7. REGULATIONS AND ADVISORIES

The international, national, and state regulations and guidelines regarding toxaphene in air, water, and other media are summarized in Table 7- 1.

ATSDR has derived an acute-duration oral MRL of 0.005 mg/kg/day for toxaphene based on a hepatotoxicity study (Mehendale 1978).

ATSDR has derived an intermediate-duration oral MRL of 0.001 mg/kg/day based on hepatic effects (Chu et al. 1986).

No EPA reference concentration or reference dose exists for the compound.

EPA has classified toxaphene as a B2, probable human carcinogen (IRIS 1995). They derived a cancer potency factor of 1.1 mg/kg/day for oral exposure. IARC classifies toxaphene as 2B, possibly carcinogenic to humans (IARC 1987).

Toxaphene is on the list of chemicals appearing in The Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (EPA 1988a). Section 313 of Title III of EPCRA requires owners and operators of certain facilities that manufacture, import, process, or otherwise use the chemicals on this list to report annually their release of those chemicals to any environmental media.

OSHA requires employers of workers who are occupationally exposed to toxaphene to institute engineering controls and work practices to reduce employee exposure to, and maintain employee exposure at, levels at or below permissible exposure limits (PEL). The employer must use engineering and work practice controls, if feasible, to reduce exposure to or below an 8-hour time-weighted level (TWA) of 0.5 mg/m^3. Respirators must be provided and used during the time period necessary to install or implement feasible engineering and work practice controls (OSHA 1989).

Also, to prevent or reduce skin absorption, an employee's skin exposure to toxaphene must be prevented or reduced to the extent necessary in the circumstances through the use of gloves, coveralls, goggles, or other appropriate personal protective equipment, engineering controls, or work practices.

Toxaphene is regulated by the Clean Water Effluent Guidelines as stated in Title 40, Sections 400-475, of the Code of Federal Regulations. For each point source category, toxaphene may be regulated as one of a group of chemicals controlled as Total Toxic Organics, or may have a specific Regulatory Limitation, or may have a Zero Discharge Limitation. The one point source category for which toxaphene is controlled as a Total Toxic Organic is electroplating (EPA 1981 a). The point source category for which toxaphene has a Zero Discharge Limitation is steam electric power generation (EPA 1982a).

Under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), food tolerance restrictions for toxaphene ranged from 0.1 to 7 ppm (EPA 1971a, 1971b, 1986a). Tolerances for residues of toxaphene in various raw agricultural commodities, milk, and crude soybean oil were revoked in September 1993 (EPA 1993b).

The Resource Conservation and Recovery Act (RCRA) identifies toxaphene as a hazardous waste in three ways: (1) when it exceeds a toxicity characteristic leaching procedure test concentration of 0.5 mg/L (EPA 1990c); (2) when it occurs as a waste from specific sources (EPA 1981b); and (3) when it is discarded as a commercial product, off-spec species, container residue, or spill residue (EPA 1980a). Toxaphene is also designated a hazardous air pollutant under the Clean Air Act Amendments of 1990.

