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RE: Asbestos Part 2: Supplemental Evaluation Including Legacy Uses and Associated Disposals of Asbestos; Draft Scope of the Risk Evaluation To Be Conducted Under the Toxic Substances Control Act (TSCA)

Mr. Gimlin,

The National Tribal Toxics Council (NTTC) is an EPA Tribal Partnership Group (TPG), supported by the Office of Pollution Prevention and Toxics (OPPT), that works to provide Tribes with information on issues and rulemakings related to toxic chemicals and pollution prevention. On behalf of Tribes, the NTTC works to ensure that tribal risks are accurately characterized and evaluated in EPA's risk assessment process by informing and educating the EPA on tribal lifeways, exposures, and risks. The NTTC appreciates the opportunity to provide comments on the draft scope of the supplemental TSCA risk evaluation for asbestos, including legacy use and disposal.

NTTC commends EPA for listing "indigenous, native populations" as a group that may be considered as a potentially exposed and susceptible subpopulation (PESS) in Part II of the risk evaluation of asbestos. As the Indigenous peoples of this country, Native Americans are integrated with this environment and have multiple exposure pathways not experienced by the rest of the population, along with exposures that occur more frequently and are of longer duration. Disparities in underlying disease status of Native Americans also exist and are well-documented. As NTTC has argued in all previous letters to the Agency, Native Americans are often both more highly exposed to toxic chemicals and, at the same time, have greater biological susceptibility to the health hazards of those chemicals, as compared to the general population and to most, if not all, other populations. Even with the forced loss of

land that occurred in the past four centuries, Tribal peoples, at over six and one-half million people and counting, live, and practice traditional and customary activities, throughout the United States. They therefore exceed the criteria for the intent and letter of what constitutes a TSCA PESS population.

Asbestos is widely distributed in consumer products, ranging from children's toys to home and hobby products to commercial construction materials. It is NTTC's position that Native Americans are, and will continue to be, disproportionately affected by legacy asbestos exposure and, therefore, we have great interest in the ensuing risk evaluation. In the Draft Scope, there was no mention of how multiple exposures and/or susceptibilities will be considered, combined, and aggregated when determining risk. NTTC is concerned that the risks Native Americans face from exposure to legacy asbestos will not be evaluated unless all these factors are considered by EPA and that any resulting risk management decisions will not be protective of this vulnerable population.

Health disparities between American Indian/Alaska Native people (AI/AN) and the non-Hispanic White (NHW) population are well-documented but frequently not considered by EPA. In Section 2.4.2 of the Draft Scope, EPA lists the health hazards of asbestos exposure it may consider in the risk evaluation and these include mesothelioma, lung, ovarian, and laryngeal cancer. NTTC notes that Alaska Natives, as well as American Indians in the Northern and Southern Plains, experience disproportionately higher lung cancer incidence rates compared to NHWs (53% higher lung cancer incidence rate for Alaska Native people[1]) and lung cancer tends to be diagnosed at a younger age among AI/ANs than among NHWs (23% vs 16%)[2]. For the period of 2012-2016, lung cancer was the leading cause of cancer death for AN/AIs[3].

Incidence and mortality rates of ovarian and uterine cancer are also higher for AI/AN women than for White women[4]. Alaska Native people also have significantly higher rates of laryngeal cancer than NHW[5]. According to the American Cancer Society, exposure to asbestos is also linked with stomach cancer. The stomach cancer incidence rate for AI/AN is 40% higher for men, and 70% higher for women, than that of the NHW population. The mortality rate from stomach cancers is 210% higher for AI/AN men, and 200% higher for AI/AN women[6]. These

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[1] Source: US HHS, NCI 2020. Seer Cancer Statistics Review, 1975-2016. Tables 1.20, 2.15 through 24.15, Source: NCI 2020. Seer Cancer Statistics Review, 1975-2016. Table 1.20 https://seer.cancer.gov/csr/1975_2016/sections.html and Alaska Native Epidemiology Center, http://anthctoday.org/epicenter/healthData/factsheets/Cancer_Mortality_statewide_09_03_2019.pdf

[2] https://www.cdc.gov/cancer/uscs/about/data-briefs/no14-lung-cancer-incidence-AIAN-PRCDA-2012-2016.htm

[3] Centers for Disease Control and Prevention. Lung Cancer Incidence in the American Indian and Alaska Native Population, United States Purchased/Referred Care Delivery Areas—2012–2016. https://www.cdc.gov/cancer/uscs/about/data-briefs/no14-lung-cancer-incidence-AIAN-PRCDA-2012-2016.htm

[4] Singh SD et al. Ovarian and Uterine Cancer Incidence and Mortality in American Indian and Alaska Native Women, United States, 1999–2009. Am J Public Health. 2014 June; 104(Suppl 3): S423–S431.

