Fact Sheet Date: March 12, 1998

NEW YORK STATE
- HUMAN HEALTH FACT SHEET -

Ambient Water Quality Value for Protection of Sources of Potable Water

SUBSTANCE: Trichlorofluoromethane **CAS REGISTRY NUMBER:** 75-69-4

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 trichlorofluoromethane in water of 50 ug/L based on a review of literature up to 1984 (NYS, 1985). This was based on subdivision 701.15(e) of 6 NYCRR that describes a general value of 50 ug/L when the database is inadequate to derive a specific value. Recent studies and assessments (1983-1989) have been reviewed (Reed et al., 1988; Maltoni et al., 1988). No evidence of carcinogenicity was found in chronic bioassays (Maltoni, 1988; NCI, 1978). Many acute and subchronic inhalation studies have been reported, revealing diverse cardiac and pulmonary effects, but none are adequate to derive a guidance value (Reed et al., 1988).

DERIVATION OF VALUE

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 trichlorofluoromethane. Therefore, the ambient surface water quality value for trichlorofluoromethane is 5 ug/L.

Groundwater

The principal organic contaminant (POC) groundwater standard of 5 ug/L (6 NYCRR 703.5) applies to trichlorofluoromethane. 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

Maltoni, C., Lefemina, G., Tovoli, D. and Perino, G. 1988. Long term carcinogenicity bioassays on three chlorofluorocarbons (trichlorofluoromethane, dichlorodifluoromethane, chlorodifluoromethane administered by inhalation to Sprague-Dawley rats and Swiss mice. Ann N.Y. Acad. Sci. 538: 261-82.

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

10NYCRR. Chapter I. Part 5. Subpart 5-1. Public Water Supplies.

NYS, New York State. 1985. Ambient Surface Water Quality Standards Documentation. Trichlorofluoromethane. Sept. 9, 1985 (Fact Sheet Revised) Albany, N.Y.

NCI, 1978. National Cancer Institute. Bioassay of Trichlorofluoromethane for Possible Carcinogenicity. U.S. Department of Health, Education, Welfare. National Institute of Health, Bethesda, MD.

Reed, N.R., et.al. 1988. Health Risk Assessment of Trichlorofluoromethane in California Drinking Water. Department of Environmental Toxicity. University of California, Davis, CA.

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