Table 7-1. Regulations and Guidelines Applicable to Toxaphene

Agency	Description	Information	Reference
INTERNATIONAL			
WHO		NA	
IARC	Group (cancer ranking)	2B[a]	IARC 1987
NATIONAL			
Regulations:			
a. Air:			
OSHA	PEL (TWA)	0.5 mg/m^3 (0.030 ppm)	29 CFR 1910.1000 OSHA 1974
	PEL (Ceiling)	skin designation	29 CFR 1910.1000 OSHA 1974
EPA OAR	Hazardous Air Pollutant	Yes	Clean Air Act Amendments Title III, Section 112 (b) U.S. Congress 1990
b. Water			
OW	Effluent Guidelines and Standards: Toxic pollutants	Yes	40 CFR 401.15 EPA 1979a
	Pretreatment Regulations: Appendix B -- 65 Toxic Pollutants	Yes	40 CFR 403 EPA 1986b
	Appendix G - Removal Credits	Yes	40 CFR 403 EPA 1986b
	Effluent Guidelines and Standards: Electroplating Definition of Total Toxic Organic	>0.01 mg/L	40 CFR 413.02 EPA 1981a
	Effluent Guidelines and Standards: Steam Electric Power Generation: Appendix A - 126 Priority Pollutants	Yes	40 CFR 423 EPA 1982a
	Effluent Guidelines and Standards: Metal Finishing - Definition of Total Toxic Organic	>0.01 mg/L	40 CFR 433.11 EPA 1983a
	Applicability; Description of the Organic Pesticide Chemicals Manufacturing Subcategory	Yes	40 CFR 455.20 EPA 1978a
	Designation of Hazardous Substances	Yes	40 CFR 116.4 EPA 1978b
	Reportable Quantities of Hazardous Substances: Section 311 of the Clean Water Act	1 lb	40 CFR 117.3 EPA 1979b
	Appendix D -- NPDES Permit Application Testing Requirements (122.21)	Yes	40 CFR 122 EPA 1983b
	Form 2D	Yes	40 CFR 122 EPA 1983b
	Instructions -- Form 2C	NA	40 CFR 125 EPA 1979c
	Toxic Pollutant Effluent Standards	Yes	40 CFR 129.4 EPA 1977b
	Toxaphene Effluent Standard	0 - 1.5 µg/L discharge/ day	40 CFR 129.103 EPA 1977b

Table 7-1. Regulations and Guidelines Applicable to Toxaphene (continued)

Agency	Description	Information	Reference
NATIONAL (cont.)			
	Identification of Test Procedures	Yes	40 CFR 136.3 EPA 1973
	Method 608 -- Organochlorine Pesticides and PCBs	Yes	40 CFR 136 EPA 1973
	Method 625 -- Base/Neutrals and Acids		40 CFR 136 EPA 1973
	Organic Chemicals Other Than Total Trihalomethanes, Sampling and Analytical Requirements	0.01 mg/L (detection limit)	40 CFR 141.24 EPA 1975
	Public Notification	Yes	40 CFR 141.32 EPA 1975
c. Other EPA OERR/ CEPP	Reportable Quantity	1 lb.	40 CFR 302 EPA 1985a
	Designation of hazardous substances	Yes	40 CFR 302.4 EPA 1985a
	Extremely Hazardous Substances and Their Threshold Planning Quantities (Camphechlor)	500/10,000 lbs.	40 CFR 355, App. A EPA 1987a
	Chemicals and chemical categories to which this part applies (Toxic Release Inventory)	25,000 lb. mfd. or processed 10,000 lb. otherwise used	40 CFR 372.65 EPA 1988a
EPA OSW	Municipal Solid Waste Landfills: Design Criteria - MCL for Upper Aquifer	0.005 mg/L	40 CFR 258.40 EPA 1991a
	Municipal Solid Waste Landfills: Appendix II	2 µg/L (Practical Quantitation Limit)	40 CFR 258 EPA 1991a
	Toxicity characteristic	0.5 mg/L	40 CFR 261.24 EPA 1990c
	Hazardous wastes from specific sources	Yes	40 CFR 261.32 EPA 1981b
	Discarded commercial chemical products, off-specification species, container residues, and spill residues thereof	Yes	40 CFR 261.33 EPA 1980a
	Appendix VII - Basis for Listing Hazardous Waste	Yes	40 CFR 261 EPA 1981c
	Appendix VIII - Hazardous Constituents	Yes	40 CFR 261 EPA 1988b
	Appendix IX - Wastes Excluded Under 260.20 and 260.22	Yes	40 CFR 261 EPA 1984e
	Groundwater concentration limits	0.005 mg/L	40 CFR 264.94 EPA 1982b
	Appendix IX - Groundwater Monitoring List	2 µg/L (practical quantitation limit)	40 CFR 264 EPA 1987b

Table 7-1. Regulations and Guidelines Applicable to Toxaphene (continued)

