



CR 91-4

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

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STATE OF WISCONSIN)
)
DEPARTMENT OF NATURAL RESOURCES) ss

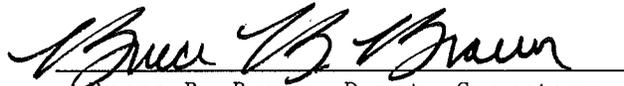
TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETINGS:

I, Bruce B. Braun, Deputy Secretary of the Department of Natural Resources and custodian of the official records of said Department, do hereby certify that the annexed copy of Natural Resources Board Order No. WR-1-91 was duly approved and adopted by this Department on August 29, 1991. I further certify that said copy has been compared by me with the original on file in this Department and that the same is a true copy thereof, and of the whole of such original.

IN TESTIMONY WHEREOF, I have here-
unto set my hand and affixed the
official seal of the Department at
the Natural Resources Building in
the City of Madison, this 1st
day of November, 1991

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Bruce B. Braun, Deputy Secretary

(SEAL)

2-1-92

ORDER OF THE STATE OF WISCONSIN NATURAL RESOURCES BOARD
REPEALING, RENUMBERING AND AMENDING, AMENDING AND CREATING RULES

.....
IN THE MATTER of repealing s. NR 140.26(6); .
renumbering and amending s. NR 140.24(7); .
amending ss. NR 140.10 Table 1, 140.22(4), .
(5) Table 4, 140.24(1)(intro.), (a), (b), .
(c)(intro.), 5. and 10., (2)(intro), .
(5)(intro.), 140.26(1)(intro.), (a), (b) and .
(2), and 140.28(1)(b); and creating ss. .
NR 140.02, 140.24(3)(title), (4)(title), .
(6)(title), 140.26(3)(title), (4)(title), and .
(5)(title) of the Wisconsin Administrative Code .
pertaining to groundwater quality standards. .

WR-1-91

.....
Analysis Prepared by the Department of Natural Resources

Statutory authority: ss. 144.025(2) and 227.11(2)(a) and ch. 160, Stats.

Statutes interpreted: s. 144.025(2) 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 enforcement standards and preventive action limits for 12 additional substances and modify the enforcement standard and preventive action limit for simazine and atrazine based on recommendations from the Department of Health and Social Services. The atrazine standards will be for total chlorinated atrazine residue, including metabolites, rather than parent compound. Groundwater standards are proposed for benzo(a)pyrene, bromoform, chloroethane, 1,2-dichloropropane, di(2-ethylhexyl) phthalate, 2,4-dinitrotoluene, 2,6-dinitrotoluene, methyl ethyl ketone, methyl tert-butyl ether, monochlorobenzene, naphthalene and phenol. Language is also proposed to clarify the Department's response to groundwater contamination.

SECTION 1. NR 140.02 is created to read:

NR 140.02 REGULATORY FRAMEWORK. (1) This chapter supplements the regulatory authority elsewhere in the statutes and administrative rules. The department will continue to exercise the powers and duties in those regulatory programs, consistent with the enforcement standards and preventive action limits for substances in groundwater under this chapter. This chapter provides guidelines and procedures for the exercise of regulatory authority which is established elsewhere in the statutes and administrative rules, and does not create independent regulatory authority.

(2) The department may adopt regulations which establish specific design and management criteria for regulated facilities or activities, if the regulations will ensure that the regulated facilities and activities will not cause the concentration of a substance in groundwater affected by the facilities or activities to exceed the enforcement standards and preventive action limits under this chapter at a point of standards application. The department may adopt more stringent regulations under authority elsewhere in the statutes based on the best currently available technology for regulated activities and practices which ensure a greater degree of groundwater protection or when necessary to comply with state or federal laws.

(3) Preventive action limits serve to inform the department of potential groundwater contamination problems, establish the level of groundwater contamination at which the department is required to commence efforts to control the contamination and provide a basis for design and management practice criteria in administrative rules. Preventive action limits are applicable both to controlling new releases of contamination as well as to restoring groundwater quality contaminated by past releases of contaminants. Although a preventive action limit is not intended to always require remedial action, activities affecting groundwater must be regulated to minimize the level of substances to the extent technically and economically feasible, and to maintain compliance with the preventive action limits unless compliance with the preventive action limits is not technically and economically feasible.

