CR 85-178

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Carroll D. Besadny
Secretary

BOX 7921
MADISON, WISCONSIN 53707

STATE OF WISCONSIN)
) ss
DEPARTMENT OF NATURAL RESOURCES)

RECEIVED
JUL 24 1986
2:30
Revisor of Statutes
Bureau

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. WW-48-85 was duly approved and adopted by this Department on May 29, 1986. 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 General Executive Facility #2 in the City of Madison, this 18th day of July, 1986.

Bruce B. Braun

Bruce B. Braun, Deputy Secretary

(SEAL)

8301K

ORDER OF THE STATE OF WISCONSIN NATURAL RESOURCES BOARD

REPEALING AND RECREATING RULES

IN THE MATTER of repealing and recreating ch. NR 290 of the Wisconsin Administrative Code pertaining to Steam Electric Power Generating

WW-48-85

Analysis Prepared by the Department of Natural Resources

Section 101(a) of 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". To implement the act, the Environmental Protection Agency was authorized to issue effluent standards, pretreatment standards, and new source performance standards for industrial dischargers. Pursuant to such standards set by EPA for the steam electric power generating industry, the state of Wisconsin Department of Natural Resources promulgated ch. NR 290, Wis. Adm. Code, to regulate this industry.

The Federal Water Pollution Control Act Amendments of 1972 were amended by the Clean Water Act of 1977. As a result of the Clean Water Act of 1977, several changes were made by EPA in regulating the steam electric power generating industry. The effect of the repeal and recreation of ch. NR 290, Wis. Adm. Code, will be to clarify and update standards and provisions of the steam electric power generating point source to reflect recent changes made by EPA in 40 CFR 423 under the authority of sections 301, 304, 306, 307, 308 and 501 of the Clean Water Act of 1977.

The purpose of this rulemaking is to revise the effluent limitations for BAT, NSPS, PSES and PSNS. This regulation limits the discharge of pollutants into waters of the state, as defined in ch. 147, Stats., and into publicly owned treatment works by existing and new source steam electric power plants.

As a result of the Clean Water Act of 1977, the emphasis of EPA's program has shifted from conventional pollutants to the control of a lengthy list of toxic pollutants. Previously promulgated BAT, NSPS, PSES and PSNS are amended. This regulation establishes new and revised limitations, standards, and prohibitions to control the 126 toxic pollutants, iron, total residual chlorine (total residual oxidants), free available chlorine, total suspended solids, oil and grease, and pH. In addition, the BPT limitations are amended to allow concentration based limitations to be included in permits.

Pursuant to the authority vested in the State of Wisconsin Natural Resources Board by ss. 144.01, 147.035, 147.04, 147.06, 147.07 and 227.11(2)(a), Stats., the State of Wisconsin Natural Resources Board hereby repeals and recreates rules interpreting ss. 147.01, 147.035, 147.04, 147.06 and 147.07, Stats., as follows:

Section 1. Chapter NR 290 is repealed and recreated to read:

Chapter NR 290

STEAM ELECTRIC POWER GENERATING

(2) By July 1, 1984, effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT);

(3) At the commencement of discharge, new source performance standards (NSPS).

NR 290.12 DISCHARGE STANDARDS. (1) BEST PRACTICABLE TECHNOLOGY. The following effluent limitations and standards for all or specific wastewater flows establish, except as provided in s. NR 290.13, the quantity or quality of pollutants or pollutant properties which may be discharged by a facility subject to the provisions of this chapter after application of the best practicable control technology currently available:

(a) The pH of all discharges, except once through cooling water, shall be within the range of 6.0 to 9.0. Dischargers which continuously monitor pH shall be subject to s. NR 205.06.

(b) There may be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

(c) The quantity of pollutants in each of the wastewater sources identified in Table 1 may not exceed the quantity determined by multiplying the flow by the concentration of each pollutant listed in Table 1.

(d) Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than 2 hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the department that the units in a particular location cannot operate at or below this level of chlorination.

