

7. REGULATIONS AND ADVISORIES

Because of its potential to cause adverse health effects in exposed people, a number of regulations and advisory values have been established for BCEE by various international, national and state agencies. These values are summarized in Table 7-1.

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TABLE 7-1. Regulations and Guidelines Applicable to BCEE

Agency	Description	Value	References
International			
IARC	Carcinogenic classification	Group 3	IARC 1987
National			
<u>Regulations</u>			
a. Air			
OSHA	Permissible Exposure Limit (PEL) Ceiling	15 ppm (90 mg/m ³)	29 CFR 1910.1000
b. Water			
EPA OWRS	General permits under the National Pollutant Discharge Elimination System (NPDES)	NA ^(a)	40 CFR 122 Appendix D Table II
	General Pretreatment Regulations for Existing and New Sources of Pollution (chloroalkyl ethers)	NA	40 CFR 403
c. Non-specific media			
EPA OERR	Reportable Quantity	1 lb	40 CFR 302.4 EPA 1985
	Reportable Quantity (proposed)	10 lb	EPA 1987c
	Extremely Hazardous Substances Threshold Planning Quantity	10,000 lb	40 CFR 355 EPA 1987b
EPA OSW	Hazardous Waste Constituent (chloroalkyl ethers, N.O.S.) (Appendix VIII)	NA	40 CFR 261 EPA 1980b
	Ground-water Monitoring List (Appendix IX)	NA	40 CFR 264 EPA 1987d
<u>Guidelines</u>			
a. Air			
ACGIH	Threshold Limit Value (TLV) Time Weighted Average (TWA)	5 ppm (30 mg/m ³)	ACGIH 1986
	Short-term Exposure Limit (STEL)	10 ppm (60 mg/m ³)	
NIOSH	Immediately Dangerous to Life or Health Level (IDLH)	250 ppm	NIOSH 1985

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TABLE 7-1 - continued

Agency	Description	Value	References
b. Water			
EPA OWRS	Ambient Water Quality Criteria to Protect Human Health ^(b)		EPA 1980a
	Ingesting Water and Organisms		
	10 ⁻⁵	0.30 µg/L	
	10 ⁻⁶	0.03 µg/L	
	10 ⁻⁷	0.003 µg/L	
	Ingesting Organisms Only		
	10 ⁻⁵	13.6 µg/L	
	10 ⁻⁶	1.36 µg/L	
	10 ⁻⁷	0.14 µg/L	
c. Other			
EPA	Carcinogenic Classification	B2	EPA 1988
	Cancer slope factor	1.1 (µg/kg/d) ⁻¹	
	10 ⁻⁶ Risk level (water)	3x10 ⁻⁵ mg/L	
	10 ⁻⁶ Risk level (air)	3x10 ⁻⁶ mg/m ³	
	State Regulations and Guidelines		
State Environmental Agencies	Drinking Water Standards and Guidelines		FSTRAC 1988
	Arizona	0.01 µg/L	
	Kansas	4.2 µg/L	
	Maine	8.3 µg/L	
	Minnesota	0.31 µg/L	
State Environmental Agencies	Acceptable Ambient Air Concentration Guidelines or Standards		NATICH 1987
	Kansas	71.429 µg/m ³ (annual)	
	Nevada	0.119 ppm (8 hr)	
	Pennsylvania, Philadelphia	120 ppb (1 yr)	
	Virginia	500 µg/m ³ (24 hr)	

(a) Not applicable.

(b) Because of its carcinogenic potential, the EPA-recommended concentration for BCEE in ambient water is zero. However, because attainment of this level may not be possible, levels which correspond to upper bound incremental lifetime cancer risks of 10⁻⁵, 10⁻⁶, and 10⁻⁷ are estimated.

