



June 14, 2024

Dr. Michal Freedhoff  
Assistant Administrator  
Office of Chemical Safety and Pollution Prevention  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue NW  
Washington DC, 20460

RE: Asbestos Part 2, Draft risk evaluation on legacy uses and associated disposals  
Docket ID #: EPA-HQ-OPPT-2021-0254

Dear Assistant Administrator Freedhoff:

On behalf of the American Public Health Association, a diverse community of public health professionals that champions the health of all people and communities, we appreciate the opportunity to provide feedback on the U.S. Environmental Protection Agency's draft risk evaluation for legacy asbestos. We appreciate the effort invested to prepare the document. We offer the following comments to strengthen it and to set the stage for an EPA risk management rule with the strongest possible public health protections. These comments were developed in collaboration with members of APHA's Occupational Health and Safety Section.

***Conditions of Use***

APHA concurs with EPA's determination that the asbestos Conditions of Use (COU) listed at Lines 4426-4446 (p.189-190) pose an unreasonable risk of injury to health or the environment. We are concerned, however, with the agency's decision to not make the same determination on 17 other broad categories of COU (pp. 190-191, Lines 4449-4497). As listed in the draft risk evaluation, items in these categories include products for industrial and commercial use, as well as consumer products such as children's toys, hobby materials, ceramics, automotive applications, textiles, ceramics and garden products. We recognize that there is not scientific evidence for every source of exposure to asbestos, but that does not diminish the fact that there is no safe level of exposure. The evidence of cancer and non-cancer health effects of asbestos is well known. Therefore, the precautionary approach is to assume exposure will occur where asbestos is present. EPA will be setting itself up for a risk management approach that could require testing of imported goods that may contain asbestos.

**Populations at Risk of Exposure**

To manage the risk to asbestos, it is important for all of us to have a better picture of where it is likely to be present. To our knowledge, estimates of this type have not been prepared since 1984 in the EPA-contracted reports on asbestos in schools, and its survey of friable asbestos in government buildings, residential properties with 10 or more rental units and private non-residential commercial buildings.<sup>1,2,3</sup> EPA’s risk evaluation will be improved by using the best available data to estimate the number of homes, schools, buildings and other structures that contain asbestos. For part of the estimate, data can be located based on the years when asbestos-containing building materials were used in these structures and for various typical products (e.g., roofing, wall board, floor tiles, wrap insulation).

**Populations at risk of exposure from asbestos-containing building materials in housing**

An estimate for potential exposure from housing units could be developed in part using data from the U.S. Census Bureau’s American Community Survey. It includes data on housing characteristics and demographics of residents which can be stratified by metropolitan and micropolitan statistical areas. About 50% of current U.S. housing units were built prior to 1980, the peak time when asbestos was used in residential building materials (Table 1). A map is attached which shows 939 metropolitan and micropolitan statistical areas by “median year built.” The dataset used to create the map is submitted as a separate document.<sup>4</sup> We recommend EPA consult with the U.S. Census Bureau and other federal/state agencies to identify data sources which could help characterize the risk of exposure in different regions and/or localities.

Table 1: Median year built, U.S. housing

Median Year Built (by decades)	Number of Metropolitan and Micropolitan Statistical Areas (n=939)	%
Prior to 1960	44	4.7
1960 - 1969	147	15.7
1970 – 1979	307	32.7
1980 – 1989	334	35.6
1990 - 1999	104	11.1
2000 +	3	0.2

U.S. Census Bureau, American Community Survey, 2020<sup>4</sup>

<sup>1</sup> U.S. EPA. (October 1984). Evaluation of the Asbestos in Schools Identification and Notification rule. EPA 560/5-84/005.[https://ia800909.us.archive.org/35/items/ERIC\\_ED250818/ERIC\\_ED250818.pdf](https://ia800909.us.archive.org/35/items/ERIC_ED250818/ERIC_ED250818.pdf)

<sup>2</sup> Westat, Inc., Battelle & Midwest Research Institute. (October 1984). Final report to the EPA: Asbestos in buildings, national survey of asbestos-containing friable materials.

<sup>3</sup> Westat, Inc. & Battelle. (September 1988). Final report to the EPA: Additional analysis of EPA’s 1984 asbestos survey data.

<sup>4</sup> U.S. Census Bureau. American Community Survey, Median Year Structure Built. 2022 (5-year Estimates) Table No. B25035.

