



July 13, 2022

The Honorable Michael Regan
Administrator,
United States Environmental Protection Agency
Washington DC 20460

Re: Asbestos Part 1: Chrysotile Asbestos; Regulation of Certain Conditions of Use Under Section 6(a) of the Toxic Substances Control Act (TSCA) Docket EPA-HQ-OPPT-2021-0057-0006

Sent via Regulations.gov

Dear Administrator Regan:

We appreciate the opportunity to provide comment on the proposed rule to address the unreasonable risk of injury to health caused by chrysotile asbestos.

The American Lung Association is the oldest voluntary health association in the United States, currently representing the more than 36 million Americans living with lung diseases. The Lung Association is the leading organization working to save lives by improving lung health and preventing lung disease through research, education and advocacy.

We urge the U.S. Environmental Protection Agency (EPA) to rapidly complete the rulemaking process and adopt a complete ban of the use of asbestos in the United States. The process to eliminate asbestos began 33 years ago. Alternatives for every remaining use of the substance now exist. Completing this ban will save lives, protect human health, and close this chapter of prioritizing the bottom line of asbestos-using companies over American lives.

History and Opportunity

EPA has known about the extensive and extreme dangers of asbestos exposure for decades. In 1989, EPA issued a final rule under section 6 of the Toxic Substances Control Act (TSCA) to prohibit the manufacture, importation, processing, and distribution of asbestos in almost all products.¹ A flurry of challenges and lawsuits followed, ending in a successful industry challenge that prevented a complete ban from taking place. Since then, sub-types of the substance have been imported relatively freely, exposing Americans and resulting in unnecessary deaths from a variety of causes.

In striking down EPA's original ban, the court held that EPA had violated TSCA by not adequately demonstrating that a ban was the "least burdensome" action that could achieve an acceptable level of risk.² This had the functional impact of requiring EPA to minimize the

¹ Asbestos: Manufacture, Importation, Processing, and Distribution in Commerce Prohibitions; Final Rule (54 FR 29460, July 12, 1989).

² Corrosion Proof Fittings v. EPA, 947 F.2d 1201 (5th Cir. 1991).

disruption to regulated industry rather than maximize public health benefits in direct conflict with the agency's primary mission to protect human health and the environment.³

In 2016, Congress passed the Frank R. Lautenberg Chemical Safety for the 21st Century Act, amending and strengthening TSCA.⁴ In the bill, Congress underlined their intention that EPA look at the hazards of chemicals in total and explicitly affirmed that EPA could determine if a chemical posed an "unreasonable risk" "without consideration of cost."⁵ The update allows EPA to reinstate a full ban on dangerous materials like asbestos.

Health Impacts

In 2004, the global burden of disease attributable to asbestos was estimated at 107,000 deaths, including 41,000 from asbestos-caused lung cancer, 7,000-24,000 deaths from asbestosis and 43,000-59,000 deaths from mesothelioma.⁶

Domestically, models looking at mortality rates from diseases caused by asbestos exposure in the United States estimated exposure is responsible for approximately 10,000 deaths per year.⁷ A 2017 Centers for Disease Control (CDC) analysis found that despite decades of asbestos regulations, more than 45,200 people died of mesothelioma in the United States between 1999 and 2015.⁸ Mitigation measures have not resulted in a decline in deaths, probably due to the latency period between exposure and disease diagnosis.⁹ There is no recognized safe level of asbestos exposure.

According to the United States Department of Health and Human Services and the World Health Organization, asbestos is highly carcinogenic.¹⁰ Exposure to asbestos causes cancer of the lungs, mesothelial tissue (mesothelioma), colorectum, larynx, ovaries, pharynx and stomach. Those lucky enough to not experience a malignancy are at risk of asbestosis, chronic obstructive pulmonary disease (COPD), plaques in the lungs and inflammation of the chest.¹¹ Below we offer more details on a few of the most common lung impacts of asbestos exposure.

