

## CHAPTER 7. REGULATIONS AND GUIDELINES

Pertinent international and national regulations, advisories, and guidelines regarding mirex and chlordecone in air, water, and other media are summarized in Table 7-1. This table is not an exhaustive list, and current regulations should be verified by the appropriate regulatory agency.

ATSDR develops MRLs, which are substance-specific guidelines intended to serve as screening levels by ATSDR health assessors and other responders to identify contaminants and potential health effects that may be of concern at hazardous waste sites. See Section 1.3 and Appendix A for detailed information on the MRLs for mirex and chlordecone.

**Table 7-1. Regulations and Guidelines Applicable to Mirex and Chlordecone**

Agency	Description	Information	Reference
<b>Air</b>			
EPA	RfC	No data	IRIS <a href="#">1992</a> , <a href="#">2009</a>
WHO	Air quality guidelines	No data	<a href="#">WHO 2010</a>
<b>Water &amp; Food</b>			
EPA	Drinking water standards and health advisories	No data	<a href="#">EPA 2012</a>
	National primary drinking water regulations	No data	
RfD			
	Mirex	0.0002 mg/kg/day	<a href="#">IRIS 1992</a>
	Chlordecone	0.0003 mg/kg/day	<a href="#">IRIS 2009</a>
WHO	Drinking water quality guidelines	Mirex excluded from guideline value derivation because unlikely to occur in drinking water	<a href="#">WHO 2017</a>
FDA	EAFUS	No data <sup>a</sup>	<a href="#">FDA 2013</a>
<b>Cancer</b>			
ACGIH	Carcinogenicity classification	No data	ACGIH 2016
HHS	Carcinogenicity classification		
	Mirex	Reasonably anticipated to be a human carcinogen <sup>b</sup>	<a href="#">NTP 2016b</a>
	Chlordecone	Reasonably anticipated to be a human carcinogen <sup>b</sup>	<a href="#">NTP 2016a</a>
EPA	Carcinogenicity classification		
	Mirex	No data	<a href="#">IRIS 1992</a>

## 7. REGULATIONS AND GUIDELINES

**Table 7-1. Regulations and Guidelines Applicable to Mirex and Chlordecone**

Agency	Description	Information	Reference
	Chlordecone	Likely to be carcinogenic to humans	<a href="#">IRIS 2009</a>
IARC	Carcinogenicity classification		
	Mirex	Group 2B <sup>c</sup>	IARC <a href="#">1979</a>
	Chlordecone	Group 2B <sup>c</sup>	IARC <a href="#">1979</a>
<b>Occupational</b>			
ACGIH	TLV	No data	ACGIH 2016
OSHA	PEL (8-hour TWA) for general industry, construction, and shipyards	No data	OSHA <a href="#">2016a</a> , <a href="#">2016b</a> , <a href="#">2017</a>
NIOSH	REL (up to 10-hour TWA)		
	Chlordecone	0.001 mg/m <sup>3d</sup>	<a href="#">NIOSH 2016</a>
<b>Emergency Criteria</b>			
EPA	AEGLs-air	No data	<a href="#">EPA 2016</a>
DOE	PACs-air		<a href="#">DOE 2016a</a>
	Mirex		
	PAC-1 <sup>e</sup>	6.3 mg/m <sup>3</sup>	
	PAC-2 <sup>e</sup>	69 mg/m <sup>3</sup>	
	PAC-3 <sup>e</sup>	410 mg/m <sup>3</sup>	
	Chlordecone		
	PAC-1 <sup>e</sup>	1.6 mg/m <sup>3</sup>	
	PAC-2 <sup>e</sup>	17 mg/m <sup>3</sup>	
	PAC-3 <sup>e</sup>	100 mg/m <sup>3</sup>	

<sup>a</sup>The EAFUS list of substances contains ingredients added directly to food that FDA has either approved as food additives or listed or affirmed as GRAS.

<sup>b</sup>Based on sufficient evidence of carcinogenicity from studies in experimental animals.

<sup>c</sup>Group 2B: Possibly carcinogenic to humans.

<sup>d</sup>Potential occupational carcinogen.

<sup>e</sup>Definitions of PAC terminology are available from U.S. Department of Energy ([DOE 2016b](#)).

ACGIH = American Conference of Governmental Industrial Hygienists; AEGL = acute exposure guideline levels; DOE = Department of Energy; EAFUS = Everything Added to Food in the United States; EPA = Environmental Protection Agency; FDA = Food and Drug Administration; GRAS = generally recognized as safe; HHS = Department of Health and Human Services; IARC = International Agency for Research on Cancer; IRIS = Integrated Risk Information System; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; PAC = Protective Action Criteria; PEL = permissible exposure limit; REL = recommended exposure limit; RfC = inhalation reference concentration; RfD = oral reference dose; TLV = threshold limit values; TWA = time-weighted average; WHO = World Health Organization