

Hexavalent - What's the odds?

	MCL ppb	# people/70year lifetime exposure
PHG	0.02	$1 \times 10^{-6} = 1 \text{ in } 1,000,000$
DLR	1.00	$5 \times 10^{-5} = 1 \text{ in } 500,000$
MCL	10.00	$5 \times 10^{-4} = 1 \text{ in } 50,000$

Public Health Goal (PHG)

Detection Level for purposes of Reporting" (DLR)

Maximum Contaminate Level (MCL)

"With regard to the basis for the PHG mentioned below, PHGs for cancer-causing substances are set at a theoretical level of 1×10^{-6} , or up to one excess case of cancer per million people per 70-year lifetime exposure. This is also called "*de minimis*" cancer risk. Public health and environmental regulatory agencies generally consider risks within the 10^{-6} to 10^{-4} cancer risk range to be "acceptable," though on occasion a higher theoretical cancer risk may be acceptable, when setting a health-based standard. Values 10 or 100 times the PHG correspond to risk levels of 10^{-5} or 10^{-4} , respectively."

http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/MCLReview2016.shtml