(e) In the event that wastestreams from various sources are combined for treatment or discharge, the quantity of each pollutant or pollutant property limited in pars. (a) to (d) attributable to each regulated stream except coal pile runoff may not exceed the specified limitation for that waste source.

(f) Any untreated discharge from facilities designed, constructed, and operated to treat the volume of coal pile runoff which is associated with a 10 year, 24 hour rainfall event may not be subject to the limitations of par. (c).

(g) Where the department determines there is no need for a restriction on the mass of pollutants discharged, the quantity of any pollutant allowed to be discharged may be expressed as a concentration limitation instead of the mass limitation required to be calculated by par. (c). Concentration limitations shall be those concentrations specified in this subsection.

Table 1

BPT Effluent Limitations in mg/l

Wastewater	TSS Avg.	TSS Max.	O&G Avg.	O&G Max.	Iron (total) Avg.	Iron (total) Max.	Copper (total) Avg.	Copper (total) Max.	FAC Avg.	FAC Max.
Low volume waste	30	100	15	20						
Fly ash transport water	30	100	15	20						
Bottom ash transport water	30	100	15	20						
Metal cleaning wastes	30	100	15	20	1.0	1.0	1.0	1.0		
Once through cooling water									0.2	0.5
Cooling tower blowdown									0.2	0.5
Coal pile runoff[1]	-	50[2]								

Avg. = Average of daily values for 30 consecutive days may not exceed (mg/l)

Max. = Maximum for any 1 day (mg/l)

O & G = Oil and grease

[1]This limitation is subject to the provisions of s. NR 290.12(1)(f).

[2]Maximum concentration for any time.

(2) BEST AVAILABLE TECHNOLOGY. The following effluent limitations and standards for all or specific wastewater flows establish the quantity or quality of pollutants or pollutant properties which may be discharged by a facility subject to the provisions of this chapter after application of the best available technology economically achievable:

(a) There may be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

(b) The quantity of pollutants in each of the wastewater sources identified in Table 2 may not exceed the quantity determined by multiplying the flow by the concentration of each pollutant listed in that table.

(c) For any plant with a total rated electric generating capacity of 25 or more megawatts discharging once through cooling water, total residual chlorine may not be discharged from any single generating unit for more than 2 hours per day unless the utility demonstrates to the department that discharge for more than 2 hours is required for macroinvertebrate control. Simultaneous multi-unit chlorination is permitted.

(d) For any plant with a total rated generating capacity of less than 25 megawatts discharging once through cooling water and for plants of any size discharging cooling tower blowdown, neither free available chlorine nor total residual chlorine may be discharged from any unit for more than 2 hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the department that the units in a particular location cannot operate at or below this level of chlorination.

(e) Where the discharger requests and the department approves in writing, instead of monitoring cooling tower blowdown, compliance with the limitations for the 126 priority pollutants may be determined by engineering calculations which demonstrate that the regulated pollutants are not present or are present in the final discharge in no detectable amount.

(f) Where the department determines there is no need for a restriction on the mass of pollutants discharged, the quantity of any pollutant allowed to be discharged may be expressed as a concentration limitation instead of the mass limitation required to be calculated by par. (b). Concentration limitations shall be those concentrations specified in this subsection.

(g) In the event that wastestreams from various sources are combined for treatment or discharge, the quantity of each pollutant or pollutant property controlled in pars. (a) to (e) attributable to each regulated stream may not exceed the specified limitations for that waste source.

Table 2

BAT Effluent Limitations in mg/l

Wastewater	Iron (total) Avg.	Iron (total) Max.	Copper (total) Avg.	Copper (total) Max.	FAC[1] Avg.	FAC[1] Max.	TRC[2] Avg.	TRC[2] Max.	Chromium (total) Avg.	Chromium (total) Max.	Zinc (total) Avg.	Zinc (total) Max.	Other Priority Pollutants Avg.	Other Priority Pollutants Max.
Chemical metal cleaning wastes	1.0	1.0	1.0	1.0										
Once through cooling water					0.2	0.5	-	0.2						
Cooling tower blowdown[3]					0.2	0.5			0.2	0.2	1.0	1.0	nda[4]	nda[4]

Avg. = Average of daily values for 30 consecutive days may not exceed (mg/l)

Max. = Maximum for any 1 day (mg/l)

[1] These limitations apply only to plants witn a total rated electric generating capacity of less than 25 megawatts.