SECTION 2. NR 140.10, Table 1 is amended to read:

Table 1

Public Health Groundwater Quality Standards

<u>Substance</u>	<u>Enforcement Standard</u> (micrograms per liter- except as noted)	<u>Preventive Action</u> <u>Limit</u> (micrograms per liter- except as noted)
Alachlor	0.5	0.05
Aldicarb	10	2
Arsenic	50	5
Atrazine	3.5	0.35
<u>Atrazine, total chlorinated residue</u>	<u>3¹</u>	<u>.3¹</u>
Bacteria, Total Coliform	Less than one in 100 ml for membrane filter method or not present in any 10 ml portion by fermentation tube method for both preventive action limit and enforcement standard	
Barium	1 milligram/liter (mg/l)	.2mg/l
Benzene	5	.067
<u>Benzo(a)pyrene</u>	<u>0.003</u>	<u>0.0003</u>
Bromodichloromethane	179	36
<u>Bromoform</u>	<u>4.4</u>	<u>0.44</u>
Butylate	67	6.7
Cadmium	10	1
Carbaryl	960	192
Carbofuran	50	10

Carbon Tetrachloride	5	.5
Chloramben	150	30
<u>Chloroethane</u>	<u>400</u>	<u>80</u>
Chloroform	6	.6
Chromium	50	5
Cyanazine	12.5	1.25
Cyanide	200	40
Dibromochloromethane	215	43
1,2-Dibromoethane (EDB)	.01	.001
1,2-Dibromo-3-chloropropane (DBCP)	.05	.005
Dicamba	300	60
1,2-Dichlorobenzene	1250	125
1,3-Dichlorobenzene	1250	125
p-Dichlorobenzene (1,4-Dichlorobenzene)	75	15
1,1-Dichloroethane	850	85
1,2-Dichloroethane	5	.05
1,1-Dichloroethylene	7	.024
1,2-Dichloroethylene (cis)	100	10
1,2-Dichloroethylene (trans)	100	20
2,4-Dichlorophenoxyacetic Acid	100	20
<u>1,2-Dichloropropane</u>	<u>5</u>	<u>0.5</u>
<u>Di(2-ethylhexyl) phthalate</u>	<u>3</u>	<u>0.3</u>
Dimethoate	2	.4
<u>2,4-Dinitrotoluene</u>	<u>0.05</u>	<u>0.005</u>

<u>2,6-Dinitrotoluene</u>	<u>0.05</u>	<u>0.005</u>
Dinoseb	13	2.6
Dioxin (2,3,7,8-TCDD)	0.00000022	0.000000022
Endrin	.2	.02
EPTC (Eptam)	250	50
Ethylbenzene	1360	272
Fluoride	4 mg/l	.44 mg/l
Fluorotrichloromethane (Freon-11)	3490	698
Lead	50	5
Lindane	.02	.002
Mercury	2	0.2
Methoxychlor	100	20
Methylene Chloride (Dichloromethane)	150	15
<u>Methyl ethyl ketone</u>	<u>460</u>	<u>90</u>
<u>Methyl tert-butyl ether (MTBE)</u>	<u>60</u>	<u>12</u>
Metolachlor	15	1.5
Metribuzin	250	50
<u>Monochlorobenzene</u>	<u>100</u>	<u>20</u>
<u>Naphthalene</u>	<u>40</u>	<u>8</u>
Nitrate + Nitrite (as N)	10 mg/l	2 mg/l
Pentachlorophenol	300	30
<u>Phenol</u>	<u>6 mg/l</u>	<u>1.2 mg/l</u>

Selenium	10	1
Silver	50	10
Simazine	2.15 mg/l <u>1.7</u>	.215 mg/l <u>0.17</u>
Tetrachloroethylene	1	.1
Tetrahydrofuran	50	10
Toluene	343	68.6
Toxaphene	.0007	.00007
1,1,1-Trichloroethane	200	40
1,1,2-Trichloroethane	.6	.06
Trichloroethylene	5	.18
2,4,5-Trichlorophenoxy- propionic Acid	10	2
Trifluralin	7.5	.75
Vinyl Chloride	.2	.0015
Xylene	620	124

¹Total chlorinated atrazine residue includes parent compound and the following metabolites of health concern: deethylatrazine, deisopropylatrazine and diaminoatrazine.

SECTION 3. NR 140.22(4) is amended to read:

NR 140.22(4) For spills and discharges regulated under s. 144.76, Stats., or s. NR ~~181.08~~ 600.07, the point of standards application shall be every point at which groundwater is monitored to determine if a preventive action limit or enforcement standard has been attained or exceeded.

