

Barry Castleman, ScD, Environmental Consultant, Statement to Senate Health, Education, Labor and Pensions Committee, March 1, 2007

I have been warning mechanics about asbestos hazards in brake repair since 1972, as a local health official in Baltimore. Since then, I have been involved as a public health worker in a wide range of issues involving asbestos in the US and around the world. I support banning asbestos product manufacture and importation in the US.

US imports of brake shoes from countries that mine asbestos and manufacture asbestos products are growing and now total over \$100 million annually. There is no surveillance to assure that asbestos brake imports from China, Brazil, Colombia, and Mexico even carry the cancer warning labels “required” by OSHA. We also are importing a lot of asbestos-cement sheet from Mexico. These products are no longer made in the US, and they compete against safer products made here.

To this day, we are faced with scandals in government efforts to deal with public health asbestos problems, while companies involved in damage suits try to distort public policy to gin up trial court defenses for their historic failure to warn workers using asbestos products. It is my hope that these companies, who now use little or no asbestos, will not oppose the asbestos ban just so they can go on using the argument that the asbestos products they used to sell are still legal for sale in the US. If Ford and GM oppose an asbestos ban here as they face throughout Europe, they should tell us what they are selling in the US now, what models of their new vehicles and replacement parts are still made with asbestos. And they should explain why this should be allowed to continue.

I testify as an expert witness in asbestos litigation, usually at the request of plaintiffs. This has given me access to corporate documents not available in public libraries. I tell juries about the corporate and public health history of asbestos, the subject of my doctoral thesis at the Johns Hopkins School of Public Health and an 894-page book, now in its 5th edition (*Asbestos: Medical and Legal Aspects*. Aspen, NY, 2005).

Global Consensus that Asbestos Must Go

Back in 1989, when the US EPA issued rules to phase out the use of asbestos in almost all products, the US was a leader in moving to ban the manufacture and importation of asbestos products. The EPA rule was overturned in a court challenge, and EPA was unable to persuade the Justice Department to appeal the ruling. Nothing has been banned since 1991 under the Toxic Substances Control Act, and asbestos products continue to be manufactured and imported for use here.

European countries took the lead in issuing national bans on asbestos use in the 1990s and enacted a ban throughout the (now 27) countries in the European Union that came into effect in 2005. Asbestos is also now banned in Chile, Argentina, Uruguay, Honduras, Kuwait, Saudi Arabia, Jordan, Australia, Japan, the Seychelles, New Caledonia, and Gabon. Egypt, Croatia,

Vietnam, South Korea, and South Africa are moving to end their consumption of asbestos products.

In the past year, major initiatives on asbestos have been undertaken by the World Health Organization, the International Labor Organization, and the World Bank. The World Health Organization has concluded that “the most efficient way to eliminate asbestos-related diseases is to stop the use of all types of asbestos.” The WHO is now working with the ILO to help countries around the world develop national plans to eliminate asbestos use and minimize the hazards from in-place asbestos materials. The World Trade Organization has given its blessing to national asbestos bans. The World Bank is avoiding the use of asbestos-cement materials in tsunami reconstruction in Indonesia. I drafted a guidance note that the World Bank plans to use, to select safer materials in new construction projects and to minimize asbestos hazards in infrastructure renovation.

Current Situation in the United States

At present, 10,000 Americans die every year from our past use of asbestos in this country. The continuing use of asbestos adds to the eventual toll. Liability considerations and regulation have steadily reduced the quantity of asbestos fiber imported and used as a raw material in US manufacturing, but imported asbestos products continue to enter the country, endangering workers and the general public. Workers in other countries make asbestos products we import, in conditions that would not be permitted here under OSHA and EPA standards. The products are distributed here by companies that may not be labeling them as containing an asbestos cancer hazard in accord with OSHA standards. And the distributors of the products sold here may or may not be around to pay compensation, by the time people get sick from these products, if they ever figure out why they were stricken with asbestos diseases. Last, the continuing sale of the asbestos products here undercuts US manufacturers of safer, non-asbestos products, damaging health, contaminating the environment,, reducing employment, and harming the US economy.