Agency	Description	Information	Reference
NATIONAL (cont.)			
	Appendix III - EPA Interim Primary Drinking Water standards	0.005 mg/L	40 CFR 265 EPA 1980b
	Appendix VII - Health-based Limits for Exclusion of Waste-Derived Residues	$5x10^{-3}$ mg/kg	40 CFR 266 EPA 1991b
	Identification of Wastes to be Evaluated by August 8, 1988	Yes	40 CFR 268.10 EPA 1986c
	Identification of Wastes to be Evaluated by June 8, 1989	Yes	40 CFR 268.11 EPA 1986c
	Treatment Standards - Applicability	Yes	40 CFR 268.40 EPA 1987c
	Treatment Standards Expressed as Specified Technologies	Yes	40 CFR 268.42 EPA 1986c
	Treatment Standards Expressed as Waste Concentrations	Yes	40 CFR 268.43 EPA 1988c
	Appendix III- List of Halogenated Organic Compounds Regulated Under 268.32	Yes	40 CFR 268 EPA 1987d
	Universal Treatment Standards	0.0095 mg/L (wastewater) 2.6 mg/kg (non-wastewater)	40 CFR 268.48 EPA 1995a 60 FR 242
Guidelines:			
a. Air			
ACGIH	Ceiling Limit for Occupational Exposure (TLV-TWA)	0.5 mg/m^3 (0.030 ppm) (skin)	ACGIH 1994
	TLV-STEL	1 mg/m^3 (0.059 ppm)	ACGIH 1994
NIOSH	Recommended Exposure Limit for Occupational Exposure (TWA)	lowest feasible concentration (skin)	NIOSH 1992
	Recommended Exposure Limit for Occupational Exposure (Ceiling)	lowest feasible concentration (skin)	NIOSH 1992
	Immediately Dangerous to Life and Health	200 mg/m^3 (11.81 ppm)	EPA 1987e
EPA	Cancer Unit Risk Factor (inhalation exposure)	$3.2x10^{-4}$ $\mu g/m^3$ ($1.89x10^{-8}$ ppm)	IRIS 1995
b. Water:			
EPA/ODW	10-d Health Advisory	0.04 mg/L (child)	EPA 1995b
	Maximum Contaminant Level	0.003 mg/L	40 CFR 141.61 EPA 1975
	Maximum Contaminant Level Goal	0.0 mg/L	40 CFR 141.50 EPA 1975
	Appendix I to 40 CFR Part 257 -- Maximum Contaminant Levels (MCLs)	0.005 mg/L	40 CFR 257 EPA 1979d

Table 7-1. Regulations and Guidelines Applicable to Toxaphene (continued)

Agency	Description	Information	Reference
NATIONAL (cont.)			
	Variances and Exemptions from MCLs for Organic and Inorganic Chemicals	Yes	40 CFR 142.62 EPA 1991c
	q_1* Cancer Slope Factor (oral exposure)	$1.1x10^{0}$ mg/kg/d	IRIS 1995
c. Other			
EPA	Cancer Classification	B2[b]	IRIS 1995
NIOSH	Cancer Classification	Potential occupational carcinogen	NIOSH 1992
NTP	Cancer Classification	Positive - mice Equivocal - rats	NTP 1995
STATE:			
a. Air:			
	Acceptable ambient air concentration guidelines or standards		NATICH 1992
AZ	1 hr. avg. time	$8.3\ \mu g/m^3$ ($4.90x10^{-4}$ ppm)	
	24 hr. avg. time	$1.5\ \mu g/m^3$ ($8.86x10^{-5}$ ppm)	
	Annual avg. time	$4.0x10^{-3}\ \mu g/m^3$ ($2.36x10^{-7}$ ppm)	
CT	8 hr. avg. time	$2.5\ \mu g/m^3$ ($1.48x10^{-4}$ ppm)	
FL-FTLDLE	8 hr. avg. time	$5.0x10^{-3}$ mg/m^3 ($2.95x10^{-4}$ ppm)	
FL-PINELLA	8 hr. avg. time	$5.0\ \mu g/m^3$ ($2.95x10^{-4}$ ppm)	
	24 hr. avg. time	$1.2\ \mu g/m^3$ ($7.09x10^{-5}$ ppm)	
	Annual avg. time	$3.1x10^{-3}\ \mu g/m^3$ ($1.77x10^{-7}$ ppm)	
FL-TAMPA	8 hr. avg. time	$5.0x10^{-3}$ mg/m^3 ($2.95x10^{-4}$ ppm)	
KS-KC	Annual avg. time	$3.13x10^{-3}\ \mu g/m^3$ ($1.85x10^{-7}$ ppm)	
MI	Annual avg. time	$3.0x10^{-3}\ \mu g/m^3$ ($1.77x10^{-7}$ ppm)	
ND	8 hr. avg. time	$5.0x10^{-3}$ mg/m^3 ($2.95x10^{-4}$ ppm)	
	1 hr. avg. time	$1.0x10^{-2}$ mg/m^3 ($5.91x10^{-4}$ ppm)	
NV	8 hr. avg. time	$1.2x10^{-2}$ mg/m^3 ($7.09x10^{-4}$ ppm)	