SECTION 4. NR 140.22(5), Table 4 is amended to read:

Table 4

Type of Facility, Practice or Activity	Horizontal Distances for the Design Management Zone
Land disposal systems regulated under ch. 144 or 147, Stats.	250 feet
Wastewater and sludge storage or treatment lagoons regulated under ch. 144 or 147, Stats.	100 feet
Solid waste disposal facilities regulated under ss. 144.43 to 144.47, Stats., which have feasibility reports approved after October 1, 1985.	150 feet
All other solid waste disposal facilities regulated under ss. 144.43 to 144.47, Stats.	300 feet
Hazardous waste disposal facilities, waste piles, landfills and surface impoundments subject to regulation under s. NR 181.49(5) <u>635.16</u> .	300 feet
Hazardous waste disposal facilities, waste piles, landfills and surface impoundments subject to regulation under s. ss. NR 181.49(6) <u>635.05 to 635.15</u> .	0 feet

SECTION 5. NR 140.24(1)(intro.), (a) and (b) are amended to read:

NR 140.24 RESPONSES WHEN A PREVENTIVE ACTION LIMIT IS ATTAINED OR EXCEEDED. (1) (title) NOTIFICATION AND ASSESSMENT. (intro.) If the concentration of a substance, including indicator parameters, in groundwater attains or exceeds a preventive action limit at a point of standards application as described under s. NR 140.22:

(a) The owner or operator of a facility, practice or activity shall notify the department in writing when monitoring data is submitted that a preventive action limit has been attained or exceeded in accordance with any deadlines in applicable statutes, rules, permits or plan approvals. Where no deadlines are imposed, the owner or operator shall notify the department as soon as practical after the results are received.

The notification shall provide a preliminary analysis of the cause and significance of the concentration.

Note: Section 144.76(2)(a), Stats., requires that the department be notified immediately of hazardous substance discharges.

(b) Upon receipt of the notice under par. (a), the department shall evaluate the information and, if further information is required to make the assessment under par. (c), may direct the owner or operator to prepare and submit a report by a specified deadline. The report shall assess the cause and significance of the increased concentration based on a consideration of the factors identified in par. (c) and shall propose a response to meet the objectives of sub. (2).

SECTION 6. NR 140.24(1)(c)(intro.), 5. and 10. are amended to read:

NR 140.24(1)(c)(intro.) The department shall assess the cause and significance of the concentration of the substance in determining the appropriate response measures to meet the objectives of sub. (2). ~~If a preventive action limit is attained or exceeded at a monitoring point within the design management zone, the department shall evaluate the location of the monitoring point, specific characteristics of the site, the nature of the substance involved and the likelihood of substance migration in assessing the need for response activities under sub. (2).~~ In addition to all other relevant information, the department shall consider the information submitted under ~~sub. (1) par. (b)~~ and the following factors where applicable:

5. Performance of the facility, practice or activity. The department shall consider whether the facility, practice or activity is performing as designed in accordance with the design requirements in s. NR 140.22(1). The department shall consider the type, age and size of the facility, practice or activity; the type of design, if applicable; the operational history; and other factors related to performance of the facility, practice or activity as appropriate.

10. Alternate responses. The department shall evaluate alternate responses, including consideration of the technical and economic feasibility of alternate ~~methods of disposal responses~~ from Table 5 or 6 or both, the practicality of stopping the further release of the substance and the risks and benefits of continued operation of the facility, practice or activity and the ability of a response to meet other applicable environmental protection laws.

SECTION 7. NR 140.24(2)(intro.) is amended to read:

NR 140.24(2)(title) RESPONSE OBJECTIVES. Based on ~~the~~ its evaluation of the report required under sub. (1), and the ~~factors~~ in assessment criteria of sub. (1)(c), the department shall specify the responses to be implemented by the owner or operator of the facility, practice or activity designed to the extent technically and economically feasible to prevent any new releases of the substance from traveling beyond the design management zone or other applicable points of standards application described in s. NR 140.22 and restore contaminated groundwater within a reasonable period of time. Both the source control and the groundwater restoration components of the response shall be designed to:

SECTION 8. NR 140.24(3)(title) and (4)(title) are created to read:

NR 140.24(3)(title) RANGE OF RESPONSES FOR INDICATOR PARAMETERS.

NR 140.24(4)(title) RANGE OF RESPONSES FOR SUBSTANCES OF PUBLIC HEALTH OR WELFARE CONCERN.

SECTION 9. NR 140.24(5)(intro.) is amended to read:

NR 140.24(5)(title) NO ACTION RESPONSE CRITERIA. The department may determine that no response is necessary and that an exemption under s. NR 140.28 is not required when either of the following conditions is met:

SECTION 10. NR 140.24(6)(title) is created to read:

NR 140.24(6)(title) PROHIBITION AND CLOSURE CRITERIA.