The US continues to import substantial quantities of asbestos-cement construction materials and other asbestos products. In 2006, the US imported over 63,000 metric tons of asbestos-cement sheets from Mexico, a 25 percent increase from the year 2000. These hazardous construction products have not been made in the US since 1992. Their handling, transport, installation (with cutting, drilling, etc.), renovation, and demolition expose countless US workers and other citizens to occupational and environmental dangers. This is commonly unrecognized as asbestos exposure; and even where it is so recognized, it is from a practical point of view largely uncontrollable by government regulators. The World Trade Organization concluded that the idea of “controlled use” of asbestos-containing construction materials is unrealistic.

The US imports an increasing amount of brake linings and pads, now over \$120 million worth a year, and an unknown share of these imports is made with asbestos. The US International Trade Commission has refused to separately classify brake friction materials made with asbestos from those made with other materials, so it is not possible to know exactly what the imports of the asbestos brake parts come to. But leading sources of these brake friction material imports are countries that still use (and three of them mine) a lot of asbestos: Brazil, China, Colombia, and

Mexico. US brake friction material imports from these countries have risen from \$23 million in 2000, to \$76 million in 2005, and \$90 million in 2006. Automotive friction materials have not been made with asbestos in the US for the past several years.

OSHA

OSHA standards since 1972 have required that brake and clutch parts made with asbestos bear various warning labels, and none of the manufacturers put warning labels on these products before that time. Litigation of claims by mechanics has disclosed that Ford Motor Company did not start putting OSHA warning labels on the packages until 1980. Chrysler did not do so until 1984. General Motors still hasn't produced documentation of when GM started to warn consumers of their brake parts about asbestos. Yet, it appears from the records I have seen that OSHA has never cited, much less fined, any seller of these unlabeled products for violation of the standard. OSHA was criticized for its poor record of enforcement by Congressman Kucinich (*OSHA's Failure to Monitor and Enforce Asbestos Regulations in Auto Repair Shops*, Feb. 2004). And when Sen. Murray suggested that OSHA monitor the imports of these products from Brazil, China, Colombia, Brazil, and Canada, she was told, "OSHA is not contemplating a warning label survey." (John Henshaw, OSHA Administrator, letter to Sen. Murray, Aug. 31, 2004)

OSHA did post a long-delayed fact sheet on its website on July 26, 2006, explaining the mandatory appendix of the current (1994) OSHA asbestos standard applicable to mechanics doing brake and clutch repair. This was immediately challenged by former OSHA chief John Henshaw, urging his former subordinates at OSHA to retract the fact sheet and possibly redo it with additional references included. Henshaw threatened that OSHA could be hit with a data quality challenge, the same tactic that had been used to press EPA to withdraw its published brake asbestos guidance document in 2003 (explained below). Henshaw's call precipitated a conference at OSHA that same day, including his successor, Edwin G. Foulke, Jr.

In the flurry that followed, OSHA scientist Daniel Crane was among those who did a technical review of the factsheet. He noted that, in issuing the 1986 asbestos standard, OSHA had relied on NIOSH data showing that asbestos exposures of mechanics exceeded the current permissible exposure limit. "OSHA has no reason to believe that the nature of dust generated in the repair of asbestos-containing brakes has changed since that time." (Aug. 26, 2006)

Notwithstanding this, on November 6, 2006, OSHA threatened the author of the factsheet, industrial hygienist Ira Wainless, with suspension for "failure to perform a comprehensive review of current research." The "current research" consisted mainly of re-analyses of earlier articles published in scientific journals, commissioned jointly by General Motors, Ford, and DaimlerChrysler, starting in 2001. Line-item billing for Dr. Shannon Henshaw Gaffney's services appeared 21 times on Chemrisk asbestos litigation bills to the Big Three in 2004, totaling around \$10,000. John Henshaw's daughter went to work at Chemrisk when she obtained her doctorate in environmental science in 2004. Mr. Henshaw, who departed OSHA on Dec. 31, 2004, told his former subordinates at OSHA last August that there was a lot of litigation over

asbestos and brake work, but he neglected to mention that he was involved in it as an expert witness for a leading defendant, Honeywell (Bendix brakes).