Table 7-1. Regulations and Guidelines Applicable to Toxaphene (continued)

Agency	Description	Information	Reference
STATE (cont.)			
NY	1 yr. avg. time	1.67 $\mu g/m^3$ ($9.86x10^{-5}$ ppm)	
OK	24 hr. avg. time	5.0 $\mu g/m^3$ ($2.95x10^{-4}$ ppm)	
PA-PHIL.	1 yr. avg. time	1.2 $\mu g/m^3$ ($7.09x10^{-5}$ ppm)	
	Annual avg. time	1.2 $\mu g/m^3$ ($7.09x10^{-5}$ ppm)	
SC	24 hrs. avg. time	2.5 $\mu g/m^3$ ($1.48x10^{-4}$ ppm)	
TX	30-min. avg. time	5.0 $\mu g/m^3$ ($2.95x10^{-4}$ ppm)	
	Annual avg. time	$5.0x10^{-1}$ $\mu g/m^3$ ($2.95x10^{-5}$ ppm)	
VA	24 hr. avg. time	8.3 $\mu g/m^3$ ($4.90x10^{-4}$ ppm)	
WA-SWEST	Annual avg. time	$3.0x10^{-3}$ $\mu g/m^3$ ($1.77x10^{-7}$ ppm)	
	24-hr. avg. time	1.7 $\mu g/m^3$ ($1.00x10^{-4}$ ppm)	
b. Water			
	Water Quality: Human Health		CELDs 1993
AL	Drinking water standard	5.0 µg/L	FSTRAC 1990
AZ	Domestic water source	3.0 µg/L	CELDs 1993
	Fish consumption	0.0008 µg/L	CELDs 1993
	Drinking water guideline	0.03 µg/L	FSTRAC 1990
	Drinking water standard	5.0 µg/L	FSTRAC 1990
CA		0.21 µg/L	CELDs 1993
CT	Organisms only	0.00075	CELDs 1993
	Organisms and water only	0.00073	CELDs 1993
DE	Freshwater fish ingestion	0.93 ng/L	CELDs 1993
	Freshwater fish & water ingestion	0.91 ng/L	CELDs 1993
	Marine/estuarine fish/shellfish ingestion	0.13 ng/L	CELDs 1993
FL	Domestic/Drinking water	5 µg/L	Sittig 1994
HI	Fish consumption	0.00024 µg/L	CELDs 1993
ID	All Classes - Upper value	0.005 mg/L	EPA 1988d
IL	Public and food processing water supply standard	0.005 mg/L	EPA 1988d
IN		0.9973 µg/L	CELDs 1993

Table 7-1. Regulations and Guidelines Applicable to Toxaphene (continued)

