

**ORDER OF THE STATE OF WISCONSIN
NATURAL RESOURCES BOARD
AMENDING RULES**

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The Wisconsin Natural Resources Board proposes an order .
to amend NR 140.10 Table 1 and Appendix 1, relating to .
groundwater quality standards. .
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DG-37-02

Analysis Prepared by the Department of Natural Resources

1. Statutes interpreted: In promulgating this rule, ss.281.12(1), 281.15, 281.19(1) and 299.11, Stats., and ch. 160, Stats., have been interpreted as authorizing the department to modify and create rules relating to development of numerical groundwater quality standards.

2. Statutory authority: Sections 281.12(1), 281.15, 281.19(1) and 299.11, Stats., and ch. 160, Stats.

3. Explanation of agency authority to promulgate the proposed rules under the statutory authority: Section 281.12(1), Stats., grants the Department the authority to carry out planning, management and regulatory programs necessary to protect, maintain and improve the quality and management of the waters of the state, ground and surface, public and private. Section 281.15, Stats., states that the Department shall promulgate rules setting standards of water quality, applicable to the waters of the state, that protect the public interest, including the protection of public health and welfare, and the present and prospective future use of such waters for public and private water systems. Section 281.19(1), Stats., grants the Department the authority to issue general orders and adopt rules applicable throughout the state for the construction, installation, use and operation of practicable and available systems, methods and means for preventing and abating pollution of the waters of the state.

In accordance with ch. 160, Stats., the reliability of sampling data is to be considered when determining the range of responses that a regulatory agency may take, or require, to address attainment or exceedance of a state groundwater quality standard at an applicable "point of standard application". Section 299.11, Stats., authorizes the Department, in conjunction with the Department of Agriculture Trade and Consumer protection, to establish uniform minimum criteria for laboratories certified to conduct water analysis testing, and to establish accepted methodologies to be followed in conducting tests and sampling protocols and documentation procedures to be followed when collecting water samples for testing.

Chapter 160, Stats., establishes an administrative process for developing numerical state groundwater quality standards to be used as criteria for the protection of public health and welfare by all state groundwater regulatory programs. Chapter 160, Stats., directs the Department to use this administrative process to establish numeric groundwater quality standards for substances of public health or welfare concern, found in, or having a reasonable probability of being detected in, the groundwater resources of the state.

4. Related statute or rule: Chapter 280, Stats., authorizes the Department to prescribe, publish and enforce minimum standards and rules to be pursued in the obtaining of pure drinking water for human consumption. Chapter NR 809, Wis. Adm. Code, establishes minimum state drinking water standards for the protection of public health safety and welfare. This administrative code contains numeric water quality protection standards applicable to public water supply systems in Wisconsin. Wisconsin state drinking water standards, applicable to public drinking water systems, have not yet been established for: butylate, dacthal, molybdenum or naphthalene.

5. Plain language analysis of the proposed rule: Chapter 160, Stats., requires the Department to develop numerical groundwater quality standards, consisting of enforcement standards and preventive action limits. Chapter NR 140, Wis. Adm. Code, establishes groundwater standards and creates a framework for implementation of the standards by the Department. The proposed amendments to ch. NR 140 would add groundwater quality standards for one additional substance and revise existing groundwater quality standards for three substances. In accordance with ch. 160, Stats., amendments to ch. NR 140 groundwater quality standards are based on recommendations from the Department of Health and Family Services. New public health related groundwater quality standards are

proposed for molybdenum. Revised public health related groundwater quality standards are proposed for butylate, dacthal and naphthalene.

6. Summary of and preliminary comparison with any existing or proposed federal regulation: The United States Environmental Protection Agency (US EPA) establishes health based drinking water maximum contaminant levels (MCLs) and health advisory levels (HALs). Federal MCLs are established based on scientific risk assessments and, in some cases, economic and technological considerations. Federal HALs are developed based on established reference doses (RfDs). No federal MCLs have been established for butylate, dacthal, molybdenum or naphthalene. Federal RfDs and lifetime HALs have been established for: butylate, dacthal, molybdenum and naphthalene. The proposed amendments to ch. NR 140 for these substances are based on the current federal lifetime HAL.