After publicity and inquiries from Congress, the OSHA bosses completely withdrew their threat against Mr. Wainless within weeks; they also decided to not retract or revise the fact sheet (A. Schneider, “Brakes warning remains/OSHA statement on asbestos exposure hazard survives challenge,” *Baltimore Sun*, Dec. 17, 2006; E.G. Foulke, OSHA, letter to Rep. George Miller, Dec. 14, 2006).

Mr. Henshaw testified several months ago that he did not know his daughter did asbestos litigation defense work at Chemrisk, where he began to be listed as a “teaming partner” in early 2005, soon after leaving OSHA. He says no one paid him to call OSHA officials about withdrawing the factsheet, which he contends was “poorly written.” Henshaw has never published anything in the peer-reviewed scientific literature, but he read it regularly during his 25 years at Monsanto before becoming the OSHA chief in 2001. (Deposition of John Henshaw in Blandford, Dec. 13, 2006)

Henshaw’s approach to his former subordinates at OSHA on a policy matter he was involved in as OSHA chief less than 2 years before may be a violation of the Federal Ethics Act. An examination of this case may suggest areas where the law should apply if it does not yet do so. I understand that the U.S. Office of Government Ethics has explained **18 U.S.C. § 207** as follows:

As an executive branch employee, you are barred permanently from trying to influence any Federal agency or court, by communications or appearances on behalf of someone other than yourself or the United States (i.e., “representational contacts”), on a matter that has parties (such as a contract, grant, or lawsuit), if you have worked on that matter as a Government employee. If the matter was under your official responsibility during your last year of Government service, even if you did not personally participate in it, you are barred from making representational contacts about that matter for two years.

Seeding the Literature

The publication and promotion of scientific reviews was key to a brazen litigation defense strategy of General Motors, Ford, and DaimlerChrysler. Defendant corporations have been prevailed upon to disclose copies of the bills received for litigation services by Exponent and Chemrisk. The Exponent bill to the Big Three on Apr. 4, 2003, titled “Technical Support – Asbestos Litigation,” has a line item, “Completion of Meta-Analysis.” Additional charges for “Completion of Meta-Analysis” were billed on May 2, Aug. 1, and Aug. 29, and Oct. 31, 2003. On Jan. 2, 2004, there was a charge of \$19,500 for “Presentation of Mechanic Meta-analysis.” In all, “Presentation at Conferences” was billed seven times between February and November, 2004 as “Technical Support – Asbestos Litigation.” The “Finalization of 2 Submitted Manuscripts” (on garage mechanics epidemiology) was another item in bills for technical support in asbestos litigation to the Big Three (May 28 and July 1 and 30, 2004). Additional

Exponent billings to the auto companies in 2004 were for writing responses to separate articles by Drs. Dodson, Lemen, and Egilman.

GM, Ford, and DaimlerChrysler have spent at least \$23 million between 2001 and spring of 2006, for the consulting and publishing services of Exponent and Chemrisk, and scientists including Dennis Paustenbach, Michael Goodman, David Garabrant, Mary Jane Teta, Patrick Hessel, Patrick Sheehan, Elizabeth Lu, Gregory Brorby, and Brent Finley. (D. S. Egilman and S. R. Bohme, "Scientific Method Questioned" *Int. J. Occ. Env. Health* 12: 292-293, 2006; and Exponent and Chemrisk bills produced by in Sept. 2006, in Rebekah Price v. DaimlerChrysler Corp. et al.). So, in addition to their technical shortcomings, such as selectivity in what was included in these reviews and what was not, the recent meta-analyses and commentaries of Exponent and Chemrisk authors should be read with it in mind that they were solicited for the purpose of fighting personal injury claims brought by mechanics and their family members. These publications were part of a strategy of corporate defense lawyers, approaching and generously supporting the scientist-authors, most of whom had previously published little or nothing on asbestos. These publications were created to provide evidence that mechanics' asbestos exposures do not cause asbestos diseases. They were to be published by the best scientists money could buy.

Current Sale in US of New Asbestos-Containing Vehicles and Brake Replacement Parts

After receiving Henshaw's threatening calls last August, OSHA officials contacted major auto makers asking whether they still sold any new vehicles with asbestos brakes. They were told by General Motors and Ford that these firms were still selling some new vehicles with asbestos brakes in the US. This contradicted the reported findings of a telephone survey that EPA had done in 2004, which EPA reported as follows: "All nine companies responded that they no longer sold asbestos brakes in new vehicles or as replacement parts in the US." The companies accounted for 96% of light vehicle sales in the US (GM, Ford, DaimlerChrysler, Toyota, Nissan, VW, BMW, Honda, Hyundai).

