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Supplemental Statement to the Criminal Court in Turin on the Schmidheiny Case

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In my last words to the Court on November 29, I said I might want to make additional comments to further clarify my testimony and assist the Court in understanding the issues before it from a public health point of view. At times in the remarks that follow, I will make reference to relevant pages of my book on asbestos (*Asbestos: Medical and Legal Aspects* 5th Ed. 2005).

Failure to Warn

A central theme of my testimony was the issue of warning the workers exposed to asbestos about the hazards involved and means to reduce them. The failure to warn or the use of misleadingly mild warnings was central in the historic growth of the asbestos industry. In the United States, this proved to be the cause of liabilities that destroyed the asbestos industry and has affected many other industries.

When I was a 22-year-old chemical engineer working in the chemical industry, directing chemical operators in the preparation of products at the company's research center, it was obvious to me that workers needed to get good information on the dangers of the materials we were using. I tried to look up what was known and provide warnings of the nature of the harmful effects that were associated with the chemicals we used. It would never have occurred to me to just tell workers to not create dust without explaining what type of harm the dust could cause. This more complete information, with the health warning, was clearly more likely to get the workers to take the necessary precautions.

In 1930, writing the first epidemiological report on asbestosis in the asbestos industry, Dr. Merewether said that asbestos workers needed to be given a "sane appreciation of the risk." Both with asbestosis and cancers caused by asbestos, this includes an understanding that the dust, which has no warning properties of its own, is nonetheless potentially lethal, and symptoms of this pulmonary lethality only arise years after the onset of exposure. This is the kind of warning that should have been given to asbestos workers since the 1930s. The fact that it was not contributed critically to the rise of asbestos use in later decades, worldwide.

The failure to warn workers of the delayed lethal danger of asbestos dust 1) deprived the workers of having the choice of whether or not to accept the risk, and 2) deprived them of the knowledge they would need to reduce the risk by reducing their exposure to the dust. Worker ignorance of the danger went along with general public ignorance of the hazards of asbestos, which was used in products in millions of people's homes. The short-term cost advantages to asbestos companies from not warning their workers and their customers were substantial. Public ignorance about the hazards of asbestos was critical to the rising market for asbestos well into the 1970s, even while the medical literature accumulated an ever more threatening picture of the consequences.

The 1972 OSHA asbestos standard, which I provided to the Court on November 29, 2010, has a preface observing that the issue of warning labels on asbestos products was "very controversial" in the development of the rule. One asbestos-cement pipe producer told OSHA that a "cancer" label would make A-C pipe "unsalable" for its main market, drinking water supply conduits (p. 599). The National Institute for Occupational Safety and Health had recommended that the warning label language include the words "Danger" and "Cancer". But OSHA determined that these words were "unwarrantedly alarming", instead requiring in their place the words "Caution" and "May cause serious bodily harm." There is more to the story than OSHA published in the *Federal Register*, however. The chief of OSHA was preventing the issuance of what he called controversial regulations as part of an effort to promote the advantages of "properly managed OSHA" for the purpose of obtaining funding from business interests in the 1972 presidential election campaign. (pp. 270-272) The OSHA asbestos standard was published the same month as this memorandum from the OSHA chief to the Nixon White House, also the same month as the Watergate break-in, June of 1972.

Had US asbestos products been required to carry cancer warnings in 1972, the demise of the asbestos industry in the US would have been accelerated. A Union Carbide official asked by the company lawyers in 1975 about the likely impact if sacks of asbestos were labeled as a cancer hazard confided that the effect on asbestos sales would be "between serious and fatal." (p. 569) It was obviously technically feasible for asbestos companies to put cancer warnings on their products; their failure to do so can be ascribed to short-term financial motives.

Product Liability

In the US, companies that sold asbestos products without warning of the dust hazards from product use have borne financial liability for the consequences to unwarned product users, many of them construction workers and mechanics. As hundreds of personal injury lawsuits were filed against US asbestos companies in the mid-1970s, the attention of top management was directed toward the management of the defense of these claims. By the late 1970s, there were thousands of lawsuits in the courts, juries were starting to award punitive damages, and it was clear that the industry was fighting for its life. This was well known to large asbestos companies in Europe, particularly the UK industry leader Turner & Newall, which also had exposure from business it had done in the US.