7. Comparison of similar rules in adjacent states (Minnesota, Iowa, Illinois and Michigan): The proposed amendments to ch. NR 140, Wis. Adm. Code, would add numeric groundwater quality standards for one additional substance and revise existing groundwater quality standards for three substances. The groundwater quality standards contained in ch. NR 140 are used in Wisconsin by state regulatory agencies as state groundwater protection standards. These standards are used as contamination site cleanup levels, design and management criteria for regulated activities and as minimum public health and welfare protection standards for contaminants in groundwater.

The states surrounding Wisconsin - Minnesota, Michigan, Illinois and Iowa, also use groundwater protection standards in their regulation of practices and activities that may impact the quality of groundwater resources. Some of the states surrounding Wisconsin have promulgated individual state groundwater protection standards and some utilize established federal standards (federal drinking water maximum contaminant levels, lifetime health advisory levels and established cancer risk levels) as their state groundwater protection standards.

Groundwater protection quality standards are usually developed based on health risk assessments. States are often required to follow state specific health risk assessment methodology when establishing groundwater protection quality standards. States may use state specific health risk assessment factors and methodology in calculating and developing their groundwater protection standards. This use of different health risk assessment factors and methodologies has led to the establishment of different state groundwater protection standard levels for the same substance. For example, the groundwater protection quality standard for naphthalene used by the states surrounding Wisconsin varies by state - the standard used in Minnesota is 300 parts per billion (ppb), the standard used in Michigan is 520 ppb and the standard used in Iowa is 100 ppb, the federal lifetime health advisory level.

The state of Minnesota has established state groundwater protection "Health Risk Limits" (HRLs) under Minnesota Statutes Section 103H.201. The Minnesota state HRL for naphthalene is 300 ppb. There is no established Minnesota state HRL for: butylate, dacthal or molybdenum. The Minnesota Department of Health has calculated "Health Based Values" (HBVs) for some groundwater contaminants. Minnesota HBVs are not standards that have been promulgated by rule but are calculated concentrations that may be used as advisory levels by Minnesota state groundwater and environmental protection programs. The Minnesota HBVs for butylate and dacthal are 300 ppb and 70 ppb respectively. No Minnesota HBV has been established for molybdenum.

The state of Michigan has established state groundwater protection quality standards. Michigan "Drinking Water Criteria and Risk Based Screening Levels (RBSLs)" are Michigan state groundwater protection standards authorized in accordance with Michigan's Natural Resources and Environmental Protection Act, 1994 PA 451 (NREPA). The Michigan state Residential & Commercial Drinking Water Criteria & RBSLs for dacthal, molybdenum and naphthalene are 73 ppb, 73 ppb and 520 ppb respectively. There is no established Michigan Drinking Water Criteria or RBSL for butylate.

The state of Illinois has established state groundwater quality standards for "potable resource groundwater". Illinois Groundwater Quality Standards are state groundwater protection standards promulgated in Illinois 35 Ill. Adm. Code 620 environmental protection regulations. No Illinois state "Groundwater Quality Standards for Class I: Potable Resource Groundwater" have been established for butylate, dacthal, molybdenum or naphthalene. The state of Illinois also has established "Groundwater Cleanup Objectives". Illinois Groundwater Cleanup Objectives include both Illinois state Groundwater Quality Standards and Human Threshold Toxicant Advisory Concentrations

(HTTACs) established in 35 Ill. Adm. Code 620. The Illinois HTTAC for butylate is 350 ppb. No Illinois HTTAC has been established for dacthal, molybdenum or naphthalene.

The state of Iowa has not established specific state groundwater protection standards. In accordance with Iowa Environmental Protection Regulations 567 IAC Chapter 133, Iowa uses established federal lifetime health advisory levels (HALs), negligible risk levels for carcinogens (NRLs) or drinking water maximum contaminant levels (MCLs) as "Action Levels" in their regulation of practices and activities that may adversely impact groundwater quality. The groundwater protection standard Action Levels that Iowa would use to regulate butylate, dacthal, molybdenum and naphthalene in groundwater are based on federal lifetime HALs. The federal lifetime HALs for butylate, dacthal, molybdenum and naphthalene are 400 ppb, 70 ppb, 40 ppb and 100 ppb respectively.