<http://www.epa.gov/fedrgstr/EPA-TOX/2006/August/Day-24/t14057.htm>

EPA was recently informed that replacement brakes bought in 2006 for a Chrysler vehicle were shown by lab testing to contain asbestos. So it appears that some of the major auto makers are still selling asbestos-containing new vehicles and replacement brakes in the US, even though they probably wouldn't dare sell try to sell that stuff in European Union countries like Germany, Poland, Slovenia, and Lithuania.

We thus have the very disturbing confirmation that new vehicles and replacement parts with asbestos continue to be sold in the US. About \$103 million worth of brake parts are imported annually from countries that mine asbestos and manufacture asbestos products (this includes Canada, India, and Peru). China is fast overtaking Brazil as the leading country of origin of these automotive friction materials. There is no official scrutiny to determine whether the required OSHA cancer warning labels are on asbestos brake products from these countries. There is no information about the working conditions or pollution at the plants where these products are made. There is no information about the business relationships that such manufacturers have with the major auto makers.

Fly-by-night distributors have a virtual invitation to ship asbestos brake and clutch parts to the US and not even place warning labels on them. OSHA seems content to post a factsheet on its website but does not make the effort to go out and warn mechanics or provide credible enforcement of its standard to protect them. Meanwhile, most mechanics think asbestos is banned in the United States and take few precautions.

When I first began investigating the victimization of workers in backward countries by companies exporting discredited, hazardous technology, I never imagined I would ever see the US treated as such a dumping ground by US-based and foreign corporations.

EPA has the power to summon information on the US sale of asbestos-containing automotive friction materials and gaskets as replacement parts; EPA can also compel the auto makers to disclose the new vehicle models with asbestos-containing friction materials and gaskets sold in the US in 2006 and this year. This authority exists under Sec. 8a of the Toxic Substances Control Act, and it should be put to immediate use.

EPA

The EPA “Gold Book” was written in 1986 after full review by EPA, OSHA, NIOSH, and others, titled *Guidance for Prevention Asbestos Disease Among Auto Mechanics*. This 16-page pamphlet with the gold cover was uncontroversial at the time it was published. It warned that mechanics grinding asbestos-containing brake and clutch parts urgently needed to have dust controls on the grinding wheels. Compressed air blow-out of brake drums, which would be forbidden by an OSHA standard issued the same month the EPA pamphlet came out, was advised against, unless it could be done inside a transparent glove-box enclosure designed to draw away the dusty air to a high-efficiency air filter. Significant exposures were otherwise going to occur and place people at risk of dying from asbestosis and cancer, warned the Gold Book. It was distributed to all of the vocational and technical schools in the country, in an exemplary government public health information effort.

EPA published the Gold Book 11 years after NIOSH had put out a national alert on the hazards of asbestos to mechanics. Even the industry trade association, the Friction Materials Standards Institute, accepted that mechanics could get cancer from the dust and needed to employ dust controls and respirators, in a work practices guide published in 1978. But a quarter century later, new doubts were raised about whether mechanics’ asbestos exposure caused asbestos disease. By 2003, there were still copies of the Gold Book available from EPA, but they were just gathering dust on the shelves.

Suddenly receiving much more attention in the courts than in the 1990s, brake manufacturers sought some official recognition of the “controversy” they had attempted to create by sponsoring a flurry of articles re-analyzing the earlier literature. As luck would have it, business interests had slipped a rider into an appropriations bill in 2001, later anointed the “Data Quality Act”. So, in August of 2003, one of the big corporate defense law firms, Morgan Lewis and Bockius, moved to have EPA withdraw the Gold Book as based on out-of-date science and government

regulations. The lawyers refused to disclose whom they represented to Members of Congress and the media. But an article in *Corporate Counsel*, “Who Represents America’s Biggest Companies,” credited major services by Morgan Lewis to Honeywell. GM was another client of the vast law firm. (Last year, I met the lawyer who signed the Morgan Lewis letter to EPA, representing another defendant at my deposition in an asbestos case, and I showed him where I had named him in the latest edition of my book on the public health history of asbestos. He just asked me how I knew about General Motors.)