The absence of product liability in Europe meant that the only warnings the big asbestos companies would have to provide there would be those required by government labor authorities. The British companies took the initiative in designing a warning label in 1976 and getting the government to accept this as adequate. The label, displayed on page 788 of my book, most prominently states "Take care with asbestos" and in smaller print notes without further explanation that, "breathing asbestos dust can damage health." This label was then adopted by the asbestos industries in some other countries.

The lack of product liability seems to have been a factor in the recalcitrant attitude of the Eternit companies on the subject of product warning labels. This is contained in documents presented during my testimony before the Court on November 22. The 1971 Boston consultants' report to Johns-Manville (J-M) of a meeting with Max Schmidheiny and his associates in Switzerland records the Eternit men's criticism of J-M President Burnett for starting to place warning labels on sacks of asbestos in 1969 (the labels said that inhalation of asbestos "may be harmful"). The July 7, 1978 Asbestos International Association memorandum on warning labels records the consensus of the leading firms of the global asbestos industry that when warnings became necessary in various countries, the companies would propose the UK warning to avoid having more alarming requirements imposed on them. This record ends with the request from one participant, Etienne van der Rest of Belgian Eternit, that the "UK members do their utmost to obtain that UK asbestos containing goods exported to the continent should not yet be labeled, as this would put the continental industry in a difficult position." Mr. van der Rest also was very critical of Turner & Newall in a March 7, 1980 letter to T&N executive Harry Hardie over T&N's decision to start labeling sacks of asbestos with a "cancer" warning.

US manufacturers of asbestos-containing boards were thinking about providing customer warnings as early as 1958 (Johns-Manville memoranda). Records of the Asbestos Cement Products Association 1968-1970 reveal discussions of publishing such information in a brochure. (summarized on pp. 616-618 in my book) The creation of the Occupational Safety and Health Administration (OSHA) and issuance of OSHA asbestos regulations in 1972 would require that health warnings ("breathing asbestos dust may cause serious bodily harm") be placed on asbestos-cement products sold in the US starting in 1972. (The above documents were provided to the court on November 29.)

As far as I know, Eternit never did take measures to warn product users about the mortal dangers of dust created in the use of asbestos-cement products in construction work.

Technically Feasible Protective Measures in Asbestos-Cement Product Manufacturing

I understand that the Court has to consider whether the protective measures Eternit had in place were as good as what could be said to be technically feasible for such processes. Upon my return home, I examined a volume of articles that were submitted by the Swiss Eternit Group at 1986 hearings of the U.S. Environmental Protection Agency on EPA's proposal to ban asbestos in all of its major uses. As this volume, entitled Exhibit B, contains mainly published articles, I had not thought to bring it to Italy with me.

But the very first article in this is an excerpt from an unpublished report prepared for the Asbestos Information Association of North America (*An Analysis of the Technical Feasibility of Controlling Asbestos Dust in Primary and Secondary Industries*, G. Bragg, 1984). This excerpt, attached, is the part of the report on asbestos cement pipe, and presumably was presented to EPA by the Swiss Eternit Group in order to portray the hygiene measures in properly designed and operated asbestos cement pipe plants.

The report starts by noting that the process of opening the bags of asbestos and fluffing and dry mixing of the materials is a "totally enclosed automatic process (wherein) there is no opportunity for exposure between the bag opening stage and the wet slurry formation." It is noted that wet areas of the plant must constantly be wet washed to prevent drying. The report notes that local exhaust ventilation is used in some plants where the pipe is subjected to sawing or surfacing operations using lathes. While it is reported that some plants used water sprays instead of local exhaust ventilation, it was observed that with sprays the operators also got sprayed and their clothes got contaminated as a result.

Airborne asbestos fiber concentrations for U.S. A-C pipe plants are presented in Table III including data from 1975-1976, 1980, and 1983-84 "data from 3 plants selected as representative of best available technology." Average exposures for all the processes in the plants in 1983-84 were 0.03-0.32 f/cc. The dustiest areas were sawing, drilling, coupling cut-off and machining.

