96-078

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

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STATE OF WISCONSIN)
) ss
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TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETINGS:

I, George E. Meyer, 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. WW-20-96 was duly approved and adopted by this Department on October 23, 1996. 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 hereunto set my hand and affixed the official seal of the Department at the Natural Resources Building in the City of Madison, this 12th day of December, 1996

George E. Meyer

George E. Meyer, Secretary

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4-1-97

ORDER OF THE STATE OF WISCONSIN NATURAL RESOURCES BOARD
CREATING RULES

The Wisconsin Natural Resources Board proposes an order to create NR 233 relating to the regulation of effluent limitations and pretreatment standards for the pesticide chemicals industry.

WW-20-96

Analysis Prepared by the Department of Natural Resources

Statutory authority: ss. 147.035(1), 147.06(1), 147.07(1), and 227.11(2)(a), Stats.

Statutes interpreted: ss. 147.035, 147.04, 147.06, and 147.07, Stats.

The Federal Water Pollution Control Act amendments of 1972 established a comprehensive program to "restore and maintain the chemical, physical and biological integrity of the Nation's waters" (section 101(a)). To implement the act, the U.S. Environmental Protection Agency issues effluent limitation guidelines, pretreatment standards, and new source performance standards for industrial wastewater discharges. The Clean Water Act of 1977 expanded the federal pollution control program by setting different types of effluent limitations: "best practicable technology" (BPT), "best available technology" (BAT), "best conventional technology" (BCT), "new source performance standards" (NSPS), "pretreatment standards for existing sources" (PSES), and "pretreatment standards for new sources" (PSNS). The Clean Water Act stressed control of toxic pollutants, including 65 "priority" pollutants and classes of pollutants in 21 major industries.

The Wisconsin Department of Natural Resources instituted the Wisconsin pollutant discharge elimination system in 1976. This system included regulation of effluent discharges from various industries. The Wisconsin Department of Natural Resources is promulgating ch. NR 233, Wis. Adm. Code, to regulate the pesticide chemicals industry. The provisions of this chapter are based upon the U.S. Environmental Agency's regulations in 40 C.F.R. Part 455.

The purpose of this rule is to specify effluent limitations for BPT, BCT, BAT, and NSPS for the direct discharge of pollutants to waters of the state and to establish pretreatment standards for the introduction of pollutants into publicly owned treatment works. The effect of the creation of ch. NR 233, Wis. Adm. Code, will be to establish state standards and limitations for industrial wastewater discharges from the pesticide chemicals industry, and new test procedures for the analysis of pesticide pollutants in the pesticide chemicals category. The Code will reflect changes made by the U.S. Environmental Protection Agency under authority of sections 301, 304, 306, 307, 308 and 501 of the Clean Water Act.

A pesticide, as defined by the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), includes "any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, and any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant." Under FIFRA all pesticides must be registered with EPA prior to shipment, delivery, or sale in the United States. A pesticide is a formulated product, a mixture of an "pesticide active ingredient" (PAI) and "inert" diluents, and each formulation has a distinct registration.

The pesticide chemicals manufacturing industry produces a wide variety of PAIs or classes of PAIs, that can be categorized into nine types: herbicides,

insecticides, rodenticides, fungicides, nematocides, miticides, disinfectants, defoliants, and synergists. The bulk of PAIs are herbicides or insecticides which are manufactured seasonally because they are used during the growing season. Other pesticide types, such as disinfectants, are produced according to individual facility manufacturing schedules.

There are two stages in the production of pesticides: the manufacture of a PAI, followed by the formulation and packaging of the PAI. A PAI is manufactured by the chemical reaction of two or more raw materials often in the presence of solvents, catalysts, and acidic or basic reagents. The raw materials may include any of a large number of organic and inorganic compounds. Pesticide active ingredients may also be used as raw materials in manufacturing derivative PAIs typically through the formation of various salts and esters. This regulation is intended to control the discharge of pollutants in wastewater generated during the manufacture of PAIs from raw materials. This regulation does not apply to the manufacture of chemical "intermediates" which are not pesticides, but which subsequently are converted to PAIs by further chemical reactions. The formulation of pesticides through the mixing, blending, or dilution of one or more PAIs, without an intended chemical reaction is distinct from pesticide manufacturing. The EPA will address the Pesticide Chemicals Formulating and Packaging subcategory at a later date.

The federal document forming the basis for 40 C.F.R. Part 455 and ch. NR 233 is the development document for effluent limitations guidelines, pretreatment standards, and new source performance standards for the pesticide chemicals manufacturing point source category (USEPA, Washington, D.C., EPA-821-R-93-016, September 1993). A copy of this document is available for inspection at the central office of the Wisconsin Department of Natural Resources, 101 South Webster Street, Madison, WI, and may be obtained from the National Technical Information Service (NTIS), Springfield, Virginia 22161, (703) 487-4600.

This rule is identical to 40 C.F.R. 455 for purposes of s. 227.14(1m)(a), Stats. However, changes have been made in the text of the federal regulation to make the rule useful to Wisconsin citizens, industry, and regulating authorities. These changes are consistent with the current state regulatory framework and reflect the conventions of state rule drafting.

Where possible, Wisconsin Administrative Code references were substituted in the text for references to the Code of Federal Regulations. Citations in the text to the Code of Federal Regulations may be cross-referenced to corresponding sections of the Wisconsin Administrative Code in the table which has been added at the end of the rule. Definitions for "existing source" and "new source" have been added to the general definitions section in the state rule. A purpose section and a compliance dates section also have been added.

SECTION 1. Chapter NR 233 is created to read:

Chapter NR 233
Pesticide Chemicals

Subchapter I - General Provisions

NR 233.01 PURPOSE. The purpose of this chapter is to establish effluent limitations, performance standards and pretreatment standards for discharges of process wastes from the pesticide chemicals point source category and its subcategories.

NR 233.02 APPLICABILITY. This chapter applies to any pesticide chemicals facility that discharges or may discharge a pollutant to waters of the state or that introduces or may introduce pollutants into a publicly owned treatment works.

NR 233.03 GENERAL DEFINITIONS. In addition to the definitions in ss. NR 205.03, 205.04 and 211.03, the following definitions apply to the terms used in this chapter:

(1) "Active ingredient" means an ingredient of a pesticide which is intended to prevent, destroy, repel or mitigate any pest.

(2) "Existing source" means any point source, except a new source as defined in sub. (3), from which pollutants are or may be discharged either to waters of the state or into a publicly owned treatment works.

(3) "New source" means any point source for which the commencement of construction occurred after April 10, 1992, and from which pollutants are or may be discharged either to waters of the state or into a publicly owned treatment works.

(4) "Pest" means:

(a) Any insect, rodent, nematode, fungus or weed.

(b) Any other form of terrestrial or aquatic plant or animal life.

(c) Any virus, bacteria or other micro-organism, except viruses, bacteria or other micro-organisms on or in living man or other living animals, which the administrator declares to be a pest under the Federal Insecticide, Fungicide and Rodenticide Act, 7 U.S.C. s. 136 et.seq.

(5) "Pesticide" means any substance or mixture of substances intended for preventing, destroying, repelling or mitigating any pest.

(6) "Pesticide chemicals" means the sum of all active ingredients manufactured at each facility covered by this chapter.

(7) "Priority pollutants" means the toxic pollutants listed in s. NR 215.03.

NR 233.04 COMPLIANCE DATES. (1) Any existing source subject to this chapter which discharges to waters of the state shall achieve:

(a) The effluent limitations representing BPT by July 1, 1977; and

(b) The effluent limitations representing BAT by July 1, 1984.

(2) Any new source subject to this chapter which discharges to waters of the state shall achieve NSPS at the commencement of discharge.

(3) Any existing source subject to this chapter which introduces process wastewater pollutants into a POTW shall achieve PSES by September 28, 1996.

(4) Any new source subject to this chapter which introduces process wastewater pollutants into a POTW shall achieve PSNS at the commencement of discharge.