8. Summary of the factual data and analytical methodologies that the agency used in support of the proposed rule and how any related findings support the regulatory approach chosen for the proposed rule: In accordance with s. 160.07, Stats., the Department is required, for substances of public health concern, to propose rules establishing recommendations from the Department of Health and Family Services (DHFS) as groundwater quality enforcement standards. In accordance with s. 160.15, Stats., the Department is required to establish by rule a preventive action limit for each substance for which an enforcement standard is established.

The DHFS has provided the Department, in a March 2005 (revised August 2005) document titled *Scientific Support Documentation for Cycle 8 Revisions of NR 140.10 Groundwater Enforcement Standard & Preventive Action Limit Recommendations*, its recommendations for revisions to existing state groundwater quality standards for butylate, dacthal and naphthalene, and its recommendations for new state groundwater quality standards for molybdenum. In developing their recommendations for new and revised state groundwater quality enforcement standards for butylate, dacthal, molybdenum and naphthalene, DHFS followed the applicable analytical methodologies required under ss. 160.07 and 160.13, Stats.

The Department has proposed rules establishing the DHFS enforcement standard recommendations for butylate, dacthal, molybdenum and naphthalene as ch. NR 140, Wis. Adm. Code, state groundwater quality enforcement standards. The Department has proposed rules establishing ch. NR 140, Wis. Adm. Code, state groundwater quality preventive action limits for butylate, dacthal, molybdenum and naphthalene in accordance with s. 160.15(1)(b) & (c), Stats.

9. Any analysis and supporting documentation that the agency used in support of the agency's determination of the rule's effect on small business under s. 227.114, Stats., or that was used when the agency prepared an economic impact report: In its determination of the effect of this proposed rule on small businesses the Department used analysis and supporting documentation that included information from the United States Department of Agriculture - National Agricultural Statistics Service (NASS) [NASS agricultural chemical usage reports from 1991 - 2004 and the NASS Agricultural Chemical Use Database] and the Wisconsin Department of Agriculture Trade and Consumer Protection (DATCP) [results from DATCP well sampling database].

10. Effects on small business, including how the rule will be enforced: The Department has determined that this rule order will not have a significant economic impact on small businesses. Chapter NR 140, Wis. Adm. Code, currently contains groundwater standards for 122 substances of public health concern, 8 substances of public welfare concern and 15 indicator parameters. The proposed groundwater standard revisions would apply to all regulated facilities, practices and activities which may impact groundwater quality.

The enforcement of Wisconsin state groundwater quality standards is done by state regulatory agencies through their groundwater protection programs. State regulatory agencies, in exercising their statutory powers and duties, establish groundwater protection regulations that assure that regulated facilities and activities will not cause state groundwater quality standards to be exceeded. A state regulatory agency may establish specific design and management criteria to ensure that regulated facilities and activities will not cause the concentration of a substance in groundwater, affected by the facilities or activities, to exceed state groundwater quality enforcement standards or preventive action limits at an applicable "point of standards application" location.

Regulated facilities, practices and activities, which are sources of the substances for which groundwater standards are proposed, are, for the most part, likely sources of substances for which groundwater standards already exist.

Consequently, there will likely be few cases where the proposed standards will be exceeded where existing standards are not currently being exceeded. Additional monitoring costs may be imposed upon regulated facilities, practices and activities, but the extent of such monitoring and any costs associated with it - while too speculative to quantify at this time - are not expected to be significant.

The proposed revisions to state groundwater quality standards include new and revised standards for the herbicides butylate and dacthal. Butylate is a pre-emergence herbicide used in Wisconsin on field and sweet corn. Use of butylate in Wisconsin on corn was reported in 1990 to have been 132,000 lbs., or on an estimated 1% of the state "corn acreage" (acreage planted that year in corn). Little use of butylate has been reported in Wisconsin since 1990. Dacthal (DCPA) is a pre-emergence herbicide used on a variety of crops. There has been little use of dacthal reported in Wisconsin.