Agency	Description	Information	Reference
STATE (cont.)			
KY	Consumption of fish tissue	0.00073 µg/L	CELDs 1993
	Domestic water supply	0.00071 µg/L	CELDs 1993
LA	Drinking water supply	0.24 ng/L	CELDs 1993
	Non-drinking water supply	0.24 ng/L	CELDs 1993
MA	Drinking water standard	5 µg/L	FSTRAC 1990
ME	Drinking water guideline	0.3 µg/L	FSTRAC 1990
MD	Drinking water	5 µg/L	CELDs 1993
	Fish consumption	0.0073 µg/L	CELDs 1993
MI	Domestic/Drinking water	0.032 µg/L	Sittig 1994
MN	Drinking water standard	5 µg/L	FSTRAC 1990
	Drinking water guideline	0.3 µg/L	FSTRAC 1990
MO	Fish consumption	0.000073µg/L	CELDs 1993
	Drinking water	0.000071 µg/L	CELDs 1993
MS	Organisms only	0.00075 µg/L	CELDs 1993
	Water & organisms	0.00073 µg/L	CELDs 1993
NJ	Class FW2	0.013 µg/L	CELDs 1993
	All SE, SC classes	0.005 µg/L	CELDs 1993
	Toxic effluent limitations for potable water	0.71 ng/L	CELDs 1993
	Domestic/Drinking water	3 µg/L	Sittig 1994
NE	MCL	0.005 mg/L	CELDs 1993
NV	Municipal or domestic	0.005 mg/L	CELDs 1993
	Industrial	0.005 mg/L	CELDs 1993
NY	Class GA	Not detectable	CELDs 1993
	Class A, A-S, AA, AA-S, B.C, SA, SB, SC	0.005 µg/L	CELDs 1993
	Class D	1.0 µg/L	CELDs 1993
	Domestic/Drinking water	0.01 µg/L	Sittig 1994
OH	Public water supply	0.00071 µg/L	EPA 1988d
OK	Public and private water supply	0.005 mg/L	EPA 1988d
OR	Water and fish ingestion	0.71 ng/L	CELDs 1993
	Fish consumption only	0.73 ng/L	CELDs 1993
	Drinking water MCL	0.005 mg/L	CELDs 1993
	Domestic/Drinking water	0.08 mg/L	Sittig 1994

Table 7-1. Regulations and Guidelines Applicable to Toxaphene (continued)

Agency	Description	Information	Reference
STATE (cont.)			
RI	Drinking water standard	5 µg/L	FSTRAC 1990
	Drinking water guideline	0.03 µg/L	FSTRAC 1990
	Class A: upper value	1.6 µg/L	EPA 1988d
	ClassA: secondary upper limit	0.013 µg/L	EPA 1988d
	Domestic/Drinking water	0.3-5.0 µg/L	Sittig 1994
SD	Domestic water	0.00071 µg/L	CELDs 1993
	All other sources	0.00073 µg/L	CELDs 1993
TN		5 µg/L	CELDs 1993
	Domestic/Drinking water	3 µg/L	Sittig 1994
TX	Domestic/Drinking water	3 µg/L	Sittig 1994
UT	Domestic source; maximum; Class 1C	5 µg/L	CELDs 1993
VA	Surface public water supply	0.005 mg/L	EPA 1988d
VT	Class A or B waters	0.71 ng/L	CELDs 1993
	Class C waters	0.73 ng/L	CELDs 1993
	Drinking water standard	0.031 µg/L	FSTRAC 1990
WI	Sport fish community-public water supplies	5.6 ng/L	CELDs 1993
	Cold water communities - public water supply	1.7 ng/L	CELDs 1993
	Great Lakes communities - public water supply	1.7 ng/L	CELDs 1993
	Warm water sport fish communities-non-public water supplies	5.7 ng/L	CELDs 1993
	Cold water communities - non-public water supplies	1.7 ng/L	CELDs 1993
	Warm water forage and limited forage fish communities and limited aquatic life - non-public water supplies	62,000 µg/L	CELDs 1993
	MCLG	0.00003 mg/L	CELDs 1993
WV	Criteria based on body burden of 1 µg/L; all water uses	0.71 ng/L	CELDs 1993
	All Classes - upper value	0.005 µg/L	EPA 1988d
	Water Quality: Aquatic Life		
AL	Acute- freshwater	0.73 µg/L	CELDs 1993
	Chronic-freshwater	0.0002 µg/L	CELDs 1993
	Acute-Marine	0.21 µg/L	CELDs 1993
	Chronic-marine	0.0002	CELDs 1993

Table 7-1. Regulations and Guidelines Applicable to Toxaphene (continued)