[5] Cancer in Alaska Native people 1969-2018, The 50-Year Report. http://anthctoday.org/epicenter/publications/Cancer_50year_Report/antr_fifty_year_report_web.pdf

[6] NCI 2020. Seer Cancer Statistics Review, 1975-2016. Table 1.20 https://seer.cancer.gov/csr/1975_2016/sections.html

statistics suggest that Native Americans have multiple susceptibilities to the negative health effects associated with asbestos exposure.

EPA also plans to evaluate "individuals who smoke" as PESS because smokers may be more susceptible to the health effects of asbestos exposure. According to the Centers for Disease Control and Prevention (CDC), AI/AN adults and youth have the highest prevalence of cigarette smoking among all racial and ethnic groups in the US[7], with more than 1 in 5 adults smoking cigarettes[8], highlighting another way this population may be more susceptible to health effects associated with asbestos exposure.

In addition to the types of cancer above, which are known to be associated with exposure to asbestos, or caused by it in the case of mesothelioma, EPA lists many other possible human health hazards it may consider in the risk evaluation, based on their initial literature search. These possible health hazards were listed to generally include cancer, cardiovascular, developmental, endocrine, gastrointestinal, hematological and immune, hepatic, mortality, musculoskeletal, neurological, nutritional and metabolic, ocular and sensory, renal, reproductive, respiratory, and skin and connective tissue effects.

For these health hazards, multiple other susceptibilities exist in the Native American population that are important to consider. For example, the overall incidence of cancer in the AI/AN population is 30% higher than that for the NHW population[9]. AI/ANs are 50% more likely to have coronary heart disease than the White population[10] and heart disease was the leading cause of death for AI/ANs[11] before the COVID-19 pandemic, followed by cancer, chronic liver disease, diabetes, and chronic lower respiratory infection[12], all of which fall under the potential health effects of asbestos exposure identified by EPA in the initial stages of their systematic review. Additionally, overall mortality for AI/ANs is about 50% higher than for the NHW population and life expectancy is shorter[13]. According to the National Center of Education Statistics[14], AI/ANs represented the highest percentage of 3 to 21-year-olds served under the Individuals with Disabilities Education Act in 2015-2016, suggesting that a relatively high rate of developmental delays may exist in this population. According to the American Diabetes Association, AI/ANs have the highest rate of diabetes (an endocrine disorder) out of all ethnic/racial groups in the US, double that of NHWs[15]. AI/ANs are 60% more likely to be diagnosed with chronic liver disease than NHWs and chronic liver disease was the fourth leading cause of death for all AI/ANs and the second leading cause of death for AI/AN men in

[7] https://www.cdc.gov/tobacco/disparities/american-indians/index.htm
[8] Tobacco Product Use Among Adults – United States, 2019. Morbidity and Mortality Weekly Report 2020.
[9] Cancer and American Indians/Alaska Natives. https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlid=31
[10] Heart Disease and American Indians/Alaska Natives. https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlid=34
[11] Cardiovascular Health in American Indians and Alaska Natives: A Scientific Statement From the American Heart Association. Breathett K et al. Circulation. 2020;141:e948–e959
[12] https://wonder.cdc.gov/controller/datarequest/D76;jsessionid=5A98E6E201F61ADF1CCC480C3E20
[13] https://www.cdc.gov/dhdsp/pubs/docs/sib_aug2015.pdf
[14] https://nces.ed.gov/programs/raceindicators/indicator_rbd.asp
[15] https://www.diabetes.org/resources/statistics/statistics-about-diabetes