Lung Cancer

Lung cancer is the leading cancer killer for both men and women in the United States¹² and the average asbestos-related lung cancer life expectancy following diagnosis is 16 months.¹³ The

³ United States Environmental Protection Agency. Our Mission and What we do. Available at: <https://www.epa.gov/aboutepa/our-mission-and-what-we-do>

⁴ Control of Toxic Substances, Findings, Policy and Intent 15.U.S.C. §2601, June 22, 2016.

⁵ Control of Toxic Substances, Prioritization, Risk Evaluation, and Regulation of Chemical Substances and Mixtures 15. U.S.C. § 2605(a), (b)(4)(A), June 22, 2016.

⁶ Ramazzini, Collegium. "The global health dimensions of asbestos and asbestos-related diseases." *Journal of Occupational Health policy* Vol. 58,2 (2016): 220-3.

⁷ Environmental Working Group. Asbestos: Think Again. Found at: <https://www.ewg.org/research/asbestos-think-again>

⁸ Mazurek JM, Syamlal G, et al. Malignant Mesothelioma Mortality - United States, 1999-2015. *MMWR Morb Mortal Wkly Rep.* 2017 Mar 3;66(8):214-218.

⁹ National Toxicology Program. Asbestos. In: Report on Carcinogens. Fourteenth Edition. U.S. Department of Health and Human Services, Public Health Service, National Toxicology Program, 2016.

¹⁰ ATSDR. Toxicological Profile Asbestos, Case 1332-21-4. September 2001; World Health Organization. International Programme on Chemical Safety: Asbestos, 2004.

¹¹ Prazakova S, Thomas PS, Sandrini A, Yates DH. Asbestos and the lung in the 21st century: an update. *The Clinical Respiratory Journal* 2014.

¹² Centers for Disease Control and Prevention. National Center for Health Statistics. CDC WONDER Online Database, compiled from Multiple Cause of Death Files, 1999-2020.

¹³ Kishimoto, T. et al. Clinical study of asbestos-related lung cancer in Japan with special reference to occupational history. *Cancer sci* vol. 101, p. 5 2010.

disease is painful and debilitating. A 2014 systematic review of nearly 6,000 studies showed that the association between asbestos exposure and lung cancer risk is essentially linear; relative risk for lung cancer increases between 1% and 4% per standardized year of exposure.¹⁴ People exposed to asbestos who develop lung cancer work in a wide range of industries, including textile production, friction products, insulation products, and cement products. However, the risk of cancer from asbestos exposure goes beyond the exposed worker; studies have found lung cancer in families and close contacts of exposed workers. The mode of exposure is not definitive, but studies suggest that worker's contaminated clothing, skin, hair and shoes is the most likely route of exposure.¹⁵

Mesothelioma

The most infamous cancer caused by exposure to asbestos is mesothelioma, a rare disease in the general population that kills about 3,000 people a year. Asbestos accounts for over 80% of cases and exposed people are often not diagnosed for decades following exposure.¹⁶ The disease is aggressive, deadly and usually incurable.¹⁷ As the disease spreads, it causes a variety of debilitating symptoms, including difficulty breathing, chest pain, the accumulation of fluid in the lungs and chest, and difficulty swallowing.¹⁸ Those diagnosed have a poor prognosis; the survival rates is typically 4–18 months after diagnosis and the current five-year survival rate for the disease is 10 percent.¹⁹

Epidemiologic evidence has increasingly shown that all asbestos fiber types cause mesothelioma in humans.²⁰ As with lung cancer, studies find that people living with someone who is exposed to asbestos through a job are at a higher risk of mesothelioma despite not working with the substance itself.²¹ Several CDC studies over the past decades indicate that the number of deaths from mesothelioma increased significantly from 1999 to 2015.²² March 2022 data looking at death rates through 2020 have shown an increase in deaths among women. The annual number of deaths from mesothelioma among women significantly increased, from 489 in 1999 to 614 in 2020.²³ Many of these women were exposed through a family member, further showing the insufficiency of mitigation measures designed to protect workers.