Four Exponent bills to General Motors, Ford, and DaimlerChrysler under the heading, “Technical Support – Asbestos Litigation” contained charges for the line item, “Prepare Materials to Challenge 1986 EPA” in the last half of 2003. This is science for sale in the service of business interests willing to endanger another generation of mechanics. The Gold Book wasn’t crucial in proving that mechanics were endangered by asbestos. But the official withdrawal of the Gold Book by EPA would have provided the basis for national publicity and motions to dismiss damage suits in courts across the country, while providing a new defense in cases that went to trial.

Fortunately, people in EPA got the word out about this attack on the Gold Book, and scientists sent comments in to EPA providing evidence that brake asbestos exposures still did cause asbestos diseases. EPA responded in November 2003 that a revised draft version of the Gold Book would be presented for public comment in spring of 2004. I called EPA as time wore on, and in 2005 was told that EPA was not going to revise the Gold Book after all, they would defer to OSHA, where a factsheet was being prepared about the brake mechanic section of the OSHA asbestos standard. That’s how I heard about the OSHA factsheet, which had been started in 2000 and was undergoing considerable delays of its own by 2005. And on July 21, 2005, the Office of Management and Budget held the first of 3 or 4 conferences with EPA and OSHA about what if anything to tell the public about asbestos hazards from brake work. On May 3, 2006, journalist Andrew Schneider reported (“Asbestos Concerns Resurface/ Brake imports using fibers surge, imperiling mechanics”, *Baltimore Sun*) that OSHA was not going to publish the factsheet, but EPA was going to revise the Gold Book after all.

Sen. Murray placed a hold on the nomination of Stephen McMillin as OMB Deputy Director, and OSHA got the factsheet out on July 26, 2006. The next month, EPA put out a proposed revision of its brake warning document for public comment. The revised document is expected to be issued in March or April of 2007. I salute the dedicated civil servants at EPA and OSHA for persisting against great pressures to produce relatively good materials up to this point. But how many people were consigned to get cancer some future day, because the federal agencies delayed for several years, playing ping-pong with their responsibility to protect workers and the public?

On May 4, 2006, Representatives David Wu and Major Owens asked the GAO to investigate the EPA’s delays and OMB’s role in handling the Gold Book revision. This investigation was delayed by lack of cooperation by EPA, and at the end of 2006 the GAO investigation was expanded to also examine OSHA’s handling of the factsheet on brake asbestos hazards. I hope that OSHA cooperates with GAO. But OSHA’s response (Dec. 14, 2006) to an inquiry by House Committee on Education and the Workforce Chairman George Miller was absolutely

insulting; Henshaw's successor, Edwin Foulke, Jr., brazenly withheld documents from Congress "because of the strong and long-recognized executive branch interest in protecting the integrity of the deliberative process." It's pretty obvious that the integrity of the process would be better served by sunlight and oversight, not stonewalling.

Contaminant Asbestos

Aside from the recognized products using commercial asbestos as an ingredient, there are products that use other minerals that naturally occur with asbestos contamination in them. These include the notorious vermiculite mined for decades in Libby, Montana by WR Grace and talc mined in northern New York state. By the time the Libby operation was closed in 1990, asbestos-contaminated attic insulation had been installed in millions of homes in the US and Canada. The Canadian government is considering what to do in the face of news reports about Raven Thundersky and several of her family members, who have been stricken with mesothelioma from living in such a dwelling.

The talc mines in New York have been notorious for occupational lung diseases since the early 1940s, at which time it was realized that asbestos fibers occur naturally in these deposits of talc and in many other talc mining areas. This talc is mined by R.T. Vanderbilt Company. For over 30 years, Vanderbilt has denied that there is asbestos in its talc, making mineralogical arguments to distinguish the contents of its talc from the definitions of asbestos in government regulations.