[2] This limitation applies only to plants with a total rated electric generating capacity of 25 or more megawatts.

[3] Except as shown for total chromium and total zinc, discharge of cooling tower blowdown shall be limited to no detectable amount, for the 126 priority pollutants contained in chemicals added for cooling tower maintenance.

[4] "nda" mans no detectable amount.

(3) NEW SOURCE PERFORMANCE STANDARDS (NSPS). The following effluent limitations and standards for all or specific subcategories establish the quantity or quality of pollutants or pollutant properties which may be discharged by a facility which is a new source subject to the provisions of this chapter:

(a) The pH of all discharges, except once through cooling water shall be within the range of 6.0 to 9.0. Dischargers which continuously monitor pH shall be subject to s. NR 205.06.

(b) There may be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

(c) The quantity of pollutants in each of the wastewater sources identified in Table 3 may not exceed the quantity determined by multiplying the flow by the concentration of each pollutant listed in that table.

(d) For any plant with a total rated electric generating capacity of 25 or more megawatts discharging once through cooling water, total residual chlorine may not be discharged from any single generating unit for more than 2 hours per day unless the utility demonstrates to the department that discharge for more than 2 hours is required for macroinvertebrate control. Simultaneous multi-unit chlorination is permitted.

(e) For any plant with a total rated electric generating capacity of less than 25 megawatts discharging once through cooling water and for plants of any size discharging cooling tower blowdown, neither free available chlorine nor total residual chlorine may be discharged from any unit for more than 2 hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the department that the units in a particular location cannot operate at or below this level of chlorination.

(f) Where the discharger requests and the department approves in writing, instead of monitoring cooling tower blowdown, compliance with the limitations for the 126 priority pollutants may be determined by engineering calculations which demonstrate that the regulated pollutants are not present or are present in the final discharge in no detectable amount.

(g) Where the department determines there is no need for a restriction on the mass of pollutants discharged, the quantity of any pollutant allowed to be discharged may be expressed as a concentration limitation instead of the mass limitation required to be calculated by par. (c). Concentration limitations shall be those concentrations specified in this subsection.

(h) In the event that wastestreams from various sources are combined for treatment or discharge, the quantity of each pollutant or pollutant property controlled in pars. (a) to (f) attributable to each regulated stream except coal pile runoff may not exceed the specified limitation for that waste source.

(i) Any untreated discharge from facilities designed, constructed, and operated to treat the volume of coal pile runoff which is associated with a 10 year, 24 hour rainfall event may not be subject to the limitations of par. (c).

Table 3

NSPS Effluent Limitations in mg/l

Wastewater	TSS Avg.	TSS Max.	O&G Avg.	O&G Max.	Iron (total) Avg.	Iron (total) Max.	Copper (total) Avg.	Copper (total) Max.	FAC Avg.	FAC Max.	TRC[1] Avg.	TRC[1] Max.	Zinc (total) Avg.	Zinc (total) Max.	Chromium (total) Avg.	Chromium (total) Max.	Other Priority Pollutants Avg.	Other Priority Pollutants Max.
Low volume waste	30	100	15	20														
Fly ash transport water[2]																		
Bottom ash transport water	30	100	15	20														
Chemical metal cleaning wastes	30	100	15	20	1.0	1.0	1.0	1.0										
Once through cooling water									0.2	0.5	-	0.2						
Cooling tower blowdown[3]									0.2	0.5			1.0	1.0	0.2	0.2	nda[5]	nda[5]
Coal pile runoff[4]	-	50																

Avg. = Average of daily values for 30 consecutive days shall not exceed (mg/l)

Max. = Maximum for any 1 day (mg/l)

O & G = Oil and grease

[1] This limitation applies only to plants with a total rated electric generating capacity of 25 or more megawatts. Those plants with a total rated electric generating capacity of less than 25 megawatts should use the FAC limits set for once through cooling water.