Asbestosis

Exposure to asbestos can scar tissue in the lungs, leading to asbestosis, an interstitial

¹⁴ Lene Snabe Nielsen, et al. (2014) Occupational Asbestos Exposure and Lung Cancer—A Systematic Review of the Literature, *Archives of Environmental & Occupational Health*, 69:4, 191-206.

¹⁵ Goldberg M, Luce D. The health impact of nonoccupational exposure to asbestos: What do we know? *European Journal of Cancer Prevention* 2009; 18(6):489–503.

¹⁶ Robinson, B., Malignant pleural mesothelioma: and epidemiological perspective. *Annals of Cardiothoracic Surgery*. Vol. 1, No 4 (November 2012).

¹⁷ Warner KJ. Allscripts EPSi. Mayo Clinic, Rochester, Minn. July 17, 2018.

¹⁸ Warner KJ. Allscripts EPSi. Mayo Clinic, Rochester, Minn. July 17, 2018.

¹⁹ Penn Medicine, Mesothelioma prognosis. Found at: <https://www.pennmedicine.org/cancer/types-of-cancer/mesothelioma/prognosis>

²⁰ "Asbestos (Chrysotile, Amosite, Crocidolite, Tremolite, Actinolite, and Anthophyllite)." World Health Organization (WHO), International Agency for Research on Cancer (IARC) Monographs on the Evaluation of Carcinogenic Risks to Humans, Volume 100C, 2012.

²¹ Noonan CW. Environmental asbestos exposure and risk of mesothelioma. *Ann Transl Med*. 2017 Jun;5(11):234.

²² Mazurek JM., et al. Malignant Mesothelioma Mortality — United States, 1999–2015. *MMWR Morb Mortal Wkly Rep* 2017;66:214–218.

²³ Mazurek JM, Blackley DJ, Weissman DN. Malignant Mesothelioma Mortality in Women — United States, 1999–2020. *MMWR Morb Mortal Wkly Rep* 2022;71:645–649.

pulmonary fibrosis disease for which no treatment exists. Symptoms may not develop for up to 20 years after exposure, after significant scarring has already made the tissue stiff and unable to expand normally.²⁴ The disease is not usually fatal but can cause debilitating symptoms.

COPD

Chronic obstructive pulmonary disease (COPD) is a collective term for emphysema and chronic bronchitis. There is no cure; doctors focus on disease management to slow disease progression and relieve symptoms. Most COPD is caused by tobacco smoking, but asbestos exposure increases the incidence of COPD and is a frequent complication of exposure. For example, a study of construction workers found the mortality rate from COPD was close to 2.5 times higher in people exposed to toxins including asbestos, even if they had never smoked and were otherwise at very low risk of the disease.²⁵ Lungs that are weakened by COPD also may be much more susceptible to additional lung damage caused by asbestos and can shorten a person's healthy years.

Pleural disease

Pleural plaques are noncancerous areas of thickened tissue that form in the lining of the lungs. Asbestos exposure can cause these pleural plaques and typically become visible twenty or more years after the inhalation of asbestos fibers.²⁶ The amount of thickening tends to be dose dependent. Though the plaques themselves are benign, having thickened tissue as the result of asbestos exposure increases the risk of a person developing a further asbestos-related disease.²⁷

EPA Must Protect Workers

The specific asbestos at issue in this proposed rule, crystalline asbestos, continues to be used in four mainly industrial categories: asbestos cement, friction materials, roof coatings, and caskets.²⁸ Most exposure therefore occurs through an individual's job, mainly in industrial or factory settings, with some legacy material exposure in home and commercial renovation. These jobs are difficult and physically demanding, and often do not require advanced schooling. People in these positions may not have as many options to earn wages than people with a college degree. Asbestos exposure remains a leading cause of work-related deaths in the world.²⁹ Individuals exposed to asbestos in their workplace often do not have a choice about the materials they work with and around. People should not be forced to pay for their livelihoods with their lives, especially when risks are known and preventable.