11. Agency Contact Person: William Phelps, Wisconsin Dept. of Natural Resources, Bureau of Drinking Water & Groundwater, 101 S. Webster St., Madison, WI, 73707-7921; (608) 267-7619; william.phelps@dnr.state.wi.us

SECTION 1. NR 140.10, Table 1 is amended to read:

Table 1
Public Health Groundwater Quality Standards

Substance¹	Enforcement Standard (micrograms per liter - except as noted)	Preventive Action Limit (micrograms per liter - except as noted)
Acetone	1000	200
Alachlor	2	0.2
Aldicarb	10	2
Antimony	6	1.2
Anthracene	3000	600
Arsenic	50	5
Asbestos	7 million fibers per liter (MFL)	0.7 MFL
Atrazine, total chlorinated residues	3 ³	0.3 ³
Bacteria, Total Coliform	0 ⁴	0 ⁴
Barium	2 milligrams/liter (mg/l)	0.4 mg/l
Bentazon	300	60
Benzene	5	0.5
Benzo(b)fluoranthene	0.2	0.02
Benzo(a)pyrene	0.2	0.02
Beryllium	4	0.4
Boron	960	190
Bromodichloromethane	0.6	0.06
Bromoform	4.4	0.44
Bromomethane	10	1
Butylate	67 400	6.7 80
Cadmium	5	0.5
Carbaryl	960	192
Carbofuran	40	8
Carbon disulfide	1000	200
Carbon tetrachloride	5	0.5
Chloramben	150	30
Chlordane	2	0.2
Chloroethane	400	80
Chloroform	6	0.6
Chloromethane	3	0.3
Chromium	100	10
Chrysene	0.2	0.02
Cobalt	40	8

Copper	1300	130
Cyanazine	1	0.1
Cyanide	200	40
Dacthal	4 mg/l 70	0.8 mg/l 14
1,2-Dibromoethane (EDB)	0.05	0.005
Dibromochloromethane	60	6
1,2-Dibromo-3-chloropropane (DBCP)	0.2	0.02
Dibutyl phthalate	100	20
Dicamba	300	60
1,2-Dichlorobenzene	600	60
1,3-Dichlorobenzene	1250	125
1,4-Dichlorobenzene	75	15
Dichlorodifluoromethane	1000	200
1,1-Dichloroethane	850	85
1,2-Dichloroethane	5	0.5
1,1-Dichloroethylene	7	0.7
1,2-Dichloroethylene (cis)	70	7
1,2-Dichloroethylene (trans)	100	20
2,4-Dichlorophenoxyacetic Acid (2,4-D)	70	7
1,2-Dichloropropane	5	0.5
1,3-Dichloropropene (cis/trans)	0.2	0.02
Di (2-ethylhexyl) phthalate	6	0.6
Dimethoate	2	0.4
2,4-Dinitrotoluene	0.05	0.005
2,6-Dinitrotoluene	0.05	0.005
Dinoseb	7	1.4
Dioxin (2, 3, 7, 8-TCDD)	0.00003	0.000003
Endrin	2	0.4
EPTC	250	50
Ethylbenzene	700	140
Ethylene glycol	7 mg/l	0.7 mg/l
Fluoranthene	400	80
Fluorene	400	80
Fluoride	4 mg/l	0.8 mg/l
Fluorotrichloromethane	3490	698
Formaldehyde	1000	100
Heptachlor	0.4	0.04
Heptachlor epoxide	0.2	0.02
Hexachlorobenzene	1	0.1
N-Hexane	600	120
Hydrogen sulfide	30	6
Lead	15	1.5
Lindane	0.2	0.02
Mercury	2	0.2
Methanol	5000	1000
Methoxy chlor	40	4
Methylene chloride	5	0.5
Methyl ethyl ketone (MEK)	460	90
Methyl isobutyl ketone (MIBK)	500	50
Methyl tert-butyl ether (MTBE)	60	12
Metolachlor	15	1.5
Metribuzin	250	50
<u>Molybdenum</u>	<u>40</u>	<u>8</u>
Monochlorobenzene	100	20
Naphthalene	40 <u>100</u>	8 <u>10</u>
Nickel	100	20
Nitrate (as N)	10 mg/l	2 mg/l
Nitrate + Nitrite (as N)	10 mg/l	2 mg/l
Nitrite (as N)	1 mg/l	0.2 mg/l
N-Nitrosodiphenylamine	7	0.7
Pentachlorophenol (PCP)	1	0.1
Phenol	6 mg/l	1.2 mg/l