2019[16]. AI/AN people have a higher rate of mortality from chronic liver disease, almost 4 times that of NHWs[17]. AI/AN women are 2.2 times more likely to be diagnosed with chronic liver disease and 4.8 times more likely to die from it than NHW women[8]. Liver cancer rates are also higher among AI/ANs than those of NHW[18] and AI/AN people are almost twice as likely to die from liver cancer[19]. Prevalence of arthritis and rheumatoid arthritis is higher in the AN population[20, 21] and AI/AN people have a 20% higher chance of developing kidney cancer than NHWs[22]. As far as potential respiratory health hazards, chronic respiratory disease also disproportionately affects the AI/AN population[23]. AI/AN children are twice as likely to have asthma than NHW children and AI/AN people are 20% more likely to have asthma than NHWs[24]. COVID-19 is currently the leading cause of death in the AI/AN population[16], with mortality rates ranging from 8.2 to 11.6 times those of NHWs (ages 20-49)[25].

The above brief overview suggests that, in addition to susceptibility to lung, laryngeal, ovarian, and stomach cancer (the cancers known to be associated with asbestos exposure), Native Americans may also be susceptible to many of the other potential health impacts of asbestos exposure—e.g. other cancers, cardiovascular disease, developmental delays, endocrine disorders, gastrointestinal cancers/disease, hepatic diseases, musculoskeletal disorders, renal diseases, and respiratory conditions. These stark health disparities between Native Americans and the general population highlight the importance of accurately evaluating the risks that exposure to harmful chemicals presents to Tribal people.

Furthermore, in addition to multiple possible susceptibilities, Tribal people may also have higher exposure to legacy asbestos due to widespread use of secondhand products and materials, older housing and electronics in Indian Country, indoor air pollution, wider use and dependence on older furnaces and wood stoves and, particularly, via disposal. NTTC has written extensively about the prevalence of proximate unlined and uncovered landfills on Tribal lands and near Tribal communities. Asbestos-containing consumer household products, including wood stove, floor, and siding, are used, DIY-renovated, and discarded in these landfills. For the 229 Alaska Tribes, these landfills are located mostly within one mile of the community, do not have cover, and typically have open public access to the site. Since asbestos can easily be transported via air, and 85% of communities burn unseparated waste in containers, on the ground, or both, at these landfills, inhalation exposure of the community may be significant.

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[16] https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlid=32

[17] Suryaprasad, A et al. Mortality Caused by Chronic Liver Disease Among American Indians and Alaska Natives in the United States, 1999–2009. Am J Public Health. 2014 June; 104(Suppl 3): S350–S358.

[18] https://www.cdc.gov/cancer/uscs/about/data-briefs/no13-liver-cancer-incidence-AIAN-PRCDA-2012-2016.htm

[19] https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlid=30

[20] Ferucci, ED et al. Arthritis Prevalence and Associations in American Indian and Alaska Native People. Arthritis Rheum. 2008 Aug 15; 59(8): 1128–1136.

[21] Ferucci ED et al. Rheumatoid arthritis in American Indians and Alaska Natives: a review of the literature. Semin Arthritis Rheum 2005 Feb;34(4):662-7.

[22] https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlid=31

[23] Laffey, KG et al. Chronic respiratory disease disparity between American Indian/Alaska Native and white populations, 2011-2018. BMC Public Health 2021 Jul 28;21(1):1466. doi: 10.1186/s12889-021-11528-8.

[24] https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlid=30

[25] COVID-19 Mortality Among American Indian and Alaska Native Persons — 14 States, January–June 2020.

NTTC is adamant that, in addition to assessing environmental releases to other media, these exposure pathways be assessed. An assumption cannot be made by EPA that all asbestos-containing material is disposed in managed monofills according to the recommendations of containment and labeling, in a way that eliminates breakage or dust, and where no salvaging is allowed[26] because that is not the case in Indian Country.