SUBCHAPTER II - Organic Pesticide Chemicals Manufacturing Subcategory

NR 233.10 APPLICABILITY; DESCRIPTION OF THE ORGANIC PESTICIDE CHEMICALS MANUFACTURING SUBCATEGORY. (1) For the purpose of calculating and applying effluent limitations for COD, BOD_5, and TSS, and applying pH limits under BPT in s. NR 233.12, BCT in s. NR 233.13, and NSPS in s. NR 233.15:

(a) This subchapter applies to discharges resulting from the manufacture of organic pesticide active ingredients and organo-tin pesticide active ingredients except those listed in par. (b).

(b) This subchapter does not apply to the following:

Allethrin
Benzyl benzoate
Bisethlyxanthogen
Chlorophacinone
Coumafuryl
Dimethyl phthalate
Diphacinone
Endothall acid
EXD (Herbisan)
Gibberellic acid
Glyphosate
Naphthalene acetic acid
Propargite
1,8 Naphthalic anhydride
Quinmethionate
Rotenone
Sulfoxide
Triazine compounds, both symmetrical and asymmetrical
Warfarin and similar anticoagulants.

(c) The effluent limitations of this subchapter for BOD_5 and TSS, but not COD, apply to the manufacturers of the following:

Ametryn
Atrazine
Cyanazine
Glyphosate
Hexazinone
Prometon
Prometryn
Propazine
Simazine
Terbuthylazine
Terbutryn

(2) For the purpose of calculating BPT effluent limitations in s. NR 233.12 for organic pesticide chemicals, this subchapter applies to discharges resulting from the manufacture of the following organic active ingredients:

2,4-D
2,4,5-T
Aldrin
Aminocarb
Azinphos methyl
Barban
BHC
Captan
Carbaryl
Chlordane
Chlorpropham
Diazinon
DDD
DDE
DDT
Demeton-O
Demeton-S
Dicamba
Dichloran
Dicofol
Dieldrin
Disulfoton
Diuron
Endosulfan
Endrin
Fenuron
Fenuron-TCA
Heptachlor
Lindane
Linuron
Malathion
Methiocarb
Methoxychlor
Mexacarbate
Mirex
Monuron
Monuron-TCA
Neubron
Parathion ethyl
Parathion methyl
PCNB
Perthane
Propham
Propoxur
Siduron
Silvex
Swep
Toxaphene
Trifluralin

(3) This subchapter does not apply to the intermediates used to manufacture the active ingredients, and active ingredients used solely in experimental pesticides. BPT coverage in this subchapter does not apply to insecticidal pathogenic organisms such as bacillus thuringiensis, insect growth hormones, plant extracts such as pyrethrins, sex attractants and botanicals such as Rotenone.

(4) A plant that manufactures a pesticide active ingredient listed in Table 1 shall comply with the BAT effluent limitations, new source performance standards, and pretreatment standards both for that ingredient listed in Table 2 or Table 3, and for priority pollutants listed in Tables 4, 5 and 6. The limitations apply as follows:

(a) Table 4 - BAT and NSPS - applies to existing and new direct discharge point sources that use end-of-pipe biological treatment.

(b) Table 5 - BAT and NSPS - applies to existing and new direct discharge point sources that do not use end-of-pipe biological treatment.

(c) Table 6 - PSES and PSNS - applies to existing and new sources that discharge to POTWs.

(5) (a) The discharge quantity for lead and total cyanide shall be determined by multiplying the concentrations listed in the applicable tables times the flow from the non-complexed lead-bearing waste streams for lead and times the flow from non-complexed cyanide-bearing waste streams for total cyanide.

(b) This subchapter does not apply to discharges of cyanide in cyanide-bearing waste streams if:

1. The department or control authority determines that the cyanide limitations and standards are not achievable due to elevated levels of non-amenable cyanide, that is not oxidized by chlorine treatment, that result from the unavoidable complexing of cyanide at the process source of the cyanide-bearing waste stream and establishes an alternative total cyanide or amenable cyanide limitation that reflects the best available technology economically achievable.

2. The determination under subd. 1 shall be based upon a review of relevant engineering, production, and sampling and analysis information, including measurements of both total and amenable cyanide in the waste stream.

3. An analysis of the extent of complexing in the waste stream, based on the information in subds. 1 and 2, and its impact on cyanide treatability shall be set forth in writing and, for direct dischargers, be contained in the fact sheet required by 40 CFR 124.8.

NR 233.11 SPECIALIZED DEFINITIONS. The following definitions apply to the terms used in this subchapter:

(1) "Organic active ingredients" means carbon-containing active ingredients used in pesticides, excluding metallo-organic active ingredients.

(2) "Organic pesticide chemicals" means the sum of all organic active ingredients listed in s. NR 233.10 (2) which are manufactured at a facility subject to this subchapter.

(3) "Total organic active ingredients" means the sum of all organic active ingredients covered by s. NR 233.10 (1) which are manufactured at a facility subject to this subchapter.

(4) "Process wastewater flow"

(a) Means the sum of the average daily flow from the following wastewater streams:

Process stream and product washes
Equipment and floor washers
Water used as solvent for raw materials
Water used as reaction medium
Spent acids
Spent bases
Contact cooling water
Water of reaction
Air pollution control blowdown
Stream jet blowdown
Vacuum pump water
Pump seal water
Safety equipment cleaning water
Shipping container cleanout
Safety shower water
Contaminated storm water
Product/process laboratory quality control wastewater

(b) Does not mean wastewaters from the production of intermediate chemicals.

(5) "Process wastewater pollutants" means those pollutants present in process wastewater flow.

NR 233.12 EFFLUENT LIMITATIONS GUIDELINES REPRESENTING THE DEGREE OF EFFLUENT REDUCTION ATTAINABLE BY THE APPLICATION OF THE BEST PRACTICABLE CONTROL TECHNOLOGY CURRENTLY AVAILABLE (BPT). Except as provided in 40 CFR 125.30 to 125.32, any existing point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of BPT:

BPT Effluent Limitations

Effluent characteristics	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days may not exceed
COD	13.000	9.0000
BOD_5	7.400	1.6000
TSS	6.100	1.8000
Organic pesticide chemicals	.010	.0018
pH	[1]	[1]

[1] Within the range of 6.0 to 9.0.

Note: For COD, BOD_5 and TSS, metric units: Kilogram/1,000 kg of total organic active ingredients. English units: Pound/1,000 lb of total organic active ingredients.

For organic pesticide chemicals, metric units: Kilogram/1,000 kg of organic pesticide chemicals. English units: Pound/1,000 lb of organic pesticide chemicals.

NR 233.13 EFFLUENT LIMITATIONS GUIDELINES REPRESENTING THE DEGREE OF EFFLUENT REDUCTION ATTAINABLE BY THE APPLICATION OF THE BEST CONVENTIONAL POLLUTANT CONTROL TECHNOLOGY (BCT). Except as provided in 40 CFR 125.30 to 125.32, any existing point source subject to this subchapter shall achieve effluent limitations representing the degree of effluent reduction attainable by the application of BCT: The limitations for BOD_5, TSS, and pH are the same as those specified in the table in s. NR 233.12.

BCT Effluent Limitations

Pollutant or pollutant property	Maximum for any one day[2]	Average of daily values may not exceed[2]
BOD_5	7.400	1.6000
TSS	6.100	1.8000
pH	([1])	([1])

[1]Within the range 6.0 to 9.0
[2]Metric units: Kilogram pollutant/1,000 kg of total organic active ingredients. English units: Pound pollutant/1,000 lb of total organic active ingredients

NR 233.14 EFFLUENT LIMITATIONS GUIDELINES REPRESENTING THE DEGREE OF EFFLUENT REDUCTION ATTAINABLE BY THE APPLICATION OF THE BEST AVAILABLE CONTROL TECHNOLOGY ECONOMICALLY ACHIEVABLE (BAT). Except as provided in 40 CFR 125.30 tho 125.32, any existing point source subject to this subchapter shall achieve effluent limitations representing the degree of effluent reduction attainable by the application of BAT as specified in s. NR 233.10 (4). For the priority pollutants, sources shall achieve discharges not exceeding the quantity or mass determined by multiplying the process wastewater flow times the appropriate concentrations listed in Table 4 or Table 5.