The ACS housing data includes variables for Metropolitan and Micropolitan Statistical Areas, such as number of residents by owned/rental, residents under age 18, poverty level, and race. EPA should use U.S. Census Bureau data such as this to estimate the amount of housing in the U.S., which is a potential source of asbestos exposure, where in the U.S. the potential exposure in housing is the highest (based on age of the structure), the number of people potentially exposed and their demographic characteristics (e.g., people under age 18, poverty level percentage, race). EPA could incorporate reasonable assumptions in the estimate to adjust, for example, for housing in which asbestos abatement took place.

***Populations at risk of exposure from asbestos-containing building materials in schools***

Similar to potential asbestos exposure in housing, EPA should develop an estimate for exposure in school buildings. According to the U.S. Census Bureau in 2022, approximately 53 million children between ages 5-17 years are enrolled in school<sup>5</sup>, many in older school buildings of an age likely with asbestos materials. The U.S. Department of Education's National Center for Education Statistics has data on school facilities, including average age of the main instruction buildings nationally and by region, and years since last major renovations. Forty-six percent of the main instructional school facilities in the U.S. were built prior to 1979, a time-period in which asbestos-containing building materials were widely used. That data could assist with developing assumptions for an estimate of school facilities at-risk for exposures due to asbestos-containing materials. EPA could also use the Asbestos Hazard Emergency Response Act inspection records for compliance by local education agencies that are under its jurisdiction. LEA's records should include their asbestos management plans, any abatement that has occurred, and records of required periodic surveillance. We understand, however, that the data may be limited because the agency has not invested in monitoring LEAs for their AHERA responsibilities,<sup>6</sup> and oversight appears to be lacking in the 12 states that oversee compliance in their LEAs.<sup>7</sup>

EPA's estimate of populations at risk from exposure in school facilities (i.e., students, teachers, and other staff) could integrate data from NECS data, such as percent of students of color, neighborhood poverty levels, and other variables. This would allow the agency to integrate with EPA's own community-level measures of environmental injustice.<sup>8</sup>

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<sup>5</sup> U.S. Census Bureau. Table 1. Enrollment Status of the Population 3 Years Old and Over, by Sex, Age, Race, Hispanic Origin, Foreign Born, and Foreign-Born Parentage: October 2022

<sup>6</sup> U.S. EPA, Office of the Inspector General. (2018). EPA needs to re-evaluate its compliance monitoring priorities for minimizing asbestos risks in schools. Report No. 18-P-0270.

<sup>7</sup> Failing the Grade: Asbestos in America's Schools. (2015). Report of an investigation by Senator Edward Markey and Senator Barbara Boxer, U.S. Senate Environment and Public Works Committee. <https://www.markey.senate.gov/imo/media/doc/2015-12-Markey-Asbestos-Report-Final.pdf>

<sup>8</sup> Filardo M, Vincent JM, Sullivan KJ. (April 29, 2019). How crumbling school facilities perpetuate inequality. Kappan. <https://kappanonline.org/how-crumbling-school-facilities-perpetuate-inequality-filardo-vincent-sullivan/>

We request the Office of Chemical Safety and Pollution Prevention coordinate with the Office of Enforcement and Compliance Assurance and other EPA leadership to address data limitations with respect to AHERA. We ask that the agency use its authority to implement a compliance monitoring program in a representative sample of LEAs which have school facilities built before 1989.<sup>9</sup> One aim would be obtaining more recent data on the prevalence of asbestos in schools facilities, given the last report was published 40 years ago.<sup>1</sup> Decades of disinvestment in existing schools, including deferred maintenance, repairs, and renovations,<sup>10,11,12,13</sup> increases the likelihood that asbestos-containing materials that was once deemed “non-friable” have degraded or been disturbed, making it friable.<sup>14</sup>

We note that Appendix E-19 in the risk evaluation does not include establishments and employees in NAICS 61 (Educational Services.) This NAICS covers elementary and secondary school employees. Janitors, building engineers and other staff can be involved in maintenance and renovation tasks with the potential for exposure to asbestos. This information should be added to Appendix E-19 and incorporated into relevant text of the document. In addition, NAICS 562112 (Hazardous Waste Collection) should also be listed in Appendix E.