Agency	Description	Information	Reference
STATE (cont.)			
AR	Chronic	0.002 µg/L	CELDs 1993
	Acute	0.73 µg/L	CELDs 1993
	All Classes: upper value	2.4 µg/L	EPA 1988d
	All Classes: secondary upper limit	0.013 µg/L	EPA 1988d
AZ	Acute-cold water fishery	0.73	CELDs 1993
	Acute-warm water fishery	0.73	CELDs 1993
	Acute-effluent dominated water	0.73	CELDs 1993
	Acute-ephemeral	1100	CELDs 1993
	Chronic-cold water fishery	0.0002	CELDs 1993
	Chronic-warm water fishery	0.02	CELDs 1993
	Chronic-effluent dominated water	0.02	CELDs 1993
	Chronic-ephemeral	1.5	CELDs 1993
CT	Acute- freshwater	0.73	CELDs 1993
	Chronic- freshwater	0.002	CELDs 1993
	Acute-salt water	0.21	CELDs 1993
	Chronic-salt water	0.0002	CELDs 1993
DE	Acute-freshwater	0.78 µg/L	CELDs 1993
	Chronic-freshwater	0.0002 µg/L	CELDs 1993
	Acute-marine	0.21 µg/L	CELDs 1993
	Chronic-marine	0.0002 µg/L	CELDs 1993
HI	Acute-freshwater	0.73 µg/L	CELDs 1993
	Chronic-freshwater	0.0002 µg/L	CELDs 1993
	Acute-saltwater	0.21 µg/L	CELDs 1993
	Chronic-saltwater	0.0002 µg/L	CELDs 1993
IN	Acute	0.0002 µg/L	CELDs 1993
	Chronic	0.73 µg/L	CELDs 1993
KS	Special aquatic life waters: upper value	0.013 µg/L	EPA 1988d
KY	Chronic	0.0002 µg/L	CELDs 1993
	Acute	0.73 µg/L	CELDs 1993
LA	Acute-freshwater	0.73 µg/L	CELDs 1993
	Acute-marine water	0.21 µg/L	CELDs 1993
	Chronic-freshwater	0.0002 µg/L	CELDs 1993
	Chronic-marine water	0.0002 µg/L	CELDs 1993

Table 7-1. Regulations and Guidelines Applicable to Toxaphene (continued)

Agency	Description	Information	Reference
STATE (cont.)			
MD	Acute-freshwater	0.73 µg/L	CELDs 1993
	Chronic-freshwater	0.0002 µg/L	CELDs 1993
	Acute-salt water	0.21µg/L	CELDs 1993
	Chronic-salt water	0.0002 µg/L	CELDs 1993
	All Classes - upper value	0.005 µg/L	EPA 1988d
MS	Acute-freshwater	0.73 µg/L	CELDs 1993
	Chronic-freshwater	0.0002 µg/L	CELDs 1993
	Acute-salt water	0.21 µg/L	CELDs 1993
	Chronic-salt water	0.0002 µg/L	CELDs 1993
NE	All Classes - upper value	0.005 mg/L	EPA 1988d
NC	Freshwater	0.0002 µg/L	CELDs 1993
	Tidal saltwater - upper value	0.07 µg/L	EPA 1988d
ND	Chronic	0.002 µg/L	CELDs 1993
	Acute	0.73 µg/L	CELDs 1993
NJ	Toxic effluent limitations 24-hr avg. - freshwater	0.013 µg/L	CELDs 1993
	Toxic effluent limitations- saltwater	0.070	CELDs 1993
	All saline classes - upper value	0.005 µg/L	EPA 1988d
NV	Aquatic use	0.00001 mg/L	CELDs 1993
OH	Warm water, outside mixing zone, 30-d avg.	0.005 µg/L	CELDs 1993
	Warm water, human health, 30-d avg.	0.0073 µg/L	CELDs 1993
	Aquatic life habitat: limited resource-cold water; outside mixing zone, 30-d avg.	0.005 µg/L	CELDs 1993
	Aquatic life habitat: limited resource-cold and warm water, human health, 30-d avg.	0.0073 µg/L	CELDs 1993
OK	Acute	0.78 µg/L	CELDs 1993
	Chronic	0.0002 µg/L	CELDs 1993
	Fish and Wildlife propagation	1.0 µg/L	EPA 1988d
OR	Acute-freshwater	0.73 µg/L	CELDs 1993
	Chronic-freshwater	0.0002 µg/L	CELDs 1993
	Marine- acute	0.21 µg/L	CELDs 1993
	Chronic-marine	0.0002 µg/L	CELDs 1993
PR	All coastal water classes - upper value	0.005 µg/L	EPA 1988d

Table 7-1. Regulations and Guidelines Applicable to Toxaphene (continued)

