MARYLAND ENVIRONMENTAL HEALTH NETWORK

House Bill 0300- Public Health - Sale or Distribution of Trichloroethylene - Prohibition

Committee: Health and Government Operations
February 13, 2019
Position: SUPPORT

The Maryland Environmental Health Network supports bills that are consistent with scientific research in the fields of public and environmental health, and those which advance social justice and equity. Marylanders are more likely to achieve health and longevity when we live in environments of clean air, and water, strong local economies, and meaningful community engagement in policy-making. As a statewide network we draw on a diverse constituency of health advocates and professionals, educators, researchers, and community members to evaluate legislative proposals. For these reasons, we support House Bill 300 banning the sale or distribution of aerosol degreaser or a spot cleaner for dry cleaning that contains trichloroethylene (TCE) to protect human health.

Trichloroethylene is an omnipresent hazardous substance.[1] The Agency for Toxic Substances and Disease Registry's (ATSDR's) Division of Toxicology and Human Health Sciences describes it as a colorless, volatile liquid that evaporates quickly into the air. It is nonflammable and has a sweet odor.[2] The harm in its use is directly correlated to the dosage of exposure. As a true multitasker, TCE is used in a myriad of automotive and commercial settings. It is primarily used as a solvent to remove grease from metal parts and as a chemical that is used to make other chemicals, especially refrigerants. However, Trichloroethylene has also been used as an extraction solvent for greases, oils, fats, waxes, and tars; by the textile processing industry to scour cotton, wool, and other fabrics; in dry cleaning operations; and as a component of adhesives, lubricants, paints, varnishes, paint strippers, pesticides, and cold metal cleaners.

Due to its widespread use, it has historically been identified by U.S. Environmental Protection Agency (U.S. EPA) identified as one of the most serious hazardous waste sites compounds in the nation. Sites with this distinction have been catalogued and subsequently included in a National Priorities List (NPL) and targeted for federal clean-up activities. U.S. EPA found trichloroethylene in at least 1,045 of the 1,699 current or former NPL sites.

As a matter of fact, it would not be an overstatement to say that TCE is nearly everywhere, which means that its use increases its contact with everyone.[3] For these reasons, TCE has been found in air, drinking water and soil. TCE breaks down slowly in surface water and is removed mostly through evaporation into the air we breathe. Trichloroethylene can slowly enter groundwater from contaminated surface water and remains there for long periods of time. A small amount of the substance in the air can also move through the skin and into your bloodstream, through the stomach or lungs. Humans exposed to high levels of trichloroethylene show nervous system effects related to hearing, seeing, and balance, changes in the rhythm of the heartbeat, liver damage, and evidence of kidney damage. Some people exposed to concentrated TCE develop skin rashes. Long terms impacts on men, who are the majority of potential populations of commercial workers exposed include decreases in sex drive, sperm quality, and reproductive hormone levels.

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[1]Chemical Structure, https://pubchem.ncbi.nlm.nih.gov/compound/trichloroethylene

[2] Agency for Toxic Substances and Disease Registry (ATSDR). 2014 Toxicological Profile for Trichloroethylene (Draft for Public Comment). Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

[3] Chiu, Weihsueh A et al. "Human health effects of trichloroethylene: key findings and scientific issues" Environmental health perspectives vol. 121,3 (2012): 303-11. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3621199/ Accessed 1 January 2019

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As a public health organization, we are sensitive to the intersection of toxic exposures and psycho social stress which impact the long-term resiliency of communities.[4] These kinds of impacts are not unlikely to trigger this synergy, and thus should be a matter of concern for overall health and wellbeing.

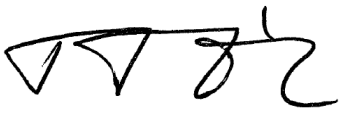
Agencies historically tasked with classification of this substance cautiously warn of risks of cancer related to use of products containing TCE. There is strong evidence that trichloroethylene can cause kidney cancer in people and some evidence that it causes liver cancer and malignant lymphoma (a blood cancer). Lifetime exposure to trichloroethylene resulted in increased liver cancer in mice and increased kidney cancer in test subject rodents at relatively high exposure levels. There is some evidence for trichloroethylene-induced testicular cancer and leukemia in rats and lymphomas and lung tumors in mice.

The National Toxicology Program (NTP) has determined that trichloroethylene is a "known human carcinogen". The EPA and the International Agency for Research on Cancer (IARC) have determined that trichloroethylene is "carcinogenic to humans."

While agencies on point have most recently been uncomfortably silent on these compounds, in the post Federal era of Toxic Substance regulation we urge the Committee to take up the precautionary principle, as those closest to the problems associated with TCE. Under the precautionary principle we ask that our decisionmakers err on the side of the least harm when questions of human health are at hand. With all that we already know about this toxicity of TCE we should be unwilling to further introduce harm into our supply chain at any cost or cost savings.

Maryland has been the first to make innovations in several areas of health and the environment and should take this opportunity to make another step towards a healthier environment for all. Implementing this ban is not only a benefit to our waterways and drinking water supply, but also promotes the public health of Marylanders by eliminating exposure to toxic substances and their carcinogenic effects. We support a ban on TCE and request a favorable report from this Committee in furtherance of commonsense, statewide health protections for the most vulnerable.

Thank you for your consideration.



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[4] A Framework for Examining Social Stress and Susceptibility to Air Pollution in Respiratory Health https://ehp.niehs.nih.gov/wp-content/uploads/117/9/ehp.0900612.pdf Accessed February 1, 2019