



WISCONSIN LEGISLATIVE COUNCIL RULES CLEARINGHOUSE

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CLEARINGHOUSE REPORT TO AGENCY

[THIS REPORT HAS BEEN PREPARED PURSUANT TO S. 227.15, STATS. THIS IS A REPORT ON A RULE AS ORIGINALLY PROPOSED BY THE AGENCY; THE REPORT MAY NOT REFLECT THE FINAL CONTENT OF THE RULE IN FINAL DRAFT FORM AS IT WILL BE SUBMITTED TO THE LEGISLATURE. THIS REPORT CONSTITUTES A REVIEW OF, BUT NOT APPROVAL OR DISAPPROVAL OF, THE SUBSTANTIVE CONTENT AND TECHNICAL ACCURACY OF THE RULE.]

CLEARINGHOUSE RULE **02-095**

AN ORDER to amend NR 140.10 Table 1 and Appendix 1, relating to groundwater quality standards.

Submitted by **DEPARTMENT OF NATURAL RESOURCES**

07-08-2002 RECEIVED BY LEGISLATIVE COUNCIL.

07-19-2002 REPORT SENT TO AGENCY.

RS:MCP

LEGISLATIVE COUNCIL RULES CLEARINGHOUSE REPORT

This rule has been reviewed by the Rules Clearinghouse. Based on that review, comments are reported as noted below:

1. STATUTORY AUTHORITY [s. 227.15 (2) (a)]

Comment Attached YES NO

2. FORM, STYLE AND PLACEMENT IN ADMINISTRATIVE CODE [s. 227.15 (2) (c)]

Comment Attached YES NO

3. CONFLICT WITH OR DUPLICATION OF EXISTING RULES [s. 227.15 (2) (d)]

Comment Attached YES NO

4. ADEQUACY OF REFERENCES TO RELATED STATUTES, RULES AND FORMS
[s. 227.15 (2) (e)]

Comment Attached YES NO

5. CLARITY, GRAMMAR, PUNCTUATION AND USE OF PLAIN LANGUAGE [s. 227.15 (2) (f)]

Comment Attached YES NO

6. POTENTIAL CONFLICTS WITH, AND COMPARABILITY TO, RELATED FEDERAL
REGULATIONS [s. 227.15 (2) (g)]

Comment Attached YES NO

7. COMPLIANCE WITH PERMIT ACTION DEADLINE REQUIREMENTS [s. 227.15 (2) (h)]

Comment Attached YES NO



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CLEARINGHOUSE RULE 02-095

Comments

[NOTE: All citations to “Manual” in the comments below are to the Administrative Rules Procedures Manual, prepared by the Revisor of Statutes Bureau and the Legislative Council Staff, dated September 1998.]

2. Form, Style and Placement in Administrative Code

The superscript numbers for several of the notes after s. NR 140.10, Table 1, are changed by the rule. For clarity, the existing numbers should be shown with a strike-through.

Report to
Legislative Council Rules Clearinghouse
NR 140.10, Wis. Adm. Code
Natural Resources Board Order No. DG-37-02

Wisconsin Statutory Authority

ss. 281.12(1), 281.15, 281.19(1) and 299.11, Stats., and ch. 160, Stats., interpreting ss. 281.12(1), 281.15, 181.19(1) and 299.11, Stats., and ch. 160, Stats.

Federal Authority

N/A

Court Decisions Directly Relevant

None

Analysis of the Rule - Rule Effect - Reason for the Rule

Chapter 160, Stats., requires the Department to develop numerical groundwater quality standards, consisting of enforcement standards and preventive action limits. Chapter NR 140 establishes groundwater standards and creates a framework for implementation of the standards by the Department. The proposed amendments are based on recommendations from the Department of Health and Family Services. New public health related groundwater quality standards are proposed for Alachlor ethane sulfonic acid (Alachlor ESA) and molybdenum. Revised public health related groundwater quality standards are proposed for Butylate, Dacthal and Naphthalene.

Alachlor ESA is a metabolite of the broadleaf herbicide Alachlor, used in Wisconsin on corn and soybeans. Alachlor ESA was found in 28% of the private water supply systems sampled in a 2000 Wisconsin survey, and in a significantly high percentage of private systems in other surveys done in the state. Molybdenum is a metallic element used in the manufacture of steel alloys and in a variety of other industrial processes. In a survey of groundwater monitoring results from the Wisconsin Groundwater Retrieval Network, molybdenum was detected in 45% of potable wells sampled for the substance.

Butylate is a herbicide used in Wisconsin on corn. Dacthal is a herbicide used primarily in Wisconsin on strawberries. Naphthalene is a volatile organic compound that is a constituent of coal tar and petroleum products, and is also used as a wood preservative and in making moth repellent.

Agency Procedures for Promulgation

Public hearings, Natural Resources Board final adoption, followed by legislative review.

Description of any Forms (attach copies if available)

None

Name and Telephone Number of Agency Liaisons

Bill Phelps, Bureau of Drinking Water and Groundwater – 267-7619
Mike Scott, Bureau of Legal Services – 266-7527
Carol Turner, Bureau of Legal Services - 266-1959

Submitted on July 8, 2002

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

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

DG-37-02

Analysis Prepared by the Department of Natural Resources

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

Statutes interpreted: ss. 281.12(1), 281.15, 281.19(1) and 299.11, Stats., and ch. 160, Stats.

