7. REGULATIONS AND ADVISORIES

The international, national. and state regulations and guidelines regarding *N*-nitrosodiphenylamine in air, water, and other media are summarized in Table 7-l.

EPA has not derived an inhalation reference concentration or an oral reference dose for *N*-nitrosodiphenylamine (IRIS 1990). The quantitative estimate of carcinogenic risk from oral exposure is 4.9×10^{-3} mg/kg/day (IRIS 1990), based on transitional cell carcinomas of the bladder in rats exposed to *N*-nitrosodiphenylamine in the diet (NCI 1979). *N*-Nitrosodiphenylamine has a weight-of-evidence classification of B2, which indicates a probable human carcinogen (IRIS 1990).

N-Nitrosodiphenylamine is on the list of chemicals appearing in "Toxic Chemicals Subject to Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986" (EPA 1987, 1988).

TABLE 7-1. Regulations and Guidelines Applicable to *N*-Nitrosodiphenylamine

Agency	Description	Information	References
INTERNATIONAL			
IARC	Carcinogenic classification	Group 3[a]	IARC 1987
NATIONAL			
Regulations:			
a. Water:			
EPA OSW	Designated as a toxic pollutant under Section 307(a)(1) of the Clean Water Act; detected in treated effluents from a small number of discharge sources and uniquely related to those sources	Yes	EPA 1989b (40 CFR 401.15); EPA 1987d
	Hazard ranking	Low	EPA 1986b
	Groundwater monitoring requirement	Yes	EPA 1987b (40 CFR 264, Appendix IX); EPA 1987c
b. Other:			
EPA OERR	Reportable quantity	100 pounds	EPA 1985a (40 CFR 302); EPA 1985b
EPA OTS	Toxic chemical release reporting; Community Right-to-Know	Yes	EPA 1988 (40 CFR 372); EPA 1987e
Guidelines:			
a. Water:			
	Ambient water quality criteria for protection of human health[b]		
	Ingesting water and organisms:		EPA 1980b
	10^{-5}	49,000 ng/L	
	10^{-6}	4,900 ng/L	
	10^{-7}	490 ng/L	
	Ingesting organisms only:		EPA 1980b
	10^{-5}	161,000 ng/L	
	10^{-6}	16,100 ng/L	
	10^{-7}	1,610 ng/L	
	Drinking water concentrations:		IRIS 1990
	10^{-4}	700 µg/L	
	10^{-5}	70 µg/L	
	10^{-6}	7 µg/L	
b. Other:			
EPA	Carcinogen classification	B2[c]	IRIS 1990
	Unit risk (air)	No data	EPA 1990
	Unit risk (water)	1.4×10^{-7} $(\mu g/L)^{-1}$	EPA 1990

TABLE 7-1 (Continued)

Agency	Description	Information	References
STATE			
Regulations and Guidelines:			
a. Air:			
Maryland	Acceptable ambient air concentrations	0.00	NATICH 1991
Wisconsin	Hazardous air contaminants without acceptable ambient concentrations requiring application of best available control technology	250 pounds/year	CELDS 1990
b. Water:			
	Drinking water quality guidelines and standards		FSTRAC 1988
Kansas		71 µg/L	
Minnesota		71.1 µg/L	
California	Toxic materials limitations-- objectives for protection of human health (30-day average)	2.5 µg/L	CELDS 1990
Indiana	Water quality continuous criteria concentration for human health (4-day average):		CELDS 1990
	Outside mixing zone	161 mg/L	
	Point of water intake	49 mg/L	
Wisconsin	Human cancer criteria		DNR 1987
	Public water supply:		
	Warm water sport fish communities	45 µg/L	
	Cold water communities	24 µg/L	
	Great Lakes communities	24 µg/L	
	Non-water supply:		
	Warm water sport fish communities	120 µg/L	
	Cold water communities	36 µg/L	
	Warm water forage and limited forage fish communities and limited aquatic life	14,000 µg/L	
c. Other:			
Wisconsin	Designated as a toxic pollutant	Yes	CELDS 1990

[a]Group 3: not classifiable as to human carcinogenicity
[b]Because of its carcinogenic potential, the EPA-recommended concentration for N-nitrosodiphenylamine in ambient water is zero. However, because attainment of this level may not be possible, levels that correspond to upper-bound incremental lifetime cancer risks of 10^{-5}, 10^{-6}, and 10^{-7} are estimated.
[c]Group B2: possible human carcinogen

EPA = Environmental Protection Agency; IARC = International Agency for Research on Cancer; OERR = Office of Emergency and Remedial Response; OSW = Office of Solid Wastes; OTS = Office of Toxic Substances