

# Quiz 1 Mona Mohammed

CENG 340—Introduction to Environmental Engineering

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## No More Questions About Vinyl Chloride!

Trichlorethylene (TCE)— ( $\text{C}_2\text{HCl}_3$ )— is used as a degreasing solvent in many industries and is classified as a suspected carcinogen by the U.S. Environmental Protection Agency (EPA). The EPA has set an enforceable regulation for TCE, called a maximum contaminant level (MCL), at 0.005 mg/L.

1. Prove that 0.005 mg/L equals 5 ppb<sub>m</sub>. (Hint: assume that the density of water is 1 g/mL).  
[6 points]
2. What is the MCL of TCE in units of mole/L? [2 points]
3. If a local tannery dumped 30 g of TCE into a full 300 m<sup>3</sup> storage tank, would the resulting concentration of TCE violate the MCL (show your work)? [2 points]