Picloram	500	100
Polychlorinated biphenyls (PCBs)	0.03	0.003
Prometon	90	18
Pyrene	250	50
Pyridine	10	2
Selenium	50	10
Silver	50	10
Simazine	4	0.4
Styrene	100	10
1,1,1,2-Tetrachloroethane	70	7
1,1,2,2-Tetrachloroethane	0.2	0.02
Tetrachloroethylene	5	0.5
Tetrahydrofuran	50	10
Thallium	2	0.4
Toluene	1 mg/l	0.2 mg/l
Toxaphene	3	0.3
1,2,4-Trichlorobenzene	70	14
1,1,1-Trichloroethane	200	40
1,1,2-Trichloroethane	5	0.5
Trichloroethylene (TCE)	5	0.5
2,4,5-Trichlorophenoxy-propionic acid (2,4,5-TP)	50	5
1,2,3-Trichloropropane	60	12
Trifluralin	7.5	0.75
Trimethylbenzenes (1,2,4- and 1,3,5- combined)	480	96
Vanadium	30	6
Vinyl chloride	0.2	0.02
Xylene ⁵	10 mg/l	1 mg/l

¹ Appendix I contains Chemical Abstract Service (CAS) registry numbers, common synonyms and trade names for most substances listed in Table 1.

² Total chlorinated atrazine residues includes parent compound and the following metabolites of health concern: 2-chloro-4-amino-6-isopropylamino-s-triazine (formerly deethylatrazine), 2-chloro-4-amino-6-ethylamino-s-triazine (formerly deisopropylatrazine) and 2-chloro-4,6-diamino-s-triazine (formerly diaminoatrazine).

³ Total coliform bacteria may not be present in any 100 ml sample using either the membrane filter (MF) technique, the presence-absence (P-A) coliform test, the minimal medium ONPG-MUG (MMO-MUG) test or not present in any 10 ml portion of the 10-tube multiple tube fermentation (MTF) technique.

⁴ Xylene includes meta-, ortho-, and para-xylene combined. The preventive action limit has been set at a concentration that is intended to address taste and odor concerns associated with this substance.

SECTION 2. Appendix 1 to Table 1 is amended to read:

**APPENDIX TO TABLE 1
PUBLIC HEALTH GROUNDWATER QUALITY STANDARDS**

Substance	CAS RN¹	Common synonyms/Trade name²
Acetone	67-64-1	<i>Propanone</i>
Alachlor	15972-60-8	<i>Lasso</i>
Aldicarb	116-06-3	<i>Temik</i>
Anthracene	120-12-7	Para-naphthalene
Asbestos	12001-29-5	
Bentazon	25057-89-0	<i>Basagran</i>
Benzene	71-43-2	