NR 233.15 NEW SOURCE PERFORMANCE STANDARDS (NSPS). (1) Any new source subject to this subchapter which discharges process wastewater pollutants shall achieve the NSPS specified in s. NR 233.10 (4), and subject to s. NR 233.10 (1) shall meet the following standards for BOD_5, TSS, COD and pH:

New Source Performance Standards

Pollutant or pollutant property	Maximum for any one day[2]	Average of daily values may not exceed[2]
COD	9.360	6.480
BOD_5	5.328	1.1520
TSS	4.392	1.2960
pH	([1])	([1])

[1]Within the range 6.0 to 9.0
[2]Metric units: Kilogram pollutant /1,000 kg of total organic active ingredients. English units: Pound pollutant/1,000 lb of total organic active ingredients

(2) Any new source subject to this subchapter which discharges priority pollutants may not exceed the quantity or mass determined by multiplying the process wastewater flow times the appropriate concentrations listed in Table 4 or Table 5.

NR 233.16 PRETREATMENT STANDARDS FOR EXISTING SOURCES (PSES). Except as provided in s. NR 211.13, any existing source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve PSES as specified in s. NR 233.10 (4). For the priority pollutants, sources shall achieve discharges not exceeding the quantity or mass determined by multiplying the process wastewater flow subject to this subchapter times the concentrations listed in Table 6. If mass limitations have not been developed as required, the source shall achieve discharges not exceeding the concentration limitations listed in Table 6.

NR 233.17 PRETREATMENT STANDARDS FOR NEW SOURCES (PSNS). Except as provided in s. NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and shall achieve PSNS as specified in s. NR 233.10 (4). For the priority pollutants, sources shall achieve discharges not exceeding the quantity or mass determined by multiplying the process wastewater flow subject to this subchapter times the concentrations listed in Table 6. If mass limitations have not been developed as required, the source shall achieve discharges not exceeding the concentration limitations listed in Table 6.

Subchapter III - Metallo-Organic Pesticide Chemicals Manufacturing Subcategory

NR 233.20 APPLICABILITY; DESCRIPTION OF THE METALLO-ORGANIC PESTICIDES CHEMICALS MANUFACTURING SUBCATEGORY. This subchapter applies to discharges resulting from the manufacture of metallo-organic active ingredients containing mercury, cadmium, arsenic or copper. This subchapter does not apply to the manufacture of intermediates used to manufacture the active ingredients.

NR 233.21 SPECIALIZED DEFINITIONS. "Metallo-organic active ingredients" means carbon containing active ingredients containing one or more metallic atoms in the structure.

NR 233.22 EFFLUENT LIMITATIONS GUIDELINES REPRESENTING THE DEGREE OF EFFLUENT REDUCTION ATTAINABLE BY THE APPLICATION OF THE BEST PRACTICABLE CONTROL TECHNOLOGY CURRENTLY AVAILABLE (BPT). Except as provided in 40 CFR ss. 125.30 through 125.32, any existing point source subject to the provisions of this subchapter may not discharge process wastewater pollutants into waters of the state.

Subchapter IV - Pesticide Chemicals Formulating and Packaging Subcategory

NR 233.30 APPLICABILITY; DESCRIPTION OF THE PESTICIDE CHEMICALS FORMULATING AND PACKAGING SUBCATEGORY. This subchapter applies to discharges resulting from all pesticide formulating and packaging operations.

NR 233.31 EFFLUENT LIMITATIONS GUIDELINES REPRESENTING THE DEGREE OF EFFLUENT REDUCTION ATTAINABLE BY THE APPLICATION OF THE BEST PRACTICABLE CONTROL TECHNOLOGY CURRENTLY AVAILABLE (BPT). Except as provided in 40 CFR ss. 125.30 to 125.32, any existing point source subject to the provisions of this subchapter may not discharge process wastewater pollutants into waters of the state.

Subchapter V - Test Methods for Pesticide Pollutants

NR 233.40 IDENTIFICATION OF TEST PROCEDURES. (1) Table 7 names the pesticide active ingredients subject to this chapter, together with the chemical abstracts service (CAS) number used for identification and the analytical method designation.

(2) Except as provided in s. NR 219.05, the discharge parameter values required under the clean water act shall be determined by one of the analytical methods cited in Table 7.

(3) Except where identical to Table 7, pesticide manufacturers may not use the analytical methods cited in ch. NR 219, Tables B, C and D.

Note: The full texts of the analytical methods cited in table 7 are contained in the "Methods For The Determination of Nonconventional Pesticides In Municipal and Industrial Wastewater, Volume I," EPA 821-R-93-010A (August 1993 Revision I) and "Volume II", EPA 821-R-93-010B (August 1993) (the "Compendium").

Table 1 to ch. NR 233

List of Organic Pesticide Active Ingredients

EPA census code	Pesticide code	Pesticide name	CAS No.
1	10501	Dicofol (1,1-Bis(chlorophenyl)-2,2,2-trichloroethanol)	00115-32-2
2	51501	Maleic Hydrazide	00123-33-1
3	42002	EDB (1,2-Ethylene dibromide)	00106-93-4
4	82901	Vancide TH (1,3,5-Triethylhexahydro-s-triazine)	07779-27-3
5	29001	Dichloropropene	00542-75-6
7	17901	Dowicil 75 (1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantanechloride)	04080-31-3
8	109901	Triadimefon	43121-43-3
9	44901	Hexachlorophene (nabac)	00070-30-4
10	55004	Tetrachlorophene	01940-43-8
11	55001	Dichlorophene	00097-23-4
12	84001	Dichlorvos	00062-73-7
13	102401	Landrin-2 (2,3,5-trimethylphenylmethylcarbamate)	02686-99-9
14	82601	Fenac (2,3,6-Trichlorophenylacetic acid	00085-34-7
14	(1)	Fenac Salts and Esters	(1)
15	82001	2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	00093-76-5
15	(1)	2,4,5-T Salts and Esters	(1)
16	30001	2,4-D (2,4-Dichlorophenoxyacetic acid)	00094-75-7
16	(1)	2,4-D Salts and Esters	(1)
17	30801	2,4-DB (2,4-Dichlorophenoxybutyric acid	00094-82-6
17	(1)	2,4-DB Salts and Esters	(1)
18	80811	Anilazine (2,4-Dichloro-6-(o-chloroanilino)-s-triazine)	00101-05-3
19	36001	Dinocap	39300-45-3
20	31301	Dichloran (2,6-dichloro-4-nitroaniline)	00099-30-9
21	8707	Busan 90 (2-Bromo-4-hydroxyacetophenone)	02491-38-5
22	15801	Mevinphos	07786-34-7
23	39001	Sulfallate (2-chloroallyldiethyldithiocarbamate)	00095-06-7
24	84101	Chlorfenvinphos	00470-90-6
25	10010	Cyanazine	21725-46-2
26	19101	Propachlor	01918-16-7
27	30501	MCPA (2-Methyl-4-chlorophenoxyacetic acid)	00094-74-6
27	(1)	MCPA Salts and Esters	(1)
28	99901	Octhilinone	26530-20-1
29	67703	Pindone	00083-26-1
30	31401	Dichlorprop (2-(2,4-Dichlorophenoxy) propionic acid)	00120-36-5
30	(1)	Dichlorprop Salts and Esters	(1)
31	31501	MCPP (2-(2-Methyl-4-chlorophenoxy) propionic acid)	00093-65-2
31	(1)	MCPP Salts and Esters	(1)
32	60101	Thiabendazole	00148-79-8
33	80815	Belclene 310 (2-(methylthio)-4-(ethylamino)-6-(1,2-dimethylamino)-s-triazine)	22936-75-0
34	21201	Cloprop (2-(m-Chlorophenoxy) propionic acid)	00101-10-0
34	(1)	Cloprop Salts and Esters	(1)

