1,1,1-Trichloroethane ($C_2H_3Cl_3$)

What is 1,1,1-Trichloroethane?

1,1,1-Trichloroethane is a synthetic chemical that does not occur naturally in the environment. 1,1,1-Trichloroethane is found mainly in the atmosphere. In water, it is moderately soluble but can volatilize to air. 1,1,1-Trichloroethane is mobile in soils and readily migrates to groundwater. It is not usually found in surface water and does not bioaccumulate in animals.

Does 1,1,1-Trichloroethane have any additional names?

Methylchloroform, Methyltrichloromethane, Trichloromethylmethane, and α-Trichloromethane

What are the known health effects?

There are no studies in humans that determine whether eating food or drinking water contaminated with 1,1,1-Trichloroethane could harm health, and available information does not indicate that it causes cancer.

How does exposure occur?

Since the manufacture of 1,1,1-Trichloroethane has been banned in the US beginning in 2002, the likelihood of being exposed to it is remote, however exposure could have occurred in the workplace while using some metal degreasing agents, paints, glues, and cleaning products.

Ingesting contaminated drinking water and food may also lead to exposure.

Is this contaminant regulated?

Yes, and water supplied to customers of Mount Laurel MUA is in compliance with USEPA and NJDEP requirements. The maximum concentration of 1,1,1-Trichloroethane permitted in drinking water is 30 ppb; 1,1,1-Trichloroethane is not presently detected in water supplied to MLTMUA customers.

How can I reduce exposure?

1,1,1-Trichloroethane in drinking water can be removed at point of use by granular activated carbon and reverse osmosis filtration.

Additional information for 1,1,1-Trichloroethane, including the information referenced, can be found at:
https://www.atsdr.cdc.gov/toxprofiles/tp70.pdf
https://apps.who.int/iris/bitstream/handle/10665/39365/9241571365-eng.pdf?sequence=1&isAllowed=y