

Fact Sheet Date: March 12, 1998

**NEW YORK STATE
- HUMAN HEALTH FACT SHEET -**

**Ambient Water Quality Value for
Protection of Sources of Potable Water**

SUBSTANCES: Methyl chloride

CAS REGISTRY NUMBERS: 74-87-3

AMBIENT WATER QUALITY VALUE: 5 ug/L

BASIS: Surface Water: Principal Organic Contaminant Classes
Groundwater: Former Reference to 10 NYCRR Subpart 5-1 Principal Organic Contaminant (POC) General Maximum Contaminant Level (MCL)

SUMMARY OF INFORMATION

New York State developed a guidance value for methyl chloride in water of 50 ug/L based on a review of literature up to 1984 (NYS, 1985). This was based on the provision of the regulation that provides a general value of 50 ug/L when the database is inadequate to derive a specific value. Recent assessments and studies (1983-1989) of health effects have been reviewed and indicate that the primary effect of inhalation exposure to chloromethane in humans is in the central nervous system. Acute exposure causes headaches, vision disturbances and giddiness while longer-term exposure may cause effects in cognitive performance. Supporting data exists for neurological effects in animals (USEPA, 1987; ATSDR, 1990). USEPA classifies chloromethane in Group C, a possible human carcinogen (USEPA, 1990; ATSDR, 1990). No data on the effects of oral exposure suitable for establishing a value exists.

DERIVATION OF VALUE

Although long-term inhalation studies indicate that a value slightly more stringent than 5 ug/L may be derived, until these studies are given complete review, the following derivation

is appropriate:

Surface Water

Regulations [6 NYCRR 702.2(b)] require that the value be the most stringent of the values derived using the procedures found in sections 702.3 through 702.7. The principal organic contaminant class value of 5 ug/L (702.3(b)) represents the most stringent value that can be derived for methyl chloride. Therefore, the ambient surface water quality value for methyl chloride is 5 ug/L.

Groundwater

The principal organic contaminant (POC) groundwater standard of 5 ug/L (6 NYCRR 703.5) applies to methyl chloride. This standard became effective on January 9, 1989 by inclusion by reference to 10 NYCRR Subpart 5-1 standards. The basis and derivation of the POC standard are described in a separate fact sheet.

REFERENCES

ATSDR, 1990. Toxicological Profile for Chloromethane. Agency for Toxic Substances and Disease Registry. U.S. Department of Health and Human Services. Washington, D.C.

6 NYCRR, Chapter X, Parts 700-705. Water Quality Regulations. Surface Waters and Groundwater Classifications and Standards.

NYS, New York State, 1985. Ambient Surface Water Quality Standards Documentation. Methyl chloride. September 6, 1985 (Fact Sheet Revised). Albany, N.Y.

USEPA, 1987. Health Effects Assessment for Methyl chloride. Environmental Criteria and Assessment Office. Cincinnati, OH. P88-179932.

USEPA, 1990. Drinking Water Regulations and Health Advisories. Office of Water. April 1991.

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