35	35603	TCMTB (2-(Thiocyanomethylthio)benzothiazole)	21564-17-0
36	99001	HAE (2-((Hydroxymethyl)amino) ethanol	34375-28-5
37	6770	Chlorophacinone	03691-35-8
38	102401	Landrin-1 (3,4,5-trimethylphenylmethylcarbamate)	02686-99-9
39	101701	Pronamide	23950-58-5
40	100501	Methiocarb	02032-65-7
41	28201	Propanil	00709-98-8
42	107801	3-Iodo-2-propynyl butylcarbamate	55406-53-6
43	86001	3-(a-Acetonylfurfuryl)-4-hydroxycoumarin (Coumafuryl)	00117-52-2
43	(1)	Coumafuryl Salts and Esters	(1)
44	37507	DNOC (4,6-dinitro-o-cresol)	00534-52-1
45	101101	Metribuzin	21087-64-9
46	19401	CPA (4-chlorophenoxyacetic acid)	00122-88-3
46	(1)	CPA Salts and Esters	(1)
47	19201	MCPB (4-(2-Methyl-4-chlorophenoxy) butyric acid)	00094-81-5
47	(1)	MCPB Salts and Esters	(1)
48	44401	Aminocarb (4-(dimethylamino)-m-tolylmethylcarbamate)	02032-59-9
49	84701	Etridiazole	02593-15-9
50	55501	Ethoxyquin	00091-53-2
51	59804	Quinoliol sulfate (8-Quinoliol sulfate)	00134-31-6
52	103301	Acephate	30560-19-1
53	114401	Acifluorfen	50594-66-6
53	114402	Acifluorfen Salts and Esters	62476-59-9
54	90501	Alachlor	15972-60-8
55	98301	Aldicarb	00116-06-3
56	69105	Hyamine 3500 (Alkyl* dimethyl benzyl ammonium chloride* (50% C14, 40% C12, 10% C16))	68424-85-1
57	4001	Allethrin (all isomers and allethrin coil)	00584-79-2
58	80801	Ametryn	00834-12-8
59	106201	Amitraz	33089-61-1
60	80803	Atrazine	01912-24-9
61	105201	Bendiocarb	22781-23-3
62	99101	Benomyl and Carbendazim	17804-35-2
63	8901	Benzene Hexachloride	00608-73-1
64	9501	Benzyl benzoate	00120-51-4
65	10101	Lethane 384 (Beta-Thiocyanoethyl esters of mixed fatty acids containing from 10-18 carbons)	00301-11-1
66	104301	Bifenox	42576-02-3
68	12301	Bromacil	00314-40-9
68	12302	Bromacil, lithium	53404-19-6
69	35301	Bromoxynil	01689-84-5
69	35302	Bromoxynil octanoate	01689-99-2
70	112301	Butachlor	23184-66-9
70	101401	Giv-gard (beta-Bromo-beta-nitrostyrene)	07166-19-0
73	81701	Captafol	02425-06-1
74	81301	Captan	00133-06-2
75	56801	Carbaryl (Sevin)	00063-25-2
76	90601	Carbofuran	01563-66-2
77	90602	Carbosulfan	55285-14-8
78	29901	Chloramben	00133-90-4
78	(1)	Chloramben Salts and Esters	(1)
79	58201	Chlordane	00057-74-9
80	27301	Chloroneb	02675-77-6
81	81501	Chloropicrin	00076-06-2
82	81901	Chlorothalonil	01897-45-6
83	25501	Chloroxuron	01982-47-4
84	83701	Stirofos	00961-11-5

85	59102	Chlorpyrifos methyl	05598-13-0
86	59101	Chlorpyrifos	02921-88-2
87	14504	Mancozeb	08018-01-7
90	109301	Fenvalerate	51630-58-1
91	43401	Cycloheximide	00066-81-9
92	28901	Dalapon (2,2-dichloropropionic acid)	00075-99-0
92	(1)	Dalapon Salts and Esters	(1)
93	27501	Dienochlor	02227-17-0
94	57601	Demeton (O,O-Diethyl O-(and S-) (2-ethylthio)ethyl) phosphorothioate)	08065-48-3
95	104801	Desmedipham	13684-56-5
96	14502	Diammonium ethylenebisdithiocarbamate	03566-10-7
97	11301	DBCP (Dibromo-3-chloropropane)	00096-12-8
98	29801	Dicamba (3,6-Dichloro-o-anisic acid)	01918-00-9
98	(1)	Dicamba Salts and Esters	(1)
99	29601	Dichlone (Phygon)	00117-80-6
100	103401	Thiophanate ethyl	23564-06-9
101	32101	Perthane (Diethyl diphenyl dichloroethane and related compounds)	00072-56-0
102	86501	EXD (Diethyl dithiobis (thionoformate))	00502-55-6
103	57801	Diazinon	00333-41-5
104	108201	Diflubenzuron	35367-38-5
105	69122	Benzethonium chloride	00121-54-0
106	35001	Dimethoate	00060-51-5
107	53501	Parathion methyl	00298-00-0
108	35201	Dicrotophos	00141-66-2
109	58801	Crotoxyphos	07700-17-6
110	78701	DCPA (Dimethyl 2,3,5,6-tetrachloroterephthalate)	01861-32-1
111	57901	Trichlorofon	00052-68-6
112	37505	Dinoseb	00088-85-7
113	37801	Dioxathion	00078-34-2
114	67701	Diphacinone	00082-66-6
115	36601	Diphenamid	00957-51-7
116	38501	Diphenylamine	00122-39-4
116	47201	MGK 326 (Dipropyl isocinchomeronate)	00113-48-4
118	63301	Nabonate (Disodium cyanodithioimidocarbonate)	00138-93-2
119	35505	Diuron	00330-54-1
120	44303	Metasol DGH (Dodecylguanidine hydrochloride)	13590-97-1
121	44301	Dodine (dodecylquanidine acetate)	02439-10-3
122	79401	Endosulfan (Hexachlorohexahydromethano-2,4,3-benzdioxathiepin-3-oxide)	00115-29-7
123	38901	Endothall	00145-73-3
123	(1)	Endothall Salts and Esters	(1)
124	41601	Endrin	00072-20-8
125	113101	Ethalfluralin	55283-68-6
126	58401	Ethion	00563-12-2
127	41101	Ethoprop	13194-48-4
128	100601	Fenamiphos	22224-92-6
129	28801	Chlorobenzilate	00510-15-6
130	41405	Butylate	02008-41-5
131	59901	Famphur	00052-85-7
132	206600	Fenarimol	60168-88-9
133	53301	Fenthion	00055-38-9
134	34801	Ferbam	14484-64-1
135	35503	Fluometuron	02164-17-2
136	75002	Fluoroacetamide	00640-19-7
137	81601	Folpet	00133-07-3
138	103601	Glyphosate (N-(Phosphonomethyl) glycine)	01071-83-6
138	(1)	Glyphosate Salts and Esters	(1)

139	103602	Glyphosine	02439-99-8
140	44801	Heptachlor	00076-44-8
141	115601	Cycloprate	54460-46-7
142	107201	Hexazinone	51235-04-2
143	109401	Isofenphos	25311-71-1
144	100201	Isopropalin	33820-53-0
145	47601	Propham	00122-42-9
146	97401	Karbutilate	04849-32-5
147	9001	Lindane	00058-89-9
148	35506	Linuron	00330-55-2
149	39504	Malachite green (Ammonium(4-(p-(dimethylamino)-alpha-phenylbenzylidine)-2,5-cyclohexadien-1-ylidene)-dimethyl chloride)	00569-64-2
150	57701	Malathion	00121-75-5
151	14505	Maneb	12427-38-2
152	34802	Manganous dimethyldithiocarbamate	15339-36-3
153	114001	Mefluidide (N-(2,4-dimethyl-5-(((trifluoromethyl) sulfonyl)-amino) phenyl acetamide	53780-34-0
153	(1)	Mefluidide Salts and Esters	(1)
154	101201	Methamidophos	10265-92-6
155	100301	Methidathion	00950-37-8
156	90301	Methomyl	16752-77-5
157	105401	Methoprene	40596-69-8
158	34001	Methoxychlor	00072-43-5
159	69134	Methylbenzethonium chloride	15716-02-6
160	53201	Methylbromide	00074-83-9
162	69129	Hyamine 2389 (Methyldodecylbenzyl trimethyl ammonium chloride 80% and methyldodecylxylylene bis (trimethylammoniumchloride) 20%)	01399-80-0
163	68102	Methylenebisthiocyanate	06317-18-6
164	54101	Quinmethionate	02439-01-2
165	108801	Metolachlor	51218-45-2
166	44201	Mexacarbate	00315-18-4
167	14601	Metiram	09006-42-2
168	35502	Monuron TCA	00140-41-0
169	35501	Monuron	00150-68-5
170	103001	Napropamide	15299-99-7
171	80301	Deet	00134-62-3
172	14503	Nabam	00142-59-6
173	34401	Naled	00300-76-5
174	35801	Norea	18530-56-8
175	105801	Norflurazon	27314-13-2
176	30701	N-1-Naphthylphthalimide	05333-99-3
176	30702	Naptalam (N-1-Naphthylphthalamic acid)	00132-66-1
176	30703	Naptalam Salts and Esters	00132-67-2
177	57001	MGK 264 (N-2-Ethylhexyl bicycloheptene dicarboximide)	00136-45-8
178	84301	Benfluralin	01861-40-1
179	79501	Sulfotepp	03689-24-5
180	79101	Aspon	03244-90-4
181	36501	Coumaphos	00056-72-4
182	32701	Fensulfothion	00115-90-2
183	32501	Disulfoton	00298-04-4
184	105901	Fenitrothion	00122-14-5
185	59201	Phosmet	00732-11-6
186	58001	Azinphos Methyl	00086-50-0
187	58702	Oxydemeton methyl	00301-12-2
192	(1)	Organo-tin pesticides	(1)
194	104201	Oryzalin	19044-88-3