Benzo(b)fluoranthene	205-99-2	B(b)F,3,4-Benzofluoranthene
Benzo(a)pyrene	50-32-8	BaP, B(a)P
Boron	7440-42-8	
Bromodichloromethane	75-27-4	Dichlorobromomethane, BDCM
Bromoform	75-25-2	Tribromomethane
Bromomethane	74-83-9	Methyl bromide
Butylate	2008-41-5	<u>S-ethyl di-isobutylthiocarbamate,</u>
		<u>Sutan+</u>
Carbaryl	63-25-2	Sevin
Carbofuran	1563-66-2	Furadan
Carbon disulfide	75-15-0	Carbon bisulfide
Carbon tetrachloride	56-23-5	Tetrachloromethane, Perchloroethane
Chloramben	133-90-4	
Chlordane	57-74-9	
Chloroethane	75-00-3	Ethyl chloride, Monochloroethane
Chloroform	67-66-3	Trichloromethane
Chloromethane	74-87-3	Methyl chloride
Chrysene	218-01-9	1,2-Benzphenanthrene
Cobalt	7440-48-4	
Cyanazine	21725-46-2	Bladex , 2-chloro-4-ethylamino-6-nitriloisopropylamino-s-triazine
Cyanide	57-12-5	
Dacthal	1861-32-1	DPCA, Chlorothal, <u>Dacthalor,</u>
		<u>1,4-benzenedicarboxylic acid</u>
Dibromochloromethane	124-48-1	Chlorodibromomethane, DBCM
1,2-Dibromo-3-chloropropane	96-12-8	DBCP, Dibromochloropropane
1,2-Dibromoethane	106-93-4	EDB, Ethylene dibromide, Dibromoethane
Dibutyl phthalate	84-74-2	DP, Di-n-butyl phthalate, n-Butyl phthalate
Dicamba	1918-00-9	Banvel
1,2-Dichlorobenzene	95-50-1	o-Dichlorobenzene, o-DCB
1,3-Dichlorobenzene	541-73-1	m-Dichlorobenzene, m-DCB
1,4-Dichlorobenzene	106-46-7	p-Dichlorobenzene, p-DCB
Dichlorodifluoromethane	75-71-8	Freon 12
1,1,-Dichloroethane	75-34-3	Ethylidene chloride
1,2-Dichloroethane	107-06-2	1,2-DCA, Ethylene dichloride
1,1-Dichloroethylene	75-35-4	1,1-DCE, 1,1-Dichloroethene, Vinylidene chloride
1,2-Dichloroethylene (cis)	156-59-2	cis-Dichloroethylene, 1,2-Dichloroethene (cis)
1,2-Dichloroethylene (trans)	156-60-5	trans-1,2-Dichloroethylene
2,4-Dichlorophenoxyacetic acid	94-75-7	2,4-D
1,2-Dichloropropane	78-87-5	Propylene dichloride
1,3-Dichloropropene (cis/trans) ³		Telone, DCP, Dichloropropylene
Di(2-ethylhexyl) phthalate	117-81-7	DEHP, Bis(2-ethylhexyl) phthalate, 1,2-Benzenedicarboxylic acid, Bis (2-ethylhexyl)ester
Dimethoate	60-51-5	
2,4-Dinitrotoluene	121-14-2	2,4-DNT, 1-methyl-2,4-dinitrobenzene
2,6-Dinitrotoluene	606-20-2	2,6-DNT, 2-methyl-1,3-dinitrobenzene
Dinoseb	88-85-7	2-(1-methylpropyl)-4,6-dinitrophenol
Dioxin	1746-01-6	2,3,7,8-TCDD,2,3,7,8-Tetrachlorodibenzo-p-dioxin
Endrin	72-20-8	
EPTC	759-94-4	Eptam, Eradicane
Ethylbenzene	100-41-4	Phenylethane, EB
Ethylene glycol	107-21-1	
Fluoranthene	206-44-0	Benzo(jk)fluorene
Fluorene	86-73-7	2,3-Benzidine, Diphenylenemethane
Fluoride	16984-48-8	
Fluorotrichloromethane	75-69-4	Freon11, Trichlorofluoromethane