Two Years' Delay is Unnecessary for Diaphragms and Sheet Gasket Replacement

Asbestos-using industries have had 30 years to prepare for the elimination of asbestos from the environment (including nearly two years since a final TSCA risk evaluation done pursuant to this rule was released). Two additional years of delay is unacceptable. The 180-day phase-out proposed for other uses offers all industries enough time to find already available alternatives and implement them. The U.S. Geological Survey supports this assessment and lists multiple

²⁴ Occupational Safety and Health Administration. Asbestos OSHA Fact sheet (2014).

²⁵ Bergdahl IA, Torén K, Eriksson K, et al. Increased mortality in COPD among construction workers exposed to inorganic dust. *Eur Respir J.* 2004;23(3):402-406.

²⁶ Sime, P., Beckett, W, Asbestos-Related Lung Disease, *Am Fam Physician.* 2007;75(5):683-688

²⁷ Miles SE, Sandrini A, Johnson AR, Yates DH. Clinical consequences of asbestos-related diffuse pleural thickening: A review. *J Occup Med Toxicol.* 2008 Sep 8;3:20.

²⁸ Pigg BJ. The uses of chrysotile. *Ann Occup Hyg.* 1994;38(4):453-408.

²⁹ WHO/ILO joint estimates of the work-related burden of disease and injury, 2000-2016: global monitoring report. 17 September 2021.

alternatives that are readily available for the remaining uses of asbestos in manufactured products.³⁰

Specifically, asbestos is used heavily in chlor-alkali production and a large percentage of the remaining imports are used by this industry. Chlor-alkali is an industrial process used to produce chlorine, caustic soda, and other chlorine and sodium derived products. These are then used to make paper and filter water.³¹ Proponents of the continued use of asbestos claim that it is necessary to protect the water supply and that the limited alternatives are too expensive.³² However, in other countries, alternatives have been used safely for a long time; Congressional testimony by Celeste Monforton at Texas State University noted that 74 of 75 plants in the European Union and about half of the plants in the United States successfully create chlor-alkali without asbestos.³³ Materials like cellulose fiber and polyurethane foams are safer and already widely used and available. Further, the benefits of avoided health impacts and premature deaths, along with savings in energy costs, will likely quickly outpace the initial conversion costs and estimated 10-15% increased ongoing cost for alternative materials.³⁴

Conclusion

Worldwide, 67 countries, including Brazil, Japan, New Zealand and members of the European Union, have weighed the benefits and the potential harms posed by asbestos and banned the chemical.³⁵ We cannot go back in time to the 1991 case that reversed EPA's attempt to fully protect people from this harmful substance and prevent exposure, but EPA can swiftly ban all remaining uses today and save lives in the future.

Thank you for the opportunity to comment.

Sincerely,



Harold P Wimmer
National President and CEO

³⁰ U.S. Geological Survey. Mineral Commodity Summaries 2017. January 2017.

³¹ Research and Markets. Chlor-Alkali Market, By Products (Caustic Soda/Sodium Hydroxide, Chlorine, Soda Ash/Sodium Carbonate), Applications & Geography: Global Industry Trends & Forecasts to 2017. (November 6, 2013).

³² American Chemistry Council. Press release: ACC Urges EPA to Reconsider its Flawed Chlor-alkali Proposal. April 5, 2022.

³³ Trager, R. Industry criticizes proposed US asbestos ban. Chemistry World. 2019.

³⁴ Haynes, Rebecca Clay. "A worn-out welcome: renewed call for a global ban on asbestos." Environmental health perspectives vol. 118,7 (2010).

³⁵ International Ban Asbestos Secretariat. Current Asbestos Ban list, found at: http://ibasecretariat.org/alpha_ban_list.php