Agency	Description	Information	Reference
STATE (cont.)			
RI	Freshwater Classes D and E		
	Upper level	1.6 µg/L	EPA 1988d
	Secondary upper limit	0.013 µg/L	EPA 1988d
	Saline Classes SA, SB and SC		
	Upper level	0.07 µg/L	EPA 1988d
SD	Acute	0.73 µg/L	CELDs 1993
	Chronic	0.0002 µg/L	CELDs 1993
TN	Continuous	0.002 µg/L	CELDs 1993
	Max	0.73 µg/L	CELDs 1993
TX	Chronic-freshwater	0.0002 µg/L	CELDs 1993
	Acute-freshwater	0.78 µg/L	CELDs 1993
	Acute-marine	0.21 µg/L	CELDs 1993
	Chronic-marine	0.0002 µg/L	CELDs 1993
UT	4-d avg.	0.0002 µg/L	CELDs 1993
	1-h avg.	0.73 µg/L	CELDs 1993
	Aquatic life classes 3A-D	0.005 µg/L	EPA 1988d
VA	Chronic- freshwater	0.013 µg/L	CELDs 1993
	Chronic- saltwater	0.0007	CELDs 1993
VT	Acute	0.73 µg/L	CELDs 1993
	Chronic	0.0002 µg/L	CELDs 1993
WI	Acute-Great Lakes	0.61 µg/L	CELDs 1993
	Acute-cold water	0.81 µg/L	CELDs 1993
	Acute-warm water sport fish	0.61 µg/L	CELDs 1993
	Acute-all others	0.81 µg/L	CELDs 1993
	Chronic-Great Lakes	0.01 µg/L	CELDs 1993
	Chronic-cold water	0.01 µg/L	CELDs 1993
	Warm water sport fish	0.01 µg/L	CELDs 1993
	All others	0.01 µg/L	CELDs 1993
	Water Quality: Propagation of Wildlife		
NV		0.005 mg/L	CELDs 1993
	Water Quality: Agricultural Use		
AZ	Irrigation	0.005 mg/L	CELDs 1993
	Livestock watering	0.005 mg/L	CELDs 1993

Table 7-1. Regulations and Guidelines Applicable to Toxaphene (continued)

Agency	Description	Information	Reference
STATE (cont.)			
NV	Irrigation	0.005 mg/L	CELDs 1993
	Watering of livestock	0.00001 mg/L	CELDs 1993
OH		0.0071 µg/L	CELDs 1993
	Water Quality: Recreational Use		
AZ	Full body contact	3.0 µg/L	CELDs 1993
	Partial body contact	1000 µg/L	CELDs 1993
DC		0.01 µg/L	CELDs 1993
RI	Freshwater Classes B & C - upper value	1.6 µg/L	EPA 1988d
	Freshwater Classes B & C - secondary upper limit	0.013 µg/L	EPA 1988d
TN		0.008 µg/L	CELDs 1993
	Groundwater Quality Standards		CELDs 1993
AZ	Drinking water protected use	0.005 mg/L	
CO		0.005 mg/L	
MA		0.005 mg/L	
MO		0.000071 µg/L	
NJ	GW1 (GW 2 & 3)	0.005 mg/L	
NC	GS waters	0.000031 mg/L	
OR	Human consumption	0.005 mg/L	
TN		0.005 mg/L	
UT		0.005 mg/L	
WI	Public health-enforcement std.	0.0007 µg/L	
	Public health-preventive action	0.00007 µg/L	
	Max. conc. for GW prtxn	0.005 mg/L	
	Groundwater Monitoring Parameters		CELDs 1993
CO		0.005 mg/L	
IN		0.005 mg/L	
IL	Max conc.-hazardous waste facility std.	0.005 mg/L	
	Monitoring constituent	Yes	
LA	Max conc.-harzardous waste facility std.	0.005 mg/L	
	Monitoring constituent	Yes	
MN	Monitoring constituent	Yes	
	Max conc.-harzardous waste facility std.	0.005 mg/L	
MO	Max conc.-harzardous waste facility std.	0.005 mg/L	
NJ	Max level-hazardous waste facility std.	0.005 mg/L	

Table 7-1. Regulations and Guidelines Applicable to Toxaphene (continued)

