in denying a petition for rule-making on the A/C pipe contamination of drinking water is likely to fail under the reasonableness standard.¹³⁸

The bar to civil action against the Administrator under the SDWA for failure to perform a discretionary duty and the requirement of abuse of discretion to overturn judicially the Agency's inaction would also likely defeat any attempt by a citizen to appeal EPA's failure to utilize the SDWA emergency powers provision in Section 1431,¹³⁹ although the provision seems applicable to A/C pipe contamination of drinking water. Pursuant to Section 1431, if the EPA receives information that a contaminant present in or likely to enter a public water system may present an "imminent and substantial endangerment" to the health of persons and if state or local authorities have not acted, the EPA may step in to issue orders or commence a civil action even if the state has primary enforcement responsibility under the Act. Particularly pertinent is the legislative intention behind the provision as expressed in the report of the House Interstate and Foreign Commerce Committee:

The authority to take emergency action is intended to be applicable not only to potential hazards presented by contaminants which are subject to primary drinking water regulations, but also to those presented by unregulated contaminants.

... The Committee intends that this broad administrative authority not be used when the system of regulatory authorities provided elsewhere in the bill could be used adequately to protect the public health. Nor is the emergency authority to be used in cases where the risk of harm is remote in time, completely speculative in nature, or *de minimis* in degree... However... the Committee intends that this language be construed... so as to give paramount importance to the objective of protection of the public health...

Furthermore, while the risk of harm must be "imminent" for the Administrator to act, the harm itself need not be. Thus, for example, the Administrator to act, the harm itself need not be. Thus, for example, the Administrator to act, the harm itself need not be.

¹³⁶ Defined in 5 U.S.C.A. §551 (1977), "[A]gency action" includes the whole or part of an agency rule, order, license, sanction, relief, or the equivalent or denial thereof, or failure to act.

¹³⁷ 5 U.S.C.A. §706 (1977). ... The reviewing court shall (1) compel agency action unlawfully withheld or unreasonably delayed, and (2) hold unlawful and set aside agency action, findings, and conclusions found to be (A) arbitrary, capricious, an abuse of discretion, ... *Id.*

¹³⁸ R. S. Swartz, *Administrative Law*, 608-609 (1976)

¹³⁹ 17 U.S.C.A. §300g (Supp. 1978).

trator may invoke this section when there is an imminent likelihood of the introduction into drinking water of contaminants that may cause health damage after a period of latency.

Among those situations in which the endangerment may be regarded as "substantial" are the following: (1) a substantial likelihood that contaminants capable of causing adverse health effects will be ingested by consumers if preventive action is not taken; (2) a substantial statistical probability that disease will result from the presence of contaminants in drinking water; or (3) the threat of substantial or serious harm (such as exposure to carcinogenic agents or other hazardous contaminants).¹⁴⁰

Under this explication of emergency authority the EPA could step in to control asbestos contamination and to order "sweeteners" added to acidic water supplies, linings on all A/C pipe in use, or other corrosion control measures immediately without going through the necessarily slow rule-making process. The Committee statement clarifies that certainty of harm is not necessary, and, most importantly, that the contaminant involved need not be already regulated. With asbestos one has a potential hazard, a period of latency before damage actually occurs, and a threat of serious harm.

Other Federal Statutes

The Consumer Product Safety Commission (CPSC) has the responsibility under the Consumer Product Safety Act (CPSA)¹⁴¹ to protect the public from "unreasonable risks of injury, illness, or death associated with consumer products and may take action against specific products presenting a substantial product hazard."¹⁴² Under the Federal Hazardous Substances Act (FHSA)¹⁴³ the CPSC "may regulate hazards involved in the presence or use of toxic and other hazardous substances in the household."¹⁴⁴ Pursuant to these laws the CPSC has commenced an investigation into the use of asbestos in consumer products.¹⁴⁵ Although A/C pipe has been included in a CPSC list of consumer products containing asbestos,¹⁴⁶ it is probable that the CPSC will not concern itself with this problem. It has already made an inter-agency agreement with the EPA to coordinate activity.¹⁴⁷

¹⁴⁰ H.R. Rep. No. 93-1185, 93d Cong., 2d Sess. 35-36, reprinted in [1974] C.S. Code Congr. & Admin. News 6487-6488.

¹⁴¹ 15 U.S.C.A. §2051 et. seq. (Supp. 1979).

¹⁴² 44 Fed. Reg. 60,056 (1979).

¹⁴³ 15 U.S.C.A. §1261 (Supp. 1979).

¹⁴⁴ 44 Fed. Reg. 60,056 (1979).

