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Arthur L. Frank MD, PhD  
Professor of Public Health and Professor of Medicine, Drexel University  
3215 Market Street, 7th floor, Philadelphia, PA 19096  
[alf26@drexel.edu](mailto:alf26@drexel.edu)

SUBJECT: Draft Risk Evaluation of Asbestos  
Docket No. EPA–HQ–OPPT–2019–0501

As a Professor of Public Health and a Professor of Medicine at Drexel University, and a researcher for more than 50 years regarding the hazards of asbestos, I wish to offer comments on the EPA Asbestos Draft Document, and suggest other areas requiring consideration. I attach an affidavit I prepared and use in court-related matters when I testify, generally for plaintiffs, which additionally document my views and reviews scientific literature regarding asbestos and several issues especially relevant to the EPA draft under consideration.

While there are some positive aspects of the draft document there are also some deficiencies as raised on the review call on April 7<sup>th</sup>, which I attended in its entirety. The Risk Assessment properly focuses on modern fiber measurement assessments and does not rely on historic dust measurements converted to fiber counts, especially as these have never been properly evaluated and verified. This risk assessment should focus on accurate, verified and legitimate data on fiber counts, and while appropriate for chrysotile should also extend to amphiboles, as noted below. Some of the current data in the draft, while current, really are for recreations of past usage, such as brake work, and all brake related data over the past decades, from all legitimate sources, should be considered and evaluated in the risk assessment.

The scope of the EPA assessment should not be limited to chrysotile alone, since there are legitimate reasons for also considering amphiboles. Workers and the general public are both still regularly exposed to amphiboles. While noting that contamination of consumer or industrial talc with amphibole is not admixed, it is still a legitimate area of health concern when used as a personal cosmetic product, as is the use of industrial talc, contaminating such work settings as tire making and its use in some construction materials. Also, significant disruption of amphibole materials from past use in homes in insulation, roofing materials, shingles and siding occurs during hurricanes and tornados ,as well as the well-known risk to firefighters who develop mesotheliomas from their work activities, as documented in peer reviewed literature. Other amphibole exposures occur with the vermiculite found in millions of homes in America and from naturally occurring materials found in parts of California. These are not “legacy” exposures but regular, current exposures had by many.

It is inappropriate to limit the cancer considerations to only lung cancers and mesotheliomas. The National Academy of Sciences published in 2006 that laryngeal cancer results from exposure to asbestos, and the International Agency for the Research on Cancer (IARC) made a similar determination. IARC, and others, found ovarian cancer in women also developed after exposure to asbestos. Additionally, peer reviewed literature notes asbestos causing various gastrointestinal cancers and kidney cancers, including some documentation from chrysotile only exposed populations. Ingestion of asbestos leads to various cancers as documented in the peer reviewed literature and it seems inappropriate to study inhalation as the only pathway related to malignant disease.

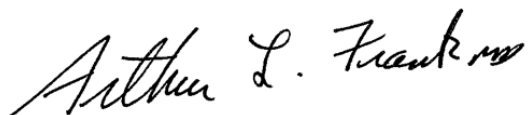
Ingestion comes from use of asbestos cement water pipes, excluded from consideration, and this exclusion seems inappropriate. In addition, another exclude source of exposure is textiles, appropriately commented upon regarding the work of Dement and colleagues, and current use notes that textiles are still a current exposure issue. Asbestos blankets and gloves are still currently used for welding activities, and regular repair work on turbine linings containing asbestos continue to expose workers to asbestos containing textiles.

Regarding gasket use, some cited data, was generated specifically to assist with defense litigation in asbestos lawsuits, such as the quoted work of Mangold. That study, which measured only some aspects of gasket use, neglected to provide data on the most dusty activity, removal of old gasket materials as is often done with wire brushes or electrical buffering equipment, artificially lowering reported values for dust levels associated with current gasket use.

The draft also makes use of defense driven research with regard to brakes. Recent data should be supplemented by older similar data, especially since the newer data looks to re-create old, not new, work practices. The range of exposures is much greater when such wider peer reviewed data is considered, such numbers noted in my attached affidavit. This would include the work of Hickish and Knight at Ford, the work at Mount Sinai and NIOSH in the 1970s and 1980s among others (see affidavit). At the April 7<sup>th</sup> hearing a claim by an asbestos brake defense attorney that same sized particle in similar populations should be studied appears to be unscientific legal advocacy, ignoring the limitations of asbestos science. Rarely, if ever, does any research evaluate populations with "same sized" fibers, the only true such work being animal studies by Stanton (see affidavit) where fibers above and below 5 microns have been found to be carcinogenic. The very fiber size of asbestos found most often in brake dust has been the same size, less than 5 micron, and of the same type-chrysotile- as documented in tissue of mesothelioma patients by Suzuki, Dodson and others in the peer reviewed literature (see affidavit). In addition, all human exposures occur to fibers of many sizes, not just one size. I am not aware of any human epidemiology that studies disease after exposure to any one size of fibers.

With regard to the chlor-alkali industry, I agree the use of asbestos is an unreasonable risk. It is also unnecessary. Safe substitutes now exist that carry no asbestos risk and the longer operating life of these materials quickly offsets their slightly higher initial cost.

In closing, the EPA should recognize, as has already been done in over 60 countries in the world, no further need of asbestos in our society and that any allowable continuing use will threaten the health and well-being of workers, their family members, and the public at large.

A handwritten signature in black ink that reads "Arthur L. Frank" with a stylized flourish at the end.