When asbestos was banned in consumer patching compounds in 1977, Bondex International reformulated a spackling compound after being told by Dr. Selikoff's laboratory that there was asbestos in the product from the talc they had used, which was Vanderbilt talc. So I was amazed to learn last year that a widely used product, Durham's Water Putty, contained asbestos because it is still made using Vanderbilt talc. I learned about this because I was an expert witness in three cases where workers who had used this product and developed mesothelioma were suing Durham Company and RT Vanderbilt. Along with other experts in the case, a pathologist and a microscopist who had analyzed the Durham product, I drafted and hand-delivered a letter Jan. 29, 2007, to the Consumer Product Safety Commission.

We asked the CPSC to enforce its ban on asbestos in consumer patching compounds by taking action against Durham, Vanderbilt, and Ace Hardware (whose retail outlets sell the product all over the country). We also told CPSC about the long history of denial by Vanderbilt that its talc contains fibers that cause asbestos disease, and we asked CPSC to find out what other products Vanderbilt talc is used in. My co-petitioner, pathologist Jerrold Abraham of Syracuse, has seen cases of asbestosis, mesothelioma, and lung cancer in individuals whose only exposure to asbestos came from the New York state talc mines. He and other doctors have published a report in the literature of 5 cases of mesothelioma in New York state talc miners in addition to 8 cases identified in previous studies as having mesothelioma.

This is an example of how contaminant asbestos can endanger large numbers of people's lives in this country. Another source of concern is Virginia Vermiculite, where Mine Safety and Health Administration (MSHA) officials were concerned about asbestos exposure of workers at this site

and at plants receiving and processing this material. Vermiculite has been used in such products as potting soil, insulation, and cat litter. <http://seattlepi.nwsourc.com/uncivilaction/asb04.shtml>

MSHA hearings on asbestos hazards of mining and stone quarrying were held on October 20, 2005, and I brought these concerns up at that time. MSHA action is needed to better protect workers mining talc in New York and vermiculite in Louisa, Virginia.

This danger can extend to basic stone used in construction. In 2005, research was published linking residence in areas of California with naturally occurring asbestos outcrops and increased risk of mesothelioma (Pan et al., *Am. J. Resp. Crit. Care Med.* Oct. 2005). Dr. Marc Schenker, one author of this study, expressed concern about the health hazard faced by people with environmental exposure in areas where development was proceeding in El Dorado County, California, and other areas where asbestos minerals are known to be present in the soil in significant amounts. <http://www.medicalnewstoday.com/medicalnews.php?newsid=32149>

In El Dorado County, California, there is a considerable amount of land development and construction, and soils have been found to contain up to several percent of tremolite asbestos. Pathologists Jerrold Abraham and Bruce Case have separately determined asbestos fiber burdens in lung tissues of deceased pets from the area. Lung tissue burdens of tremolite and actinolite asbestos increased with the number of years the animals had lived in the area. No such fibers were found in the lungs of a cat that had not lived in the area. The fiber burden in the pets' lungs was higher than found in the lungs of goats in an area of Corsica, where environmental exposure to tremolite asbestos is clearly associated with human mesothelioma occurrence. <http://www.upstate.edu/pathenvi/NOTES%20VIEW%20FINAL.pdf>

Testing conducted by the EPA showed that children and adults participating in sports activities in areas where asbestos occurs naturally in surface soils are exposed to asbestos fibers at up to 62 times the reference levels. EPA Region 9 has worked with state and local authorities in California to map, monitor, control, and regulate exposures from naturally occurring asbestos.

What is needed is a process whereby the EPA does surveillance of possible sources of contaminant asbestos around the country, starting with Vanderbilt talc and Virginia Vermiculite, using USGS mineral survey maps to help identify hot spots. Then, as operations of concern are discovered, there needs to be a process of investigation, first for EPA to realistically sample the products of these operations and do bulk sample analysis. Then, if there is any concern over public and worker exposure, the company should have to disclose its commercial customer list to EPA. EPA could then contact the customers to see how the material is handled, ask what products it is used to make, and assess what asbestos exposures result for workers, consumers, and people living where the stuff is shipped, processed, and put to end use. In annual reports, EPA should disclose what operations it has under investigation, and summarize the state of these investigations, describing the commercial uses of the suspect materials. And of course, the EPA needs the authority to close operations and stop the sale of products that are deemed a threat to public health.