In the Draft Scope, it is stated that (emphasis added):

> "EPA plans to increase consideration of environmental justice issues by evaluating reasonably available information on factors that may make population groups of concern more vulnerable to adverse effects (*e.g., unique pathways; cumulative exposure from multiple stressors; and behavioral, biological, or environmental factors that increase susceptibility); identifying unique considerations for subsistence populations when relevant*"

Due to unique exposure pathways, cumulative exposure from multiple stressors, behavioral, biological, and environmental factors that increase susceptibility, and as a subsistence population, Native Americans should be considered as a vulnerable group in the context of environmental justice, as well. Limited access to health care, for example, may lead to delayed diagnosis, which may contribute in part to the health disparities discussed above, as could the practice of tribal lifeways, life on tribal lands, socio-economic factors, intergenerational trauma, and epigenetic changes.

Native American peoples are survivors of settler colonialism. They have lived through government-sanctioned policies of genocide, dispossession, and assimilation.[27] They contend today with the resulting intergenerational trauma, economic poverty, and compromised health. They fight for the survival of their indigenous languages, many of which are threatened with extinction.[28] They struggle for food security and food sovereignty[29]. The toll exacted by this long history of affronts is familiar in every Native community. It contributes to the ongoing stressors that get recognized as the sort of extrinsic factors increasing susceptibility.

Native communities are deprived of both their children and their elders at alarming, heartbreaking rates. American Indian people face almost twice the infant mortality rate as NHWs and AI/AN infants are 50 percent more likely to die from complications related to low

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[26] Asbestos Handling and Disposal. State of Alaska Department of Environmental Conservation, Division of Environmental Health, Solid Waste Program https://dec.alaska.gov/eh/solid-waste/how-do-i-dispose-of/asbestos/

[27] For a discussion of one facet of this history, *see, e.g.*, Native American Rights Fund, *Trigger Points: Current State of Research on History, Impacts, and Healing Related to the United States' Indian Industrial/Boarding School Policy* (2019).

[28] *See, e.g.*, R. Nagle, "The U.S. Has Spent More Money Erasing Native Languages than Saving Them," High Country News (Nov. 5, 2019) https://www.hcn.org/issues/51.21-22/indigenous-affairs-the-u-s-has-spent-more-money-erasing-native-languages-than-saving-them

[29] *See, e.g.*, Diné Policy Institute, *Diné Food Sovereignty: A Report on the Navajo Nation Food System and the Case to Rebuild a Self-Sufficient Food System for the Diné People* (April 2014); Fond du Lac Band of Lake Superior Chippewa, *Expanding the Narrative of Tribal Health: the Effects of Wild Rice Water Quality Rule Changes on Tribal Health* (2017); see generally Echo Hawk Consulting, *Feeding Ourselves: Food Access, Health Disparities, and the Pathways to Healthy Native American Communities* (2015).

birthweight as compared to NHW infants[30]. And Native teen girls between the ages of 15-19 die at a rate five times higher than NHW females in the same age group[31]. In fact, according to the Indian Health Service (IHS), "American Indians and Alaska Natives continue to die at higher rates than other Americans in many categories," including not only due to diabetes and heart diseases, but also chronic liver diseases and chronic lower respiratory diseases[32]. As a result, American Indians and Alaska Natives born today have a life expectancy that is 5.5 years less than the U.S. all races population (73.0 years to 78.5 years, respectively)[32].

Among other things, these devastating losses burden Native children, for whom the trauma of what are termed "Adverse Childhood Experiences" (ACE) can adversely affect neurodevelopment, and lead to other adverse health outcomes, with some impacts extending throughout their lives[33]. Researchers have devised a metric for ACE that reflects the number of childhood traumas experienced; at 2.32 AI/AN children's ACE score is over 50% higher than for children identifying as White, and roughly 40% higher than for children identifying as Black or Hispanic[34]. It is well established that ACE results in development delays and impacts brain development in children under six[35].

One mechanism by which psychosocial stressors heighten susceptibility is increased allostatic load, which has been recognized to contribute to the human body's decreased ability to withstand chemical and other stressors. Allostatic load has been defined as "the cost of chronic exposure to fluctuating or heightened neural and neuroendocrine responses resulting from repeated or chronic environmental challenges[36]." These challenges can trigger responses in various physiological systems, including the neuroendocrine and immune systems[35]. Allostatic overload can manifest in health impacts detectable in biomarkers and clinical criteria; at the systemic level, it can result in impaired physiological ability to respond to and recover from chemical and other environmental demands[35].