It was reported that, "All three asbestos cement pipe manufacturers visited have full time engineers and industrial hygienists devoted to minimizing asbestos dust exposure in all work sites."

The thrust of this report seems to be that US manufacturers would have great difficulty meeting a permissible exposure limit (PEL) of 0.5 f/cc and could not achieve compliance with a 0.2 f/cc PEL. At the time the report was written, OSHA was revising the asbestos standard and had proposed to lower the PEL to 0.5 f/cc or less (from 2 f/cc).

Even bearing in mind that the industry's expenditures on dust control were limited to what the government required, this report at least gives some idea of what was possible and what was done by A-C pipe producers in lowering exposures of their workers to asbestos. Especially because this report was presented by Swiss Eternit Group to a governmental body, comparisons with conditions at the Eternit facilities in Italy and elsewhere are warranted.

Other excerpts of the testimony by representatives of the Swiss Eternit Group at the 1986 hearings on the EPA's proposed ban of major uses of asbestos were cited and submitted to the Court during my testimony on November 22, 2010. These statements asserted that the protection of workers and the environmental protection was a responsibility of <u>top management</u> at the Swiss Eternit Group. The volumes of corporate testimony were handed to me by Eternit representatives at the EPA hearings, where I appeared as the representative of an environmental non-governmental organization, the Natural Resources Defense Council. I left the two volumes of statements to EPA by the corporate officials and lawyers of the Swiss Eternit Group with the office of Prosecutor Guariniello.

<u>Qualifications as an Expert in Toxic Corporate Crime</u>

The custom in US courts for the presentation of experts is first to present the qualifications of an expert in the area in which the expert is testifying. Because of the nature of this case, I think it relevant to say a few words about my relevant background.

As a public health worker and in extensive research and publications, I have spent my career examining the role of the corporation in the area of toxic substances control. A glance through the titles of my publications, in my Curriculum Vitae submitted to the Court, shows that I have addressed many aspects of what might be called "toxic corporate crime". These have included: the history and global expansion of the asbestos industry; the export of hazardous industries to countries with weak regulations and liability provisions; the international "double standards" of multinational corporations in worker and environmental protection; hidden corporate influence in the setting of occupational exposure limits for toxic substances in the workplace air; and the manipulation of international scientific organizations in the selection of experts to assess the toxicity of industrial chemicals.

My book on asbestos, in which the roles of corporations and individuals are critically examined, has been subject to very careful scrutiny by the parties named since the first edition appeared in 1984. I have testified in hundreds of trials and been questioned in hundreds of depositions by the lawyers for the companies I have written about. Transcripts of these testimonies can be used in cross-examination if I say anything in trial that is inconsistent with prior sworn statements. Determined efforts continue to be made to discredit me and my work by the lawyers for the defendant corporations. I am sure that every line of my book has been checked for factual errors, ambiguities, inconsistencies, and the like. This is likewise true of every statement I make to a governmental body and every article I author in scientific journals. It has been an instructive discipline to write and testify about these abuses of workers and the public, under such scrutiny for more than 30 years.

Payment

Aside from challenges to qualifications, the US courts permit the consideration of the payment that experts receive for their services, in evaluating the weight to be given to their testimony. In this case, the community of Casale Monferrato has paid for my round-trip airfare and my hotel stay in Torino. There was no charge or payment for my preparation, testimony, and other professional services in connection with this important case.

I reiterate my offer to assist the Court in any way possible, including response to questions through correspondence. And I thank the Court for its courtesy in taking my testimony and statements the pursuit of justice.

Garrett Park, Maryland, USA, December 7, 2010

Attachment:

5.2.1 Asbestos Cement Pipe. *An Analysis of the Technical Feasibility of Controlling Asbestos Dust in Primary and Secondary Industries.* Prepared for The Asbestos Information Association/North America by Gordon M. Bragg, May 1984. Exhibit B Tab 1 to "Comments of the Swiss Eternit Group on the Notice of the EPA's Proposed Rulemaking on Asbestos (40 C.F.R. Part 763)" submitted by Donald T. Bliss et al., Washington D.C. Counsel to the Swiss Eternit Group, June 28, 1986.