### ***Location usage and community concerns***

Risk evaluation of locations with ACM should be further disaggregated to address exposure and protection concerns of different school populations. For instance, students and staff in educational settings may have concerns about how ACMs are handled by school administration. On college campuses, whistleblowers have identified potential asbestos exposure during electrical installation, in dormitory settings, and after buildings with friable asbestos show signs of degradation.<sup>15,16,17</sup> Students may have unique considerations regarding how they may be exposed to asbestos and what efforts are undertaken to address their concerns. Many institutions of higher learning use “management in place” policies, which do not proactively identify and

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<sup>9</sup> US EPA. [ampauditchecklist.pdf \(epa.gov\)](https://www.epa.gov/sites/static/files/2015-01/documents/ampauditchecklist.pdf) <https://19january2021snapshot.epa.gov/sites/static/files/2015-01/documents/ampauditchecklist.pdf>

<sup>10</sup> U.S. Government Accountability Office. K-12 education: School districts frequently identify multiple building systems needing updates or replacements. Report No. GAO-20-494. <https://www.gao.gov/assets/gao-20-494.pdf>

<sup>11</sup> National Center for Education Statistics. (2014). Condition of America’s public school facilities: 2012-2013. NCES 2014-022. <https://nces.ed.gov/pubs2014/2014022.pdf>

<sup>12</sup> 21<sup>st</sup> Century School Fund (formerly BEST). (2006). Growth and disparity: A decade of U.S. public school construction. [https://citiesandschools.berkeley.edu/reports/BEST\\_2006\\_GrowthandDisparity\\_final.pdf](https://citiesandschools.berkeley.edu/reports/BEST_2006_GrowthandDisparity_final.pdf)

<sup>13</sup> Laker B, Ruderman W, Purcell D. (2018). Toxic city: Sick schools. Philadelphia Inquirer

<sup>14</sup> U.S. EPA. Under AHERA, what criteria must be applied to determine when a non-friable asbestos containing material is made friable? [webpage], last updated April 23, 2024

<sup>15</sup> Sokolove Law. (October 2015). Whistleblowers Say College Students at UC Davis Were Exposed to Asbestos. <https://www.sokolovelaw.com/blog/uc-davis-asbestos/>

<sup>16</sup> Funderburk C. (October 2023). Asbestos-Containing Materials Found In Residence Halls, Campus Buildings. The Daily Tar Heel. <https://www.dailytarheel.com/article/2023/10/university-dorm-asbestos-data>

<sup>17</sup> The Pennsylvania State University Asbestos Exposure Lawyers. Bailey Glasser, LLP. <https://www.mymesothelioma.com/the-pennsylvania-state-university-asbestos-exposure/>

remove ACMs.<sup>18</sup> Students, in contrast, demand more transparency and exposure mitigation efforts.<sup>19</sup> More proactive policies may reduce the potential for asbestos exposure. Thus, understanding how different policy interventions affect the frequency and severity of potential exposure events is vital to any asbestos risk evaluation.

***Populations at risk of exposure: Extreme weather events and other disasters***

EPA's Conceptual Models (e.g., Figure 1-3, Figure 1-4; Figure 1-5) and the resulting draft risk evaluation should address the general public's potential exposures to asbestos resulting from weather events and other disasters. The sources of the exposures are Conditions of Use, in particular asbestos-containing construction and building materials, which are listed in Table 1-1. With climate change, more people will experience increasing adverse weather events (e.g., wildfires, tornados, hurricanes) and others that are more extreme. Just two examples illustrate that risk of asbestos exposure from such events are not hypothetical.

1. The wildfires on Maui, Hawaii in August 2023 killed more than 100 people, and contributed to many more injured and displaced. Among the consequences was debris and fire ash containing asbestos.<sup>20,21</sup>
2. Demolition of a 55-year-old waterfront hotel in Punta Gorda, Florida was put on hold in March 2024 after the city learned of the asbestos-containing building materials.<sup>22,23</sup> The hotel was severely damaged in 2022 by Hurricane Ian and further damaged by Hurricane Idalia in 2023. For 18 months while the property was closed for business, the public, including trespassers and vandals were potentially exposed to asbestos.<sup>24</sup>

Besides extreme weather events, the public's exposure to asbestos can occur from fires and explosions at industrial facilities. For example:

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<sup>18</sup> Asbestos and College Campuses: Are Students at Risk? University of Iowa.

<https://myweb.uiowa.edu/dpipr/asbestos-and-college-campuses-are-students-at-risk.html>

<sup>19</sup> Ham A. UNC removing asbestos in Mitchell Hall highlights student concerns. The Daily Tar Heel. March 2023. <https://www.dailytarheel.com/article/2023/03/university-asbestos-in-mitchell>

<sup>20</sup> McAvoy AB. (August 30, 2023) Unclear how many in Lahaina lost lives as Hawaii authorities near the end of their search for dead. Associated Press.

