

TSCA Reform Needed Now

Congress Must Protect People from Toxic Chemicals Known to Cause Harm: **Trichloroethylene (TCE)**



TCE is a widely used chemical in consumer products and is commonly found as an air and water pollutant in numerous groundwater aquifers. A known carcinogen, TCE contaminates hundreds of toxic waste sites in the United States. It is well documented that individuals in many communities are exposed to the chemical, with associated health risks. Weak regulations allow continued use of TCE in consumer products and in the workplace. Visit www.takeouttoxics.org.

risks but exposure during pregnancy is especially worrisome as it has been associated with low birth weight and multiple types of birth defects. NRDC urges Congress to update TSCA to protect people and the environment from toxic chemicals.

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A Decade of Science Confirms TCE is Harmful to Human Health

TCE is a harmful chemical commonly found in air and identified as a water pollutant in numerous groundwater aquifers. Fifteen hundred toxic waste sites in the United States are contaminated with TCE and it is well documented that many people are being exposed to this chemical with potential effects on their health. TCE has been linked to cancer in multiple organs, harms the respiratory and nervous system and has been associated with birth defects. Despite strong support from expert scientific bodies for the cancer effects, the U.S. EPA has been unable to finalize an assessment of TCE's toxicity for more than 10 years. Even when it is finalized, existing TSCA rules will still limit EPA's ability to take action to protect the public from TCE's harmful health effects. Strong TSCA reform is needed to place restrictions on TCE use to prevent further contamination of drinking water and quickly reduce human exposure to this dangerous chemical.

More Than 1,000 Safe, Effective Alternatives to TCE are Available Now

More than *300 million pounds* of TCE are produced every year in the United States, about 20 percent of which is used for metal cleaning. Steel pipe and tube manufacturing industries reported disposals and releases in 2005 of more than 5.6 million pounds. And TCE is one of the most common contaminants at toxic waste sites and a widespread contaminant of groundwater aquifers. Yet, many less harmful cleaners can replace TCE in metal cleaning and degreasing applications, including neutral and alkaline water-based and bio-based products. In fact, the Toxics Use Reduction Institute has compiled a database and assigned safety and effectiveness ratings for more than 1,000 alternatives. But consumer and worker protection should not rely on voluntary initiatives for replacement chemicals, leaving many still at risk. We need TSCA reform to protect the public's and workers' health.



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The EPA has identified contaminated drinking water as the most common source of TCE exposure in children.

SOURCES

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Trichloroethylene

Products and Industries Where TCE Is Found

In industry, TCE is used as a solvent and degreaser and in the manufacturing of other chemicals. It is found in consumer products such as paints and paint removers, adhesives, rug cleaners, typewriter correction fluids, metal cleaners, pepper sprays, and spot removers.

Exposure and Health Risks

Most people are exposed to TCE by breathing contaminated air or drinking contaminated water. Between 9 percent and 34 percent of drinking water supply sources tested in the United States contain some TCE due to leaching from disposal sites. TCE has been found in more than 1500 of the most hazardous (Superfund) waste sites around the country. When showering in contaminated water, both inhalation and dermal (skin) exposure occurs. Indoor air concentrations of TCE are usually higher than outdoor concentrations because of the use of consumer products, vapor intrusion through underground sources and volatilization from the water supply. Workers using TCE as a degreaser are at high risk for health effects. The harmful chemical does more than just irritate the eyes, throat, and skin. It is associated with cancers of the liver, kidneys, and prostate, and non-Hodgkin's lymphoma. Drinking or breathing TCE may cause harm to the nervous system, liver and lung damage, abnormal heartbeat, and at high levels, can even cause coma and death. Exposure during pregnancy has been associated with multiple types of birth defects and low birth weight.

How TCE is Designated and Regulated Now



The International Agency for Research on Cancer (IARC) has classified TCE as a probable human carcinogen.



The EPA draft cancer assessments for TCE from 2001 and 2009 conclude that TCE is "highly likely to produce cancer in humans". The EPA's latest draft assessment has confirmed earlier conclusions and found even more risks to health due to inhalation of TCE. The EPA has set a maximum contaminant level for drinking water of 5 parts per billion (ppb).

The National Toxicology Program has found TCE is reasonably anticipated to be a human carcinogen.

Congress, in the Clean Air Act Amendments of 1990, defined TCE as a toxic air pollutant subject to regulatory action by the EPA.



California has listed TCE on the *Proposition 65* list of chemicals "known to cause cancer".

The California Air Resources Board considers TCE a toxic air contaminant with no safe level of exposure and has prohibited its use in 13 product categories, including general purpose degreasers, brake cleaners, all spray paints, all aerosol adhesives, and adhesive removers.

California's EPA finalized a public health goal for TCE in drinking water of 1.7 ppb as the maximum allowable safe level.



Maine has listed TCE as a "chemical of high concern" for its carcinogenic effects under its law on Toxic Chemicals in Children's Products.

TCE Tragedy at Camp Lejeune

At Camp Lejeune, a Marine base in North Carolina, improperly stored or disposed TCE from metal degreasing operations contaminated the drinking water supply, exposing thousands of service people and civilians to exceedingly dangerous levels of the chemical. In 1982, the highest level of TCE detected in drinking water at Camp Lejeune was 1,400 parts per billion—the current U.S. environmental drinking water health standard for TCE sets a maximum safe level of 5 parts per billion. More than 20 years later, the Agency for Toxic Substances and Disease Registry is investigating whether certain birth defects and cancers found among the children born at Camp Lejeune are related to exposure to TCE. These defects and cancers include spina bifida, anencephaly, cleft lips, cleft palates, leukemia, and non-Hodgkin's lymphoma.



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