¹⁴⁵ 44 Fed. Reg. 60,057 (1979). Public comment period extended, 44 Fed. Reg. 73,121 (1979).

¹⁴⁶ 44 Fed. Reg. 60,057, 60,061 (1979).

¹⁴⁷ 44 Fed. Reg. 60,056 (1979).

drinking water. The inconclusiveness is likely to cause an action to fail under the common law or state statutes. An action may fail at the pleading stage because of the complainant's inability even to allege personal injury. Requests for rule-making on the state level concerning corrosion control measures such as the addition of water "sweeteners" may certainly be made, but obtaining judicial reversal of the denial of any request involving great expenditures for studies or creating an asbestos drinking water standard is certain to founder on the reasonableness standard applied to the WSPCC's discretion.

Action against asbestos contamination is more likely on the federal level. The EPA's initiation of the regulatory process under TSCA to control asbestos presents citizens with rule-making and public comment opportunities embracing the A/C pipe problem. However, it is likely that the EPA will not give A/C pipe a greater priority of investigation than that accorded to other asbestos products in the broad EPA regulatory program. Since action has begun that will affect the A/C pipe problem at least indirectly, appeals through judicial review of agency inaction on A/C pipe and civil actions against the EPA Administrator for denial of specific rule-making on A/C pipe are likely to fail.

The SDWA's authorization of private civil suits is ineffective in dealing with the contamination problems of A/C pipe already in the ground given the absence of asbestos maximum contaminant levels or currently-required treatment techniques that directly address the leaching of asbestos fibers. Requests for rule-making hold out the best chances for citizen action under the SDWA, particularly concerning corrosion control methods such as the addition of "sweeteners" to the water to lower its acidity. The threshold or proof of risk or harm that a federal court would require in citizen actions for creation of a regulation or initiation of emergency powers could be lower than in the common law or state statutes. However, the standard of reasonableness governing EPA rule-making may still prevent agency inaction from being overruled in judicial review initiated by a private citizen.

The EPA needs comprehensive studies of the extent and degree of the asbestos leaching problem to be able to implement the Agency's proposed corrosion control program under the SDWA and future asbestos regulation under TSCA. Therefore, requests for federal funding for studies of asbestos contamination of drinking water are certainly consistent with the authority conferred on state agencies like New Hampshire's WSPCC for primary enforcement responsibility under the SDWA.

and the EPA has already submerged the A/C pipe problem in its broad regulatory approach to asbestos under TSCA. Although the CPSC feels that its narrower approach "may enable it to reduce consumer exposure to asbestos-containing products pending more general proceedings" initiated under EPA's broader program,¹⁴⁷ the FPLSA is not applicable because A/C pipe is not a household product, and the definition of "consumer products" in the CPSC does not seem to embrace A/C pipe,¹⁴⁸ notwithstanding the inclusion of it on a CPSC list of consumer products as noted above. Public comment can still be made on the CPSC's proposals in an attempt to persuade the CPSC to regulate A/C pipe specifically if the EPA will not.

The second potential conflict with EPA authority comes from the Food and Drug Administration (FDA). However, the EPA and the FDA have agreed that "the passage of the SDWA in 1974 implicitly repealed [the] FDA's authority under the Federal Food, Drug and Cosmetic Act (FFDCA)¹⁴⁹ over water used for drinking water purposes."¹⁵⁰ The EPA now retains exclusive jurisdiction over drinking water served by public water supplies, including any additives in such water," while the FDA retains jurisdiction over "bottled drinking water" and "water (and substances in water) used in food or food processing after it has entered the food processing establishment."¹⁵¹

V. CONCLUSION

The crucial factors in any legal action to abate the danger of asbestos in New Hampshire drinking water from A/C pipe are the lack of conclusive data connecting water-borne asbestos and human illness and the absence of information about asbestos levels in the state's

¹⁴⁷ *Id.*

¹⁴⁸ For purposes of this chapter:

(1) The term "consumer product" means any article, or component part thereof, produced or distributed (i) for sale to a consumer for use in or around a permanent or temporary household or residence, a school, in recreation, or otherwise, or (ii) for the personal use, consumption or enjoyment of a consumer in or around a permanent or temporary household or residence, a school, in recreation, or otherwise; but such term does not include:

(A) any article which is not customarily produced or distributed for sale to, or use or consumption by, or enjoyment of, a consumer . . .

15 U.S.C.A. §2052(a) (Supp. 1979).

¹⁴⁹ 21 U.S.C. §3001 et. seq.

¹⁵⁰ 44 Fed. Reg. 42,776, 42,776-1 (1979).

¹⁵¹ *Id.*