195	103801	Oxamyl	23135-22-0
196	111601	Oxyfluorfen	42874-03-3
197	111501	Bolstar (Sulprofos)	35400-43-2
198	219900	Sulprofos Oxon	38527-90-1
199	41801	Santox (O-Ethyl O-(p-nitrophenyl) phenylphosphonothioate	02104-64-5
200	41701	Fonofos	00944-22-9
201	47802	Propoxur (o-Isopropylphenylmethylcarbamate)	00114-26-1
202	57501	Parathion	00056-38-2
203	108501	Pendimethalin	40487-42-1
204	56502	Pentachloronitrobenzene	00082-68-8
205	63001	Pentachlorophenol	00087-86-5
206	63003	Pentachlorophenol Salts and Esters	00131-52-2
207	108001	Perfluidone	37924-13-3
208	109701	Permethrin	52645-53-1
209	98701	Phenmedipham	13684-63-4
210	64501	Phenothiazine	00092-84-2
211	64103	Phenylphenol	00090-43-7
212	57201	Phorate	00298-02-2
213	97701	Phosalone	02310-17-0
214	18201	Phosphamidon	13171-21-6
215	5101	Picloram	01918-02-1
215	5104	Picloram Salts and Esters	02545-60-0
216	67501	Piperonyl butoxide	00051-03-6
217	69183	PBED (Busan 77) (Poly (oxyethylene (dimethylimino) ethylene (dimethylimino) ethylene dichloride)	31512-74-0
218	34803	Busan 85 (Potassium dimethyldithiocarbamate)	00128-03-0
219	102901	Busan 40 (Potassium N-hydroxymethyl-N-methyldithiocarbamate)	51026-28-9
220	39002	KN Methyl (Potassium N-methyldithiocarbamate)	00137-41-7
221	101301	Metasol J26 (Potassium N-(alpha-(nitroethyl) benzyl)-ethylenediamine)	53404-62-9
222	111401	Profenofos	41198-08-7
223	80804	Prometon	01610-18-0
224	80805	Prometryn	07287-19-6
225	97601	Propargite	02312-35-8
226	80808	Propazine	00139-40-2
227	77702	Propionic acid	00079-09-4
228	119301	Propamocarb and Propamocarb HCL	24579-73-5
229	69004	Pyrethrin coils	00121-21-1
230	69001	Pyrethrin I	
231	69002	Pyrethrum (other than pyrethrins	08003-34-7
232	69006	Pyrethrin II	00121-29-9
233	97801	Resmethrin	10453-86-8
234	58301	Ronnel	00299-84-3
235	71003	Rotenone	00083-79-4
236	74801	DEF (S,S,S-Tributyl phosphorotrithioate)	00078-48-8
237	35509	Siduron	01982-49-6
238	82501	Silvex (2-(2,4,5-Trichlorophenoxypropionic acid))	00093-72-1
238	(1)	Silvex Salts and Esters	(1)
239	80807	Simazine	00122-34-9
240	103901	Bentazon	25057-89-0
241	34804	Carbam-S (Sodium dimethyldithiocarbanate)	00128-04-1
242	75003	Sodium monofluoroacetate	00062-74-8
243	39003	Vapam (Sodium methyldithiocarbamate)	00137-42-8
244	57101	Sulfoxide	00120-62-7
245	41301	Cycloate	01134-23-2

246	41401	EPTC (S-Ethyl dipropylthiocarbamate)	00759-94-4
247	41402	Molinate	02212-67-1
248	41403	Pebulate	01114-71-2
249	41404	Vernolate	01929-77-7
250	35604	HPTMS (S-(2-Hydroxypropyl) thiomethanesulfonate)	29803-57-4
251	9801	Bensulide	00741-58-2
252	105501	Tebuthiuron	34014-18-1
253	59001	Temephos	03383-96-8
254	12701	Terbacil	05902-51-2
255	105001	Terbufos	13071-79-9
256	80814	Terbuthylazine	05915-41-3
257	80813	Terbutryn	00886-50-0
258	63004	Tetrachlorophenol	25167-83-3
258	63007	Tetrachlorophenol Salts and Esters	[1]
259	35602	Dazomet	00533-74-4
260	102001	Thiophanate methyl	23564-05-8
261	79801	Thiram	00137-26-8
262	80501	Toxaphene	08001-35-2
263	74901	Merphos (Tributyl phosphorotrithioate)	00150-50-5
264	36101	Trifluralin	01582-09-8
265	86002	Warfarin (3-(a-Acetonylbenzyl)-4-hydroxycoumarin)	00081-81-2
265	[1]	Warfarin Salts and Esters	[1]
266	51705	Zinc MBT (Zinc 2-mercaptobenzothiazolate)	00155-04-4
267	14506	Zineb	12122-67-7
268	34805	Ziram	00137-30-4
269	78802	S-(2,3,3-trichloroallyl) diisopropyl-thiocarbamate	02303-17-5
270	69005	Phenothrin	26002-80-2
271	69003	Tetramethrin	07696-12-0
272	18301	Chloropropham	00101-21-3

[1]Multiple compounds for active ingredient.

Table 2 to ch. NR 233

Organic Pesticide Active Ingredient Effluent Limitations
BAT AND PSES

Pesticide	kg/kkg (lb/1,000 lb) Pounds of pollutant per 1000 lbs. product Daily maximum may not exceed	Monthly average may not exceed	Notes
2,4-D	1.97×10^{-3}	6.40×10^{-4}	
2,4-D Salts and Esters	(1)	(1)	
2,4-DB Salts and Esters	(1)	(1)	
Acephate	6.39×10^{-4}	1.97×10^{-4}	
Acifluorfen	2.45	9.30×10^{-1}	
Alachlor	5.19×10^{-3}	1.54×10^{-3}	
Aldicarb	7.23×10^{-4}	3.12×10^{-4}	
Ametryn	7.72×10^{-3}	2.53×10^{-3}	
Atrazine	5.12×10^{-3}	1.72×10^{-3}	
Azinphos Methyl	2.74×10^{-2}	1.41×10^{-2}	
Benfluralin	3.22×10^{-4}	1.09×10^{-4}	1
Benomyl and Carbendazim	3.50×10^{-2}	8.94×10^{-3}	2
Bolstar	1.69×10^{-2}	8.72×10^{-3}	
Bromacil	3.83×10^{-1}	1.16×10^{-1}	
Bromacil, lithium	(1)	(1)	
Bromoxynil	3.95×10^{-3}	1.27×10^{-3}	
Bromoxynil octanoate	3.95×10^{-3}	1.27×10^{-3}	
Busan 40 (Potassium N-hydroxymethyl-N-methyldithiocarbamate)	5.74×10^{-3}	1.87×10^{-3}	
Busan 85 (Potassium dimethyldithiocarbamate)	5.74×10^{-3}	1.87×10^{-3}	
Butachlor	5.19×10^{-3}	1.54×10^{-3}	
Captafol	4.24×10^{-6}	1.31×10^{-6}	
Carbam-S (Sodium dimethyldithiocarbamate)	5.74×10^{-3}	1.87×10^{-3}	
Carbaryl	1.60×10^{-3}	7.30×10^{-4}	
Carbofuran	1.18×10^{-4}	2.80×10^{-5}	
Chloroneb	8.16×10^{-2}	3.31×10^{-2}	
Chlorothalonil	1.51×10^{-3}	4.57×10^{-4}	
Chlorpyrifos	8.25×10^{-4}	2.43×10^{-4}	
Cyanazine	1.03×10^{-2}	3.33×10^{-3}	
Dazomet	5.74×10^{-3}	1.87×10^{-3}	
DCPA	7.79×10^{-2}	2.64×10^{-2}	
DEF (S,S,S-Tributyl phosphorotrithioate)	1.15×10^{-2}	5.58×10^{-3}	
Diazinon	2.82×10^{-3}	1.12×10^{-3}	
Dichlorprop Salts and Esters	(1)	(1)	
Dichlorvos	9.60×10^{-5}	2.95×10^{-5}	
Dinoseb	4.73	1.43	
Dioxathion	3.40×10^{-2}	1.29×10^{-2}	
Disulfoton	7.33×10^{-3}	3.79×10^{-3}	
Diuron	3.15×10^{-2}	1.40×10^{-2}	
Endothall Salts and Esters	(1)	(1)	
Endrin	2.20×10^{-2}	5.10×10^{-3}	
Ethalfluralin	3.22×10^{-4}	1.09×10^{-4}	1
Ethion	5.51×10^{-3}	1.57×10^{-3}	
Fenarimol	1.02×10^{-1}	3.61×10^{-2}	