<sup>21</sup> U.S. EPA. Maui Wildfires. Hazardous materials removal (Phase I). (Last updated March 27, 2024)

<https://www.epa.gov/maui-wildfires/hazardous-materials-removal-phase-1>

<sup>22</sup> Orenczuk A. (2024 April 2). "This is a crazy eyesore!"...and asbestos just delayed demolition in Punta Gorda.

Fox4 Southwest Florida. <https://www.fox4now.com/punta-gorda/this-is-a-crazy-eyesore-and-asbestos-just-delayed-demolition-in-punta-gorda>

<sup>23</sup> WINK News. (2024 May). What's next for Punta Gorda hotel with asbestos. [YouTube]

<https://www.youtube.com/watch?v=ZTEPf6yw94g>

<sup>24</sup> Murray D. (2023 July 19). Punta Gorda Waterfront Hotel undergoes partial demolition process. Fox4 Southwest Florida. <https://www.fox4now.com/news/local-news/lee-county/punta-gorda-waterfront-hotel-undergoes-partial-demolition-process>

1. A fire on April 11, 2023, at a recycling facility in Richmond, Indiana sent plumes of smoke through downwind communities. More than 2,000 near-by residents were ordered to evacuate.<sup>25</sup> On April 13, 2023, EPA confirmed the presence of asbestos-containing material in debris from the incident.<sup>26</sup> The agency was involved in hazardous waste clean-up and testing in the community for 11 months.<sup>27</sup> The disaster clean-up included removal of about 6,000 tons of fire debris including suspected asbestos-containing materials.<sup>28</sup>
2. A 2021 warehouse fire in Austin, TX billowed smoke from a structure containing significant amounts of asbestos.<sup>29</sup> More than 100 firefighters responded to the event and were potentially exposed, as were many community members, vehicles and structures downwind.

### ***Frequency of weather disasters***

Climate change will increase the frequency and severity of extreme weather events. Any risk evaluation of asbestos should examine protective measures necessary to mitigate climate change impacts. EPA's Draft Risk Evaluation should not only recognize, but model asbestos fiber disturbance caused by meteorological events. Increasing frequencies of extreme weather events will increase damage to structures with asbestos containing materials (ACM)<sup>30</sup> and will also burden emergency management systems with more complex, frequent, and extensive emergency responses.<sup>31</sup> Asbestos risk evaluation and exposure research ought to further assess how emergency personnel and property owners react to disaster events. Such research should aim to make evidence-based recommendations on exposure reduction and proper personal protective equipment use by these populations. We strongly urge the EPA to examine how climate change affects asbestos exposure risk and include. More attention to further research on protecting relevant stakeholders.

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<sup>25</sup> Jeong A. (April 12, 2023). Toxic smoke from Indiana industrial fire forces evacuation order for 2,000.

Washington Post. <https://www.washingtonpost.com/nation/2023/04/11/indiana-fire-evacuations-richmond/>

<sup>26</sup> Vespa M, Guevara S, Li DK. (April 13, 2023). Residents near Indiana plastics fire report snowlike debris falling and a taste of chemicals in the air. NBC News.

<https://www.nbcnews.com/news/us-news/carcinogen-asbestos-in-debris-from-indiana-plastics-fire-rcna79556>

<sup>27</sup> U.S. EPA. My Way Trading Warehouse Fire. On-Scene Coordinator updates. (Last update March 20, 2024).

[https://response.epa.gov/site/site\\_profile.aspx?site\\_id=16003](https://response.epa.gov/site/site_profile.aspx?site_id=16003)

<sup>28</sup> City of Richmond. City of Richmond (IN) update and statement marking one year anniversary after My Way Trading Warehouse fire. News release, April 10, 2024.

<https://www.richmondindiana.gov/news/www-richmondindiana-gov-news>

<sup>29</sup> Barer D, Travis A. (May 26, 2021). New details in blaze the potentially exposed over 100 firefighters to asbestos.

<https://www.kxan.com/investigations/new-details-in-blaze-that-potentially-exposed-over-100-firefighters-to-asbestos/>

<sup>30</sup> Figueroa A. Extreme weather trends stoke fears of asbestos exposure. Politico. September 2020.

<https://subscriber.politicopro.com/article/eenews/2020/09/09/extreme-weather-trends-stoke-fears-of-asbestos-exposure-011164>

<sup>31</sup> Federal Emergency Management Agency. (August 2011). Climate Change: Long Term Trends and their Implications for Emergency Management.