Formaldehyde	50-00-0	
Heptachlor	76-44-8	<i>Velsicol</i>
Heptachlor epoxide	1024-57-3	
Hexachlorobenzene	118-74-1	Perchlorobenzene, <i>Granox</i>
N-Hexane	110-54-3	Hexane, Skellysolve B
Hydrogen sulfide	7783-06-4	Dihydrogen sulfide
Lindane	58-89-9	
Mercury	7439-97-6	
Methanol	67-56-1	Methyl alcohol, Wood alcohol
Methoxychlor	72-43-5	
Methylene chloride	75-09-2	Dichloromethane, Methylene dichloride
Methyl ethyl ketone	78-93-3	MEK, 2-Butanone
Methyl isobutyl ketone	108-10-1	MIBK, 4-Methyl-2-pentanone, Isopropyl acetone, <i>Hexone</i>
Methyl tert-butyl ether	1634-04-4	MTBE, 2-Methoxy-2-methyl-propane, tert- Butyl methyl ether <i>Dual, Bicep, Milocep</i>
Metolachlor	51218-45-2	Sencor, Lexone
Metribuzin	21087-64-9	
<u>Molybdenum</u>	<u>7439-98-7</u>	
Monochlorobenzene	108-90-7	Chlorobenzene
Naphthalene	91-20-3	
N-Nitrosodiphenylamine	86-30-6	NDPA
Pentachlorophenol	87-86-5	PCP, Pentachlorohydroxybenzene
Phenol	108-95-2	
Picloram	1918-02-1	<i>Tordon</i> , 4-amino-3,5,6-trichloropicolinic acid
Polychlorinated biphenyls ⁴		PCBs
Prometon	1610-18-0	<i>Pramitol, Prometone</i>
Pyrene	129-00-0	Benzo(def)phenanthrene
Pyridine	110-86-1	Azabenzene
Simazine	122-34-9	<i>Princep</i> , 2-chloro-4,6-diethylamino- s- triazine
Styrene	100-42-5	Ethenylbenzene, Vinylbenzene
1,1,1,2-Tetrachlorethane	630-20-6	1,1,1,2-TCA
1,1,2,2-Tetrachloroethane	79-34-5	1,1,2,2-TCA
Tetrachloroethylene	127-18-4	Perchloroethylene, PERC, Tetrachloroethene
Tetrahydrofuran	109-99-9	THF
Toluene	108-88-3	Methylbenzene
Toxaphene	8001-35-2	
1,2,4-Trichlorobenzene	120-82-1	
1,1,1-Trichloroethane	71-55-6	Methyl chloroform
1,1,2-Trichloroethane	79-00-5	1,1,2-TCA, Vinyl trichloride
Trichloroethylene	79-01-6	TCE, Chloroethene
2,4,5-Trichlorophenoxy - propionic acid	93-72-1	2,4,5-TP, <i>Silvex</i>
1,2,3-Trichloropropane	96-18-4	1,2,3-TCP, Glycerol trichlorohydrin
Trifluralin	1582-09-8	<i>Treflan</i>
1,2,4-Trimethylbenzene	95-63-6	
1,3,5-Trimethylbenzene	108-67-8	
Vanadium	7440-62-2	
Vinyl chloride	75-01-4	VC, Chloroethene
Xylene ⁵		

¹Chemical Abstracts Service (CAS) registry numbers are unique numbers assigned to a chemical substance. The CAS registry numbers were published by the U.S. Environmental Protection Agency in 40 CFR Part 264, Appendix IV.

²Common synonyms include those widely used in government regulations, scientific publications, commerce and the general public. A trade name, also known as the proprietary name, is the specific, registered name given by a manufacturer to a product. Trade names are listed in italics. Common synonyms and trade names should be cross-referenced with CAS registry number to ensure the correct substance is identified.

³This is a combined chemical substance which includes cis 1,3-Dichloropropene (CAS RN 10061-01-5) and trans 1,3-Dichloropropene (CAS RN 10061-02-6).

⁴Polychlorinated biphenyls (CAS RN 1336-36-3); this category contains congener chemicals (same molecular composition, different molecular structure and formula), including constituents of Aroclor-1016 (CAS RN 12674-11-2), Aroclor-1221 (CAS RN 11104-28-2), Aroclor-1232 (CAS RN 11141-16-5), Aroclor-1242 (CAS RN 53469-21-9), Aroclor-1248 (CAS RN 12672-29-6), Aroclor-1254 (CAS RN 11097-69-1), and Aroclor-1260 (CAS RN 11096-82-5).

⁵Xylene (CAS RN 1330-20-7) refers to a mixture of three isomers, meta-xylene (CAS RN 108-38-3), ortho-xylene (CAS RN 95-47-6), and para-xylene (CAS RN 106-42-3).

The foregoing rules were approved and adopted by the State of Wisconsin Natural Resources Board on September 28, 2005 and June 28, 2006.

The rules shall take effect on the first day of the month following publication in the Wisconsin administrative register as provided in s. 227.22(2)(intro.), Stats.

Dated at Madison, Wisconsin _____

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

By _____
Scott Hassett, Secretary

(SEAL)