Fensulfothion	1.48×10^{-2}	7.64×10^{-3}	
Fenthion	1.83×10^{-2}	9.45×10^{-3}	
Fenvalerate	5.40×10^{-3}	2.08×10^{-3}	
Heptachlor	8.80×10^{-3}	2.90×10^{-3}	
Isopropalin	7.06×10^{-3}	2.49×10^{-3}	1
KN Methyl (Potassium N-methyldithiocarbamate	5.74×10^{-3}	1.87×10^{-3}	
Linuron	2.69×10^{-3}	1.94×10^{-3}	
Malathion	2.35×10^{-4}	9.55×10^{-5}	
MCPA Salts and Esters	([1])	([1])	
MCPP Salts and Esters	([1])	([1])	
Merphos	1.15×10^{-2}	5.58×10^{-3}	
Methamidophos	1.46×10^{-2}	7.53×10^{-2}	
Methomyl	3.82×10^{-3}	1.76×10^{-3}	
Methoxychlor	3.23×10^{-3}	1.31×10^{-3}	
Metribuzin	1.36×10^{-2}	7.04×10^{-3}	
Mevinphos	1.44×10^{-4}	5.10×10^{-5}	
Nabam	5.74×10^{-3}	1.87×10^{-3}	
Nabonate	5.74×10^{-3}	1.87×10^{-3}	
Naled	([1])	([1])	
Norflurazon	7.20×10^{-4}	3.10×10^{-4}	
Organo-tin pesticides	1.72×10^{-2}	7.42×10^{-3}	3
Parathion	7.72×10^{-4}	3.43×10^{-4}	
Parathion methyl	7.72×10^{-4}	3.43×10^{-4}	
PCNB	5.75×10^{-4}	1.90×10^{-4}	
Pendimethalin	1.17×10^{-2}	3.62×10^{-3}	
Pernetgrub	2.32×10^{-3}	6.06×10^{-5}	
Phorate	3.12×10^{-4}	9.37×10^{-5}	
Phosmet	([1])	([1])	4
Prometon	7.72×10^{-3}	2.53×10^{-3}	
Prometryn	7.72×10^{-3}	2.53×10^{-3}	
Pronamide	6.64×10^{-4}	2.01×10^{-4}	
Propachlor	5.19×10^{-3}	1.54×10^{-3}	
Propanil	1.06×10^{-3}	4.84×10^{-4}	
Propazine	7.72×10^{-3}	2.53×10^{-3}	
Pyrethrin I and Pyrethrin II	1.24×10^{-2}	3.33×10^{-3}	
Simazine	7.72×10^{-3}	2.53×10^{-3}	
Stirofos	4.10×10^{-3}	1.35×10^{-3}	
TCMTB	3.89×10^{-3}	1.05×10^{-3}	
Tebuthiuron	9.78×10^{-2}	3.40×10^{-2}	
Terbacil	3.83×10^{-1}	1.16×10^{-1}	
Terbufos	4.92×10^{-4}	1.26×10^{-4}	
Terbuthylazine	7.72×10^{-3}	2.53×10^{-3}	
Terbutryn	7.72×10^{-3}	2.53×10^{-3}	
Toxaphene	1.02×10^{-2}	3.71×10^{-3}	
Triadimefon	6.52×10^{-2}	3.41×10^{-2}	
Trifluralin	3.22×10^{-4}	1.09×10^{-4}	1
Vapam (Sodium methyldithiocarbamate)	5.74×10^{-3}	1.87×10^{-3}	
Ziram (Zinc dimethyldithiocarbanate)	5.74×10^{-3}	1.87×10^{-3}	

[1]No discharge of process wastewater pollutants.

Notes:

1 Monitor and report as total Trifluralin.

2 Pounds of product include Benomyl and any Carbendazim production not converted to Benomyl.

3 Monitor and report as total tin.

4 Applies to purification by recrystalization portion of the process.

Table 3 to ch. NR 233

Organic Pesticide Active Ingredient Effluent Limitations
NSPS and PSNS

Pesticide	kg/kkg (lb/1,000 lb) Pounds of pollutant per 1000 lbs product Daily maximum may not exceed	Monthly average may not exceed	Notes
2,4-D	1.42×10^{-3}	4.61×10^{-4}	
2,4-D Salts and Esters	(1)	(1)	
2,4-DB Salts and Esters	(1)	(1)	
Acephate	6.39×10^{-4}	1.97×10^{-4}	
Acifluorfen	1.77	6.69×10^{-1}	
Alachlor	3.74×10^{-3}	1.11×10^{-3}	
Aldicarb	5.21×10^{-4}	2.25×10^{-4}	
Ametryn	5.56×10^{-3}	1.82×10^{-3}	
Atrazine	3.69×10^{-3}	1.24×10^{-3}	
Benfluralin	3.22×10^{-4}	1.09×10^{-4}	1
Benomyl and Carbendazom	2.52×10^{-2}	6.44×10^{-3}	2
Bolstar	1.22×10^{-2}	6.28×10^{-3}	
Bromacil	2.76×10^{-1}	8.36×10^{-2}	
Bromacil, lithium	(1)	(1)	
Bromoxynil	2.84×10^{-3}	9.14×10^{-4}	
Bromoxynil Octanoate	2.84×10^{-3}	9.14×10^{-4}	
Busan 40 (Potassium N-hydroxymethyl-N-methyldithiocarbamate)	4.14×10^{-3}	1.35×10^{-3}	
Busan 85 (Potassium dimethyldithiocarbamate)	4.14×10^{-3}	1.35×10^{-3}	
Butachlor	3.74×10^{-3}	1.11×10^{-3}	
Captafol	4.24×10^{-6}	1.31×10^{-6}	
Carbam-S (Sodium dimethyldithiocarbanate)	4.14×10^{-3}	1.35×10^{-3}	
Carbaryl	1.18×10^{-3}	5.24×10^{-4}	
Carbofuran	1.18×10^{-4}	2.80×10^{-5}	
Chloroneb	5.87×10^{-2}	2.39×10^{-2}	
Chlorothalonil	1.09×10^{-3}	3.29×10^{-4}	
Chlorpyrifos	5.94×10^{-4}	1.75×10^{-4}	
Cyanazine	7.42×10^{-3}	2.40×10^{-3}	
Dazomet	4.14×10^{-3}	1.35×10^{-3}	
DCPA	5.61×10^{-2}	1.90×10^{-2}	
DEF (S,S,S-Tributyl phosphorotrithioate)	1.15×10^{-2}	5.58×10^{-3}	
Diazinon	2.05×10^{-3}	8.13×10^{-4}	
Dichlorprop Salts and Esters	(1)	(1)	
Dichlorvos	6.88×10^{-5}	2.13×10^{-5}	
Dinoseb	3.41	1.03	
Dioxathion	2.54×10^{-2}	9.31×10^{-3}	
Disulfoton	5.28×10^{-3}	2.72×10^{-3}	
Diuron	2.27×10^{-2}	1.01×10^{-2}	
Endothall Salts and Esters	(1)	(1)	
Endrin	1.57×10^{-2}	3.69×10^{-3}	
Ethalfluralin	3.22×10^{-4}	1.09×10^{-4}	1
Ethion	3.97×10^{-3}	1.33×10^{-3}	
Fenarimol	1.02×10^{-1}	3.61×10^{-2}	
Fensulfothion	1.06×10^{-2}	5.50×10^{-3}	
Fenthion	1.32×10^{-2}	6.79×10^{-3}	
Fenvalerate	3.91×10^{-3}	1.50×10^{-3}	