A large body of literature exists on the history of Native American people since colonialism, and it documents a disproportionate allostatic burden on tribal peoples. A recent Washington Post article[37] describing the effect of COVID-19 on individual members and their tribes discusses in

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[30] U.S. Department of Health and Human Services, Office of Minority Health, "Infant Mortality and American Indians/Alaska Natives" https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlid=38.

[31] U.S. Department of Health and Human Services, Office of Minority Health, "Mental and Behavioral Health – American Indians/Alaska Natives," https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlid=39 (citing 2019 data).

[32] U.S. Department of Health and Human Services, Indian Health Service, "Fact Sheet: Disparities" https://www.ihs.gov/newsroom/factsheets/disparities/ (citing 2009-2011 data for U.S., All Races).

[33] *See, e.g.,* D. Bhushan, et al., *Office of the California Surgeon General. Roadmap for Resilience: The California Surgeon General's Report on Adverse Childhood Experiences, Toxic Stress, and Health* (2020) https://www.acesaware.org/wp-content/uploads/2020/12/Roadmap-For-Resilience_CA-Surgeon-Generals-Report-on-ACEs-Toxic-Stress-and-Health.pdf.

[34] Z. Giano, et al., *The Frequencies and Disparities of Adverse Childhood Experiences in the U.S.* 20 BMC Public Health 1327 (2020) https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-020-09411-z.

[35] Bhushan, D. et al., 2020. *Roadmap for resilience: The California surgeon general's report on adverse childhood experiences, toxic stress, and health*. Office of the California Surgeon General.

[36] *See, e.g.,* J. Guidi, et al., *Allostatic Load and Its Impact on Health: A Systematic Review*, 90 Psychotherapy and Psychosomatics 11 (2021) doi: 10.1159/000510696.

[37] Johnson, Al. 2021. In Alaska Native villages and across communities of color, the enduring silence of grief. Washington Post Nov 4, 2021. https://www.washingtonpost.com/health/2021/11/04/communities-of-color-loss-grief-gap/

detail the impact of losing family members on a people who already have a heavy disproportionate burden of loss of family members through the above-mentioned health disparities, a concept studied by Umberson[38], who coined the phrase 'gap of grief''. Bereavement has its own adverse health consequences and, when placed on top of additional socioeconomic disparities, produces a 'weathering' of both physical and mental health. Unfortunately for tribal peoples, their children experience death and loss and multiple childhood traumas at substantially greater rates than NHWs or other ethnicities. One in 168 AI/AN children have lost a parent to COVID-19, compared with 1 in 753 for white children[39]. Tribal children, who are disproportionately burdened with higher allostatic load and functional impairment and depression from acute events such as COVID-19 loss, which reduce their body's coping mechanisms in experiencing trauma, are also already disproportionately burdened with ACE, as described above.

Legacy exposure to asbestos is significant for Tribal people, who are more susceptible to its negative health effects. Even if the US follows in the footsteps of the 55 countries that have banned asbestos, legacy asbestos will continue to present exposure risks to this vulnerable population. EPA needs to work closely with Tribes to understand the multiple exposure pathways their peoples experience and to ensure any risk management actions the Agency undertakes are protective.

In closing, we voice our support for the evaluation of asbestos as a potential Persistent Bioaccumulative & Toxic (PBT) chemical. As we have stated in past comments, PBT properties are of especial concern because of Indigenous peoples' integration with their natural environment. A chemical that negatively affects a Tribe's environment is exactly identical to saying that the chemical negatively affects its people. It is what it means to be Indigenous.

As its Tribal Partnership Group, NTTC welcomes the opportunity to work closely with EPA, to ensure that risk management actions the Agency undertakes are protective of Tribes and tribal lifeways. Please contact myself, Dianne Barton, NTTC Chair, at (503) 731-1259 / bard@critfc.org or Susan Hanson, NTTC Co-Chair, at susanthanson9@icloud.com.

Sincerely,

Dianne C. Barton, Ph.D.
Chair, National Tribal Toxics Council

[38] Umberson, D. et al., 2017. Death of family members as an overlooked source of racial disadvantage in the United States. PNAS January 31, 2017. 114 (5) 915-920.
[39] *Supra* footnote 27.