SECTION 11. NR 140.24(7) is renumbered NR 140.02(4) and as renumbered is amended to read:

NR 140.02(4) The department may take any actions within the context of regulatory programs established in statutes or rules outside of this chapter, if those actions are necessary to protect public health and welfare or prevent a significant damaging effect on groundwater or surface water quality for present or future consumptive or nonconsumptive uses, whether or not an enforcement standard and preventive action limit for a substance have been adopted under this chapter. Nothing in this chapter authorizes an impact on groundwater quality which would cause surface water quality standards contained in chs. NR 102 to ~~104~~ 105 to be attained or exceeded.

SECTION 12. NR 140.26(1)(intro.), (a) and (b) are amended to read:

NR 140.26 RESPONSES WHEN AN ENFORCEMENT STANDARD IS ATTAINED OR EXCEEDED. (1)(title) NOTIFICATION AND ASSESSMENT. If the concentration of a substance in groundwater attains or exceeds an enforcement standard at a point of standards application as described under s. NR 140.22:

(a) The owner or operator of a facility, practice or activity shall notify the department in writing when monitoring data is submitted that an enforcement standard has been attained or exceeded in accordance with any deadlines in applicable statutes, rules, permit permits or plan approval approvals. Where no deadlines are imposed, the owner or operator shall notify the department as soon as practical after the results are received. The notification shall provide a preliminary analysis of the cause and significance of the concentration.

Note: Section 144.76(2)(a), Stats., requires that the department be notified immediately of hazardous substance discharges.

(b) Upon receipt of the notice under par. (a), the department shall evaluate the information and, if further information is required to make the assessment under par. (c), may direct the owner or operator to prepare and submit a report by a specified deadline. The report shall assess the cause and significance of the increased concentration based on a consideration of the factors identified in s. NR 140.24(1)(c) and shall propose a response to achieve compliance with the enforcement standard at the point of standards application and to comply with sub. (5).

SECTION 13. NR 140.26(2) is amended to read:

NR 140.26(2)(title) REGULATORY RESPONSES. Based on the evaluation of the increased concentration as outlined in sub. (1), the department shall require responses as necessary to prevent any new releases of the substance from traveling beyond the design management zone or other applicable point of standards application described in s. NR 140.22 and restore contaminated groundwater within a reasonable period of time. Both the source control and the groundwater restoration components of the response shall be designed to achieve compliance with the enforcement standard at the point of standards application and to ~~comply with sub. (5)~~ achieve compliance with the preventive action limit at the point of standards application unless not technically and economically feasible. The range of responses which the department may take or require if an enforcement standard for a substance of public health or welfare concern has been attained or exceeded at a point of standards application are

listed in Table 6. More than one response may be required by the department. In addition, the department may require one or more responses from Table 5, except number one.

SECTION 14. NR 140.26(3)(title), (4)(title) and (5)(title) are created to read:

NR 140.26(3)(title) NONREGULATORY RESPONSES.

NR 140.26(4)(title) RESPONSES FOR NITRATE AND SUBSTANCES OF PUBLIC WELFARE CONCERN.

NR 140.26(5)(title) COMPLIANCE WITH PREVENTIVE ACTION LIMITS.

SECTION 15. NR 140.26(6) is repealed.

SECTION 16. NR 140.28(1)(b) is amended to read:

NR 140.28(1)(b) ~~Remedial action~~ A response is required under s. NR 140.24(2) or 140.26(2) when a preventive action limit or an enforcement standard has been attained or exceeded at a point of standards application unless an exemption has been granted under this section or the criteria of s. NR 140.24(5)(a) or (b) are met.

The foregoing rules were approved and adopted by the State of Wisconsin Natural Resources Board on August 29, 1991.

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

November 1, 1991

STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES

By

Carroll D. Besadny

Carroll D. Besadny, Secretary

(SEAL)



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Carroll D. Besadny
Secretary

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November 1, 1991

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NOV 6 1991

Revisor of Statutes
Bureau

Mr. Gary L. Poulson
Assistant Revisor of Statutes
119 Martin Luther King, Jr., Blvd.

Dear Mr. Poulson:

Enclosed are two copies, including one certified copy, of State of Wisconsin Natural Resources Board Order No. WR-1-91. These rules were reviewed by the Assembly Committee on Natural Resources and the Senate Committee on Urban Affairs, Environmental Resources and Elections pursuant to s. 227.19, Stats. Summaries of the final regulatory flexibility analysis and comments of the legislative review committees are also enclosed.

You will note that this order takes effect following publication. Kindly publish it in the Administrative Code accordingly.

Sincerely,

C. D. Besadny
Secretary

Enc.