Guthion	1.97×10^{-2}	1.02×10^{-2}	
Heptachlor	6.31×10^{-3}	2.06×10^{-3}	
Isopropalin	5.07×10^{-3}	1.82×10^{-3}	
KN Methyl (Potassium N-methyldithiocarbamate)	4.14×10^{-3}	1.35×10^{-3}	
Linuron	1.94×10^{-3}	1.40×10^{-3}	
Malathion	1.69×10^{-4}	6.88×10^{-5}	
MCPA Salts and Esters	([1])	([1])	
MCPP Salts and Esters	([1])	([1])	
Merphos	1.15×10^{-2}	5.58×10^{-3}	
Methamidophos	1.05×10^{-2}	5.42×10^{-3}	
Methomyl	2.75×10^{-2}	1.27×10^{-3}	
Methoxychlor	2.34×10^{-3}	9.25×10^{-4}	
Metribuzin	9.80×10^{-3}	5.06×10^{-3}	
Mevinphos	1.03×10^{-4}	3.69×10^{-5}	
Nabam	4.14×10^{-3}	1.35×10^{-3}	
Nabonate	4.14×10^{-3}	1.35×10^{-3}	
Naled	([1])	([1])	
Norflurazon	7.20×10^{-4}	3.10×10^{-4}	
Organo-tin pesticides	1.25×10^{-2}	5.36×10^{-3}	3
Parathion Ethyl	5.56×10^{-4}	2.45×10^{-4}	
Parathion Methyl	5.56×10^{-4}	2.45×10^{-4}	
PCNB	4.16×10^{-4}	1.38×10^{-4}	
Pendimethalin	1.17×10^{-2}	3.62×10^{-3}	
Permethrin	1.68×10^{-4}	4.39×10^{-5}	
Phorate	3.12×10^{-4}	9.37×10^{-5}	
Phosmet	([1])	([1])	4
Prometon	5.56×10^{-3}	1.82×10^{-3}	
Prometym	5.56×10^{-3}	1.82×10^{-3}	
Pronamide	4.78×10^{-4}	1.45×10^{-4}	
Propachlor	3.74×10^{-3}	1.11×10^{-3}	
Propanil	7.63×10^{-4}	3.48×10^{-4}	
Propazine	5.56×10^{-3}	1.82×10^{-3}	
Pyrethrin I and Pyrethrin II	8.91×10^{-3}	2.40×10^{-3}	
Simazine	5.89×10^{-3}	1.91×10^{-3}	
Stirofos	2.95×10^{-3}	9.72×10^{-4}	
TCMTB	2.80×10^{-9}	7.54×10^{-4}	
Tebuthiuron	9.78×10^{-2}	3.41×10^{-2}	
Terbacil	2.76×10^{-1}	8.36×10^{-2}	
Terbufos	4.92×10^{-4}	1.26×10^{-4}	
Terbuthylazine	5.56×10^{-3}	1.82×10^{-3}	
Terbutryn	5.56×10^{-3}	1.82×10^{-3}	
Toxaphene	7.35×10^{-3}	2.67×10^{-3}	
Triadimefon	4.69×10^{-2}	2.46×10^{-2}	
Trifluralin	3.22×10^{-4}	1.09×10^{-4}	1
Vapam (Sodium methyldithiocarbamate)	4.14×10^{-3}	1.35×10^{-3}	
Ziram (Zinc dimethyldithiocarbanate)	4.14×10^{-3}	1.35×10^{-3}	

[1]No discharge of process wastewater pollutants.

Notes:

1 Monitor and report as total Trifluralin.

2 Pounds of product shall include Benomyl and any Carbendazim production not converted to Benomyl.

3 Monitor and report as total tin.

4 Applies to purification by recrystalization portion of the process.

Table 4 to ch. NR 233

BAT and NSPS Effluent Limitations for Priority Pollutants
For Direct Discharge Point Sources
That Use End-of-Pipe Biological Treatment

Pollutant	(Micrograms per liter (μg/l)) Daily maximum may not exceed	Monthly average may not exceed
1,1-Dichloroethylene	25	16
1,1,1-Trichloroethane	54	21
1,2-Dichloroethane	211	68
1,2-Dichloropropane	230	153
1,2-Dichlorobenzene	163	77
1,2-trans-Dichloroethylene	54	21
1,3-Dichloropropene	44	29
1,4-Dichlorobenzene	28	15
2-chlorophenol	98	31
2,4-Dichlorophenol	112	39
2,4-Dimethylphenol	36	18
Benzene	136	37
Bromodichloromethane	380	142
Bromomethane	380	142
Chlorobenzene	28	15
Chloromethane	190	86
Cyanide (Total)	640	220
Dibromochloromethane	794	196
Dichloromethane	89	40
Ethylbenzene	108	32
Lead (Total)	690	320
Naphthalene	59	22
Phenol	26	15
Tetrachloroethylene	56	22
Tetrachloromethane	38	18
Toluene	80	26
Tribromomethane	794	196
Trichloromethane	46	21

Table 5 to Subchapter I of NR 233

BAT and NSPS Effluent Limitations for Priority Pollutants
For Direct Discharge Point Sources
That Do Not Use End-of-Pipe Biological Treatment

Pollutant	(Micrograms per liter (μg/l)) Daily maximum may not exceed	Monthly average may not exceed
1,1-Dichloroethylene	60	22
1,1,1-Trichloroethane	59	22
1,2-trans-Dichloroethylene	66	25
1,2-Dichlorobenzene	794	196
1,2-Dichloropropane	794	196
1,2-Dichloroethane	574	180
1,3-Dichloropropene	794	196
1,4-Dichlorobenzene	380	142
2,4-Dimethylphenol	47	19
Benzene	134	57
Bromodichloromethane	380	142
Bromomethane	380	142
Chlorobenzene	380	142
Chloromethane	295	110
Cyanide (Total)	640	220
Dibromochloromethane	794	196
Dichloromethane	170	36
Ethylbenzene	380	142
Lead (Total)	690	320
Naphthalene	47	19
Phenol	47	19
Tetrachloroethylene	164	52
Tetrachloromethane	380	142
Toluene	74	28
Tribromomethane	794	196
Trichloromethane	325	111

Table 6 to ch. NR 233

PSES and PSNS For Priority Pollutants

Pollutant	(Micrograms per liter (μg/l)) Daily maximum may not exceed	Monthly average may not exceed
1,1-Dichloroethylene	60	22
1,1,1-Trichloroethane	59	22
1,2-trans-Dichloroethylene	66	25
1,2-Dichlorobenzene	794	196
1,2-Dichloropropane	794	196
1,2-Dichloroethane	574	180
1,3-Dichloropropene	794	196
1,4-Dichlorobenzene	380	142
Benzene	134	57
Bromodichloromethane	380	142
Bromomethane	380	142
Chlorobenzene	380	142
Chloromethane	295	110
Cyanide (Total)	640	220
Dibromochloromethane	794	196
Dichloromethane	170	36
Ethylbenzene	380	142
Lead (Total)	690	320
Naphthalene	47	19
Tetrachloroethylene	164	52
Tetrachloromethane	380	142
Toluene	74	28
Tribromomethane	794	196
Trichloromethane	325	111

