UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
GUIDANCE FROM HOTLINE COMPENDIUM

WSG H15
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SUBJECT: Determination of MCLGs and MCLs

SOURCE: Jennifer Orme

How does the EPA establish the MCLG and MCL for a particular contaminant? More specifically, what level or range of health risk is considered when establishing the two levels?

Response:

An MCLG is a maximum contaminant level goal, which is an aspirational goal. An MCLG indicates the ideal level of protection that can be provided against any adverse health effects that may be experienced after exposure to a given contaminant through drinking water. The EPA determines a level for each contaminant, which is considered an "acceptable level of risk" for all members of the population.

These levels will vary according to the health effects associated with each contaminant. For non-carcinogenic contaminants, the MCLG is based on the Agency Verified Reference Dose, adjusted for drinking water exposure. For known or probable carcinogens, there is no threshold level that is considered "acceptable." Upon direction from Congress, the EPA set MCLG's for carcinogens at "zero."

The EPA also establishes a maximum contaminant level (MCL) or specifies a treatment technique for each contaminant.

Unlike the MCLG, the MCL is an enforceable regulation that the EPA considers practically and feasibly attainable; the MCL must be maintained by the PWS. In many cases, such as the non-carcinogenic contaminants, the MCL is equivalent to the MCLG, because the EPA believes that the PWS can provide this level of protection. For carcinogenic contaminants, however, the Agency realizes that it is most likely impossible to completely eliminate the contaminant and does not set an MCL at "zero." Rather, the EPA sets a level that can be attained, given available technology and resources. The level usually falls into the excess cancer risk range of 1 in 10,000 (10^{-4}) to 1 in 1,000,000 (10^{-6}).

NOTE: This response slightly differs from the version published in the October, 1988 Monthly Report. The Office of Drinking Water determined a need to re-evaluate the original response.