[https://www.fema.gov/pdf/about/programs/oppa/climate\\_change\\_paper.pdf](https://www.fema.gov/pdf/about/programs/oppa/climate_change_paper.pdf)

### ***Personal Protective Equipment***

Proper PPE use is highly connected to exposure risk. Proper PPE use can significantly reduce asbestos exposure risk. Training, compliance, and implementation of PPE use by different workers and the public when handling ACM deserves further study. EPA is correct in updating policy guidance and evaluating risk levels particularly for workers do not use PPE. For them, the EPA can go further by also understanding how PPE is currently being used and why compliance is low. For the public, EPA should also assess awareness, training and accessibility of PPE. Public behavior is particularly important during asbestos cleanup after disasters and if asbestos removal work sites are insufficiently isolated from the public.<sup>32</sup> Research must include assessing PPE and barriers to its use to determine actionable steps to reduce asbestos exposure risk.

### ***Asbestos cement pipe***

EPA's risk evaluation should include the agency's best available information on the localities and/or regions in the country in which asbestos cement pipe was used for municipal water and sewer systems. EPA's Office of Air Quality Planning and Standards gave final approval in 2019 to an alternative work practice standard for asbestos cement pipe replacement (84 *Federal Register* 26852). In the docket for the final approval, OAQPS indicates:

“There are over 630,000 miles of Asbestos Cement pipe buried across the United States that have reached or will reach the end of their estimated design and useful lives. Like most of our buried infrastructure, the time has come to renovate or replace these systems.”<sup>33</sup>

The proposed EPA risk evaluation for legacy asbestos should include the “over 630,000 miles” statement quoted above. It should also refer to records with the best information available from that docket and OAQPS staff to characterize, the localities where AC pipe is likely to be found in public water and wastewater systems. One example of a major city with AC pipe is Houston, TX.<sup>34</sup> One source of assistance for such data could be the American Water Works Association and/or direct inquiries to a sample of municipal departments of public works. Another source could be applications from municipalities (through state agencies) for funding from HUD's Community Development Block Grant program. Such grants are available for infrastructure improvements including replacement of municipal AC pipe.

We also note that Appendix E-19 does not include NAICS 221310 (Water Supply and Irrigation Systems), 237990 (Other Heavy and Civil Engineering Construction), and 541990 (All Other

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<sup>32</sup> U.S. Department of Housing and Urban Development. (June 2015). Homeowner's and Renter's Guide to Asbestos Cleanup After Disasters. [https://www.hud.gov/sites/documents/IEPWG\\_ASBESTOS\\_FAMILY.PDF](https://www.hud.gov/sites/documents/IEPWG_ASBESTOS_FAMILY.PDF)

<sup>33</sup> U.S. EPA. Guidelines for replacing asbestos cement pipe by close tolerance pipe slurrification. (n.d.). Docket No. EPA-HQ-OAR-2017-0427

<sup>34</sup> In 2012, two alert workers and a television reporter in Houston exposed improperly managed ruptures of AC pipe. The KHOU News 11 investigation estimated that 20% of the City of Houston's water pipe infrastructure AC pipe. KHOU (2012). Houston contract worker asbestos exposure. [https://www.youtube.com/watch?v=4Pjt6Sg\\_5tw](https://www.youtube.com/watch?v=4Pjt6Sg_5tw) (Additional information available upon request.)

Professional, Scientific, and Technical Services). These NAICS were included in the “source categories” in OAQPS 2019 final approval for alternative work practice for AC pipe replacement. They should be included in Appendix E-19 and related text.

***“Thermal destruction” of asbestos and firefighting***

Lines 1339-1343 should be edited to make clear that asbestos-containing materials are not destroyed during house or other structural fires, or even wildfires. That is, that “thermal destruction” refers to a particular type of industrial incineration. The implication of this clarification is that asbestos exposure is still a risk from structural and other fires for firefighters and the general public.

We appreciate the opportunity to provide these comments. Our goal is a risk evaluation document that leads to proposed risk management activities that will greatly reduce asbestos-related diseases and deaths and protect the public’s health for as long as the legacy of asbestos remains in our environment.

Sincerely,

A handwritten signature in black ink, appearing to read "Georges C. Benjamin". The signature is fluid and cursive, with the first name "Georges" being the most prominent.

Georges C. Benjamin, MD  
Executive Director

Attachment (Map of Median Year Built, Housing)



# Median Year Built For Housing Infrastructure for Metro & Micro U.S. Metropolitan Statistical Areas