Table 7 to ch. NR 233

Test Methods For Pesticide Active Ingredients

EPA Survey Code	Pesticide Name	CAS No.	EPA Analytical Method No.(s)
8	Triadimefon	43121-43-3	507/633/525.1/1656
12	Dichlorvos	00062-73-7	1657/507/622/525.1
16	2,4-D; 2,4-D Salts and Esters (2,4-Dichlorophenoxyacetic acid)	00094-75-7	1658/515.1/615/515.2/555
17	2,4-DB; 2,4-DB Salts and Esters (2,4-Dichlorophenoxybutyric acid)	00094-82-6	1658/515.1/615/515.2/555
22	Mevinphos	07786-34-7	1657/507/622/525.1
25	Cyanazine	21725-46-2	629/507
26	Propachlor	01918-16-7	1656/508/608.1/525.1
27	MCPA; MCPA Salts and Esters (2-Methyl-4-chlorophenoxy-acetic acid)	00094-74-6	1658/615/555
30	Dichlorprop; Dichlorprop Salts and Esters (2-(2,4-Dichloro-phenoxy) propionic acid)	00120-36-5	1658/515.1/615/515.2/555
31	MCPP; MCPP Salts and Esters (2-(2-Methyl-4-chlorophenoxy) propionic acid)	00093-65-2	1658/615/555
35	TCMTB (2-(Thiocyanomethylthio) benzothiazole)	21564-17-0	637
39	Pronamide	23950-58-5	525.1/507/633.1
41	Propanil	00709-98-8	632.1/1656
45	Metribuzin	21087-64-9	507/633/525.1/1656
52	Acephate	30560-19-1	1656/1657
53	Acifluorfen	50594-66-6	515.1/515.2/555
54	Alachlor	15972-60-8	505/507/645/525.1/1656
55	Aldicarb	00116-06-3	531.1
58	Ametryn	00834-12-8	507/619/525.1
60	Atrazine	01912-24-9	505/507/619/525.1/1656
62	Benomyl	17804-35-2	631

68	Bromacil; Bromacil Salts and Esters	00314-40-9	507/633/525.1/1656
69	Bromoxynil	01689-84-5	1625/1661
69	Bromoxynil octanoate	01689-99-2	1656
70	Butachlor	23184-66-9	507/645/525.1/1656
73	Captafol	02425-06-1	1656
75	Carbaryl (Sevin)	00063-25-2	531.1/632/553
76	Carbofuran	01563-66-2	531.1/632
80	Chloroneb	02675-77-6	1656/508/608.1/525.1
82	Chlorothalonil	01897-45-6	508/608.2/525.1/1656
84	Stirofos	00961-11-5	1657/507/622/525.1
86	Chlorpyrifos	02921-88-2	1657/508/622
90	Fenvalerate	51630-58-1	1660
103	Diazinon	00333-41-5	1657/507/614/622/525.1
107	Parathion methyl	00298-00-0	1657/614/622
110	DCPA (Dimethyl 2,3,5,6-tetrachloroterephthalate)	01861-32-1	508/608.2/525.1/515.1 515.2/1656
112	Dinoseb	00088-85-7	1658/515.1/615/515.2/555
113	Dioxathion	00078-34-2	1657/614.1
118	Nabonate (Disodium cyanodithiomidocarbonate)	00138-93-2	630.1
119	Diuron	00330-54-1	632/553
123	Endothall	00145-73-3	548/548.1
124	Endrin	00072-20-8	1656/505/508/608 617/525.1
125	Ethalfluralin	55283-68-6	[1]1656/[1]627
126	Ethion	00563-12-2	1657/614/614.1
127	Ethoprop	13194-48-4	1657/507/622/525.1
132	Fenarimol	60168-88-9	507/633.1/525.1/1656
133	Fenthion	00055-38-9	1657/622
138	Glyphosate (N-(Phosphonomethyl) glycine)	01071-83-6	547
140	Heptachlor	00076-44-8	1656/505/508/608 617/525.1

144	Isopropalin	33820-53-0	1656/627
148	Linuron	00330-55-2	553/632
150	Malathion	00121-75-5	1657/614
154	Methamidophos	10265-92-6	1657
156	Methomyl	16752-77-5	531.1/632
158	Methoxychlor	00072-43-5	1656/505/508/608.2 617/525.1
172	Nabam	00142-59-6	630/630.1
173	Naled	00300-76-5	1657/622
175	Norflurazon	27314-13-2	507/645/525.1/1656
178	Benfluralin	01861-40-1	[1]1656/[1]627
182	Fensulfothion	00115-90-2	1657/622
183	Disulfoton	00298-04-4	1657/507/614/622/525.1
185	Phosmet	00732-11-6	1657/622.1
186	Azinphos Methyl	00086-50-0	1657/614/622
192	Organo-tin pesticides	12379-54-3	Ind-01/200.7/200.9
197	Bolstar	35400-43-2	1657/622
203	Parathion	00056-38-2	1657/614
204	Pendimethalin	40487-42-1	1656
205	Pentachloronitrobenzene	00082-68-8	1656/608.1/617
206	Pentachlorophenol	00087-86-5	625/1625/515.2/555 515.1/525.1
208	Permethrin	52645-53-1	608.2/508/525.1/1656/1660
212	Phorate	00298-02-2	1657/622
218	Busan 85 (Potassium dimethyldithiocarbamate)	00128-03-0	630/630.1
219	Busan 40 (Potassium N-hydroxy-methyl-N-methyldithiocarbamate)	51026-28-9	630/630.1
220	KN Methyl (Potassium N-methyldithiocarbamate)	00137-41-7	630/630.1
223	Prometon	01610-18-0	507/619/525.1
224	Prometryn	07287-19-6	507/619/525.1
226	Propazine	00139-40-2	507/619/525.1/1656
230	Pyrethrin I	00121-21-1	1660

232	Pyrethrin II	00121-29-9	1660
236	DEF (S,S,S-Tributyl phosphorotrithioate)	00078-48-8	1657
239	Simazine	00122-34-9	505/507/619/525.1/1656
241	Carbam-S (Sodium dimethyldithiocarbamate)	00128-04-1	630/630.1
243	Vapam (Sodium methyldithiocarbamate)	00137-42-8	630/630.1
252	Tebuthiuron	34014-18-1	507/525.1
254	Terbacil	05902-51-2	507/633/525.1/1656
255	Terbufos	13071-79-9	1657/507/614.1/525.1
256	Terbuthylazine	05915-41-3	619/1656
257	Terbutryn	00886-50-0	507/619/525.1
259	Dazomet	00533-74-4	630/630.1/1659
262	Toxaphene	08001-35-2	1656/505/508/608 617/525.1
263	Merphos (Tributyl phosphorotrithioate)	00150-50-5	1657/507/525.1/622
264	Trifluralin	01582-09-8	1656/508/617/627/525.1
268	Ziram (Zinc dimethyldithiocarbamate)	00137-30-4	630/630.1

[1]Monitor and report as total Trifluralin.

Note: The Wisconsin administrative code corresponds to the code of federal regulations according to the following table:

State code	Code of Federal Regulations
s. NR 205.03	40 C.F.R. s. 401.11
s. NR 205.04	40 C.F.R. s. 401.11
ch. NR 211	40 C.F.R. Part 403
s. NR 211.03	40 C.F.R. s. 403.3
s. NR 211.13	40 C.F.R. s. 403.7
s. NR 215.03	40 C.F.R. Part 423, Appendix A
ch. NR 219	40 C.F.R. Part 136
ch. NR 233	40 C.F.R. Part 455

The foregoing rules were approved and adopted by the State of Wisconsin Natural Resources Board on October 23, 1996.

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), Stats.

Dated at Madison, Wisconsin December 12, 1996.

STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES

By George E. Meyer
George E. Meyer, Secretary

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DEPT. OF NATURAL RESOURCES

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary

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December 11, 1996

Mr. Gary L. Poulson
Assistant Revisor of Statutes
131 West Wilson Street - Suite 800
Madison, WI

Dear Mr. Poulson:

Enclosed are two copies, including one certified copy, of State of Wisconsin Natural Resources Board Order No. WW-20-96. These rules were reviewed by the Assembly Committee on Environment and Utilities and the Senate Committee on Environmental Resources and Urban Affairs 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,

George E. Meyer
Secretary

Enc.