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 2 additional substances and revise existing groundwater quality standards for 3 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 Alachlor ethane sulfonic acid (Alachlor ESA) and Molybdenum. Revised public health related groundwater quality standards are proposed for Butylate, Dacthal and Naphthalene.

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
<u>Alachlor ethane sulfonic acid (Alachlor ESA)²</u>	<u>20</u>	<u>4</u>
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	<u>67 400</u>	<u>6.7 80</u>
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	<u>4 mg/4 70</u>	<u>0.8 mg/4 14</u>
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
Methoxychlor	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	480	96
(1,2,4- and 1,3,5- combined)		
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.

²Synonyms for the ethane sulfonic acid metabolite of Alachlor (Alachlor ESA) include: MON 5775; 2',6'-diethyl-N-methoxymethyl-2-sulfoacetanilide, sodium salt and 2-[2,6-diethylphenyl(methoxymethyl) amino]-2-oxoethane sulfonic acid, sodium salt.

³ 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).

⁴ 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.

⁵Xylene 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 RN ¹	Common synonyms/Tradename ²
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	<i>Sevin</i>
Carbofuran	1563-66-2	<i>Furadan</i>
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	<i>Bladex</i> , 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	<i>Banvel</i>
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	<i>Freon 12</i>
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

1,2-Dichloroethylene (cis)	156-59-2
1,2-Dichloroethylene (trans)	156-60-5
2,4-Dichlorophenoxyacetic acid	94-75-7
1,2-Dichloropropane	78-87-5
1,3-Dichloropropene (cis/trans) ³	
Di(2-ethylhexyl) phthalate	117-81-7
Dimethoate	60-51-5
2,4-Dinitrotoluene	121-14-2
2,6-Dinitrotoluene	606-20-2
Dinoseb	88-85-7
Dioxin	1746-01-6
Endrin	72-20-8
EPTC	759-94-4
Ethylbenzene	100-41-4
Ethylene glycol	107-21-1
Fluoranthene	206-44-0
Fluorene	86-73-7
Fluoride	16984-48-8
Fluorotrichloromethane	75-69-4
Formaldehyde	50-00-0
Heptachlor	76-44-8
Heptachlor epoxide	1024-57-3
Hexachlorobenzene	118-74-1
N-Hexane	110-54-3
Hydrogen sulfide	7783-06-4
Lindane	58-89-9
Mercury	7439-97-6
Methanol	67-56-1
Methoxychlor	72-43-5
Methylene chloride	75-09-2
Methyl ethyl ketone	78-93-3
Methyl isobutyl ketone	108-10-1
Methyl tert-butyl ether	1634-04-4
Metolachlor	51218-45-2
Metribuzin	21087-64-9
<u>Molybdenum</u>	<u>7439-98-7</u>
Monochlorobenzene	108-90-7
Naphthalene	91-20-3
N-Nitrosodiphenylamine	86-30-6
Pentachlorophenol	87-86-5
Phenol	108-95-2
Picloram	1918-02-1
Polychlorinated biphenyls ⁴	
Prometon	1610-18-0
Pyrene	129-00-0
Pyridine	110-86-1
Simazine	122-34-9
Styrene	100-42-5
1,1,1,2-Tetrachlorethane	630-20-6
1,1,2,2,-Tetrachloroethane	79-34-5
Tetrachloroethylene	127-18-4
Tetrahydrofuran	109-99-9

chloride
cis-Dichloroethylene, 1,2-Dichloroethene
(cis)
trans-1,2-Dichloroethylene
2,4-D
Propylene dichloride
Telone, DCP, Dichloropropylene

DEHP, Bis(2-ethylhexyl) phthalate, 1,2-Benzenedicarboxylic acid, Bis (2-ethylhexyl)ester

2,4-DNT, 1-methyl-2,4-dinitrobenzene
2,6-DNT, 2-methyl-1,3-dinitrobenzene
2-(1-methylpropyl)-4,6-dinitrophenol
2,3,7,8-TCDD, 2,3,7,8-Tetrachlorodibenzo-p-dioxin

Eptam, *Eradicane*
Phenylethane, EB

Benzo(jk)fluorene
2,3-Benzidine, Diphenylenemethane

Freon 11, Trichlorofluoromethane

Velsicol

Perchlorobenzene, *Granox*
Hexane, Skellysolve B
Dihydrogen sulfide

Methyl alcohol, Wood alcohol

Dichloromethane, Methylene dichloride
MEK, 2-Butanone
MIBK, 4-Methyl-2-pentanone,
Isopropylacetone, *Hexone*
MTBE, 2-Methoxy-2-methyl-propane, tert-Butyl methyl ether
Dual, *Bicep*, *Milocep*
Sencor, Lexone

Chlorobenzene

NDPA
PCP, Pentachlorohydroxybenzene

Tordon, 4-amino-3,5,6-trichloropicolinic acid
PCBs
Pramitol, *Prometone*
Benzo(def)phenanthrene
Azabenzene
Princep, 2-chloro-4,6-diethylamino- s-triazine
Ethenylbenzene, Vinylbenzene
1,1,1,2-TCA
1,1,2,2-TCA
Perchloroethylene, PERC, Tetrachloroethene
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 _____.

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 _____
Darrell Bazzell, Secretary

(SEAL)