Conclusion: Ban Asbestos

The problem of asbestos in automotive friction materials well illustrates the need to ban asbestos in this country. While traditional public health information and regulation can reach some people, there will be many more who never see an OSHA website or inspector or receive guidance from the EPA. There are hundreds of thousands who do regular brake and clutch repairs in their jobs, and another 2,000,000 brake jobs are done each year by people working on their own vehicles. Similarly, the importation of asbestos-cement building panels from Mexico is a serious and unnecessary hazard to construction workers and the general public. There is simply no reason to tolerate the import of asbestos products that are not even manufactured in this country.

Modern industry has no need of asbestos. Global corporations (Dow, ICI, Unilever) have worldwide codes of practice for avoiding the use of asbestos-containing materials in new construction and treating them with great care in existing infrastructure. The auto makers serve major markets in Europe and elsewhere, without using asbestos in new cars and trucks or replacement parts. There are no multinational asbestos corporations left in the world.

What remains of the asbestos industry are separate national companies, owned by the bottom dwellers of the corporate food chain. These companies' profitability is based on minimizing the costs of prevention and compensation, primarily selling asbestos-cement construction materials. The asbestos industry is a quasi-criminal industry in much of the world today, using its power to corrupt political processes and control the media when challenged. The asbestos industry is still expanding in such countries as India and China, they're still building new asbestos factories over there. And the local Lords of Asbestos smile and point to the US if anyone talks about banning asbestos, saying it's still legal over here.

But this isn't India, we don't have an asbestos industry in the United States. The asbestos trade group vanished from K Street long ago. The US government has taken a stand in support of national asbestos bans. When asbestos exporter Canada challenged the French asbestos ban at the World Trade Organization in 1999-2001, the US supported France's (successful) defense. US asbestos consumption is down to 2,000 tons per year, from 800,000 in 1973. There are no more operating asbestos mines in the US. The economic impact of banning asbestos and asbestos products in the US would be trivial. And if Congress doesn't allow for a protracted rulemaking process, we should be able to match South Korea by having a total asbestos product ban in effect by the end of next year.

I urge that the legislation require EPA to issue proposals within 6 months to set criteria to establish what products contain asbestos (the "ban rule") and then promptly hold hearings to consider exemptions applied for by business interests. EPA should be directed to consider in exemption applications the availability of safer, asbestos-free alternative products and processes, and the potential health impacts on workers, consumers, and the general public. The ban should take effect starting one year after enactment for all commercial uses of asbestos for which substantive requests for exemption have not been made. The EPA "ban rule" should also be issued within one year after enactment, defining the criteria for establishing whether products are

covered by the ban. Other agencies, such as NIOSH, may be able to help on this. EPA should complete evaluation of all applications for exemption within one year after holding hearings after publishing the proposed “ban rule”. Exemptions should lapse if not renewed 3 years later. This should be relatively straightforward for products made with commercial asbestos, less so for products and processes involving contaminant-asbestos.

The widespread distribution of asbestos-contaminated talc and vermiculite in consumer products urgently needs to be investigated and regulated. Public and worker asbestos exposure is most insidious when it is concealed, and there should be criminal penalties for selling such products while concealing that they have asbestos in them. The Ban Asbestos statute should cover contaminant-asbestos articles in commerce and provide EPA with the means to fully investigate and regulate all such public health hazards. The EPA ban rule should define what is meant by an asbestos product, for products including those containing contaminant-asbestos, including methods of analysis as well as other considerations for conducting evaluations (e.g., have people developed asbestos disease from exposure to it, has it shown this potential in experimental animal studies, how similar is it to materials about which such data exist, are studies to resolve such questions presently being conducted by independent researchers).

To the extent that there are more complex issues involved with contaminant-asbestos, the resolution of these should not be structured in a way that will delay the less controversial banning of products made with commercial asbestos as an ingredient.

Banning asbestos in the United States would have an important effect on the rest of the world. Today, most people in the world still live in countries where there is still a lot of asbestos consumed – we will also help them by our example, I assure you, even as we help the people of our own country.

I have not been paid by anyone for my preparation and testimony here today. Nor do I represent anyone today but myself, a public health worker. Thank you for inviting me to speak.

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