Agency	Description	Information	Reference
STATE (cont.)			
TN		0.005 mg/L	
VA	Monitoring constituent	Yes	
WI	Monitoring constituent	Yes	
	Max conc.-hazardous waste facility std.	0.005 mg/L	
WV	Monitoring constituent	Yes	
CA	Restricted Pesticides	Yes	
	Discharge Limits	0.21 ng/L	
	Total Threshold Limit Conc. In Extremely Hazardous Wastes	500 mg/kg	
	Persistent and Bioaccumulative Toxic Substances and Their Total Threshold Limit Concentration for Extremely Hazardous Wastes	500 mg/kg (w/w)	
	Prohibition of Net Discharge Associated with Industrial, Toxic and Other Wastes	Yes	
IL	Public and Food Processing Water	0.005 mg/L	
WI	No qty>qty which remains after BATEA treatment or a lesser qty that provides an ample safety margin		
	Toxic Discharge	Yes	
NJ	NPDES Permits: Testing Requirements for Organic Toxic Pollutants	Yes	CELDs 1993
OK	Alert and Concern Levels in Fish Tissue	5.0 mg/kg (alert) 2.5 mg/kg (concern)	CELDs 1993
	Max allow concs for organochlorides & other persistent pesticides (preservation of species dependent on waterbody)		CELDs 1993
PR	Coastal estuarine waters	0.0002 µg/L	
	Surface waters	0.0002 µg/L	
	Ground waters	0.0002 µg/L	
SD	Surface Water Discharge Permit Application Requirements: Test Requirements for Organic Toxic Pollutants	Yes	CELDs 1993
c. Other:			
	Hazardous Waste		CELDs 1993
CA		Yes	
CO		Yes (LDR)	
IL		Yes	
LA		Yes	
MA		Yes (LDR)	
ND		Yes	

Table 7-1. Regulations and Guidelines Applicable to Toxaphene (continued)

Agency	Description	Information	Reference
STATE (cont.)			
NH		Yes	
WI		Yes	
WV		Yes	
	Hazardous Waste Toxicity Characteristic		CELDs 1993
CA		0.5 mg/L	
CO		0.5 mg/L	
IL		0.5 mg/L	
LA		0.5 mg/L	
MA		0.5 mg/L	
MN		0.5 mg/L	
ND		0.5 mg/L	
PA		0.5 mg/L	
WI		0.5 mg/L	
WV		0.5 mg/L	
	Hazardous Waste Constituents		CELDs 1993
CO		Yes	
IL		Yes (App. H)	
		Yes (App. G)	
LA		Yes	
MN		Yes	
ND		Yes (App. IV)	
WI		Yes	
WV		Yes (App. VIII)	
		Yes (App. VII)	

NOTE: Update of drinking water guidelines and other areas in progress.
Units in table reflect values and units of measure designated by each agency in its regulations or advisories.

[a]Possibly carcinogenic to humans

[b]Probably carcinogenic to humans

ACGIH = American Conference of Governmental and Industrial Hygienists; CAAA = Clean Air Act; CELDs = Computer-aided Environmental Legislative Database; CEPP = Chemical Emergency Preparedness Program; CPSC = Consumer Product Safety Commission; EPA = Environmental Protection Agency; FSTRAC = Federal State Toxicology and Regulatory Alliance Committee; IARC = International Agency for Research on Cancer; IRIS = Integrated Risk Information System; LDR = Land Disposal Restriction; MCL = Maximum Contaminant Level; MCLG = Maximum Contaminant Level Goal; NA = Not available at the present time; NATICH = National Air Toxics Information Clearinghouse; NIOSH = National Institute of Occupational Safety and Health; NPDES = National Pollutant Discharge Elimination System; NTP = National Toxicology Program; OAR = Office of Air and Radiation; ODW = Office of Drinking Water; OERR = Office of Emergency and Remedial Response; OPTS = Office of Pesticides and Toxic Substances; OSHA = Occupational Safety and Health Administration; OSW = Office of Solid Waste; OW = Office of Water; PCB = Polychlorinated Biphenyl; PEL = Permissible Exposure Limit; STEL = Short Term Exposure Limit; TLV = Threshold Limit Value; TSCA = Toxic Substances Control Act; TWA = Time Weighted Average; WHO = World Health Organization