Environmental Protection Network

(202) 656-6229
environmentalprotectionnetwork.org
info@environmentalprotectionnetwork.org

EPN COMMENTS FOR THE PUBLIC MEETING OF THE SCIENCE ADVISORY COMMITTEE ON CHEMICALS REGARDING THE DRAFT ASBESTOS EVALUATION UNDER TSCA

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Good day. My name is Penelope Fenner-Crisp. Today, I will be presenting comments on behalf of the Environmental Protection Network (EPN), which is an organization comprised of more than 500 U.S. EPA alumni volunteering their time to protect the integrity of EPA, human health, and the environment.

I will focus on matters specific to asbestos and refer you to our written submission for our comments on several general areas of concern we have addressed for this and each of the draft risk evaluations issued to date.

We have known for many decades that asbestos is a human carcinogen. So, not surprisingly, that endpoint is the primary focus of this human health risk assessment. A clear causal relationship between asbestos exposure and lung cancer and mesotheliomas has been established. However, both the National Academy of Sciences (NAS) Institute of Medicine (IOM)in 2006 and the International Agency for Research on Cancer (IARC) in 2012 have concluded that asbestos also causes laryngeal cancer, both noting that there was evidence of a dose-response relationship seen in some studies. IARC also concluded that asbestos causes ovarian cancer, noting positive exposure-response relationships in some studies. EPA's rationale for narrowing its focus to lung cancer and mesotheliomas, excluding all other tumor sites, can be summed up in a single dismissive quote… "there is inadequate data for exposure-response analyses." EPN questions this blanket conclusion and believes that the cancer assessment should be expanded to include an analysis of the data on laryngeal and ovarian cancer, with an emphasis on their adequacy to support dose-response assessment and potential for inclusion in the calculation of the combined inhalation unit risk (IUR).

EPN also questions whether it was appropriate to exclude from the assessment those studies of scenarios in which exposure occurring to both chrysotile and amphibole fiber forms could not be separated out, given that trace amounts of this and other forms can be found in chrysotile as it is used in commerce. EPA states that it distinguished between studies where only commercial chrysotile was used or where workers were exposed only to commercial chrysotile, and situations where chrysotile was used in combinations with amphibole asbestos forms but the available information did not allow exposures to chrysotile and amphibole forms to be separated. Studies in the latter group were excluded from further consideration. This decision seems to be somewhat duplicitous.

EPN is also concerned that the draft risk evaluation does not assess and quantify the non-cancer risks of asbestosis and pleural thickening. Asbestosis may be triggered by fewer fibers than are associated with the 1x10-4 cancer risk standard for the occupational setting. When one compares the 2014 Integrated Risk Information System (IRIS) reference concentration (RfC) for Libby amphibole

asbestos for non-cancer effects with the 1988 asbestos IUR for cancer risk, cancer is the clear risk driver. One cannot assume the same relationship would play out in this situation for several reasons: 1) The Libby amphibole RfC was compared against the 1 x 10-6 standard that applies to the general population (and, in this case, to consumer uses). However, the risk standard for the occupational setting is 1 x 10-4, or 100-fold higher than that for the general population; 2) EPA is proposing a combined IUR that is about 1/3 lower (that is, less conservative) than the 1988 IRIS value but could change if/when IURs for the other tumor types are incorporated; and 3) an RfC calculated for chrysotile may be lower than that for Libby amphibole. The combination of these three factors could result in a flipping of the risk driver from cancer to a non-cancer effect or, more likely, lead to an underestimation of the overall health risks of asbestos exposure based on cancer alone, as EPA acknowledges. We won't know unless and until an analysis of the non-cancer effects is conducted.

EPA is obligated to determine if underestimation is the case and to what degree. The non-cancer toxicity of chrysotile may be greater than that of Libby amphibole asbestos ,and there is uncertainty that the IUR for chrysotile asbestos may not fully encompass the health risks associated with chrysotile exposure. Several of the Conditions of Use (COU)-related exposures evaluated for human health risks are at or greater than the point of departure (POD) for non-cancer effects associated with exposure to Libby amphibole asbestos.

Lastly, EPN questions whether it was appropriate to exclude the transmission electron microscopy (TEM) studies from substantive consideration in the risk assessment. We do not agree with this decision. In light of the time constraints today, a more detailed discussion of this issue can be found in our written comments.

Thank you for your attention.