[2] There may be no discharge of wastewater pollutants from fly ash transport water.

[3] Except as shown for total chromium and total zinc, discharge of cooling tower blowdown shall be limited to no detectable amount for the other priority pollutants contained in chemicals added for cooling tower maintenance.

[4] This limitation is subject to s. NR 290.12(3)(i).

[5] "nda" means no detectable amount.

NR 290.13 MODIFICATION OF EFFLUENT LIMITATIONS. (1) ALL LIMITATIONS AND STANDARDS. The effluent limitations and standards set forth in this subchapter shall be used in accordance with this section to establish the quantity or quality of pollutants or pollutant properties which may be discharged by a point source subject to the provisions of this subchapter, except as:

(a) They may be superseded by more stringent limitations and standards necessary to achieve water quality standards or meet other legal requirements, or

(b) They may be supplemented or superseded by standards or prohibitions for toxic pollutants or by additional limitations for other pollutants required to achieve water quality standards, or

(c) They may be modified for BPT and BAT purposes in accordance with sub. (2).

(2) BEST PRACTICABLE TECHNOLOGY, BEST AVAILABLE TECHNOLOGY. Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available and the best available technology economically achievable may be modified as follows:

(a) An individual discharger or other interested person may submit evidence to the department that factors relating to the equipment or facilities involved, the process applied, or other such factors, which may include significant cost differentials, related to such discharger are fundamentally different from the factors considered in the establishment of the effluent limitations. On the basis of such evidence or other available information the department shall make a written determination that such factors are or are not fundamentally different for that facility compared to those specified in the Steam Electric Power Generating Development Document, EPA-440/1-82/029, November 1982. If such fundamentally different factors are found to exist, the department shall establish for the discharger effluent limitations in the WPDES permit either more or less stringent than the limitations in this chapter, to the extent dictated by such fundamentally different factors. Such limitations shall be reviewed by EPA which may approve, disapprove, or specify other limitations.

NOTE: Copies of the development document identified in par. (a) are available for inspection at the department of natural resources , 101 S. Webster, Madison; the secretary of state's office; and the revisor of statutes, and may be obtained for personal use from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20460.

Subchapter II - Indirect Discharges

NR 290.20 APPLICABILITY. The provisions in this subchapter are applicable to discharges of wastewater from the steam electric power generating category of point sources into publicly owned treatment works.

NR 290.21 COMPLIANCE DATES. Discharge of pollutants from facilities subject to the provisions of this subchapter may not exceed, as appropriate:

(1) By July 1, 1984 for pretreatment standards for existing sources;

(2) At the commencement of discharge for pretreatment standards for new sources.

NR 290.22 DISCHARGE STANDARDS. (1) PRETREATMENT STANDARDS FOR EXISTING SOURCES (PSES). Except as provided in s. NR 211.13 any existing source subject to this section which introduces pollutants into a publicly owned treatment works shall comply with ch. NR 211 and achieve the following pretreatment standards for existing sources by July 1, 1984.

(a) There shall be no discharge of polychlorinated biphenyl compounds such as those used for transformer fluid.

(b) The quantity of pollutants in each of the wastewater sources identified in Table 4 may not exceed the concentration listed in that table.

(c) Where the discharger requests and the control authority approves in writing, instead of monitoring cooling tower blowdown, compliance with the limitations for the 126 priority pollutants may be determined by engineering calculations which demonstrate that the regulated pollutants are not present or are present in the final discharge in no detectable amount.

(2) PRETREATMENT STANDARDS FOR NEW SOURCES (PSNS). Except as provided in s. NR 211.13 any new source subject to this section which introduces pollutants into a publicly owned treatment works shall comply with ch. NR 211 and the following pretreatment standards for new sources:

(a) There may be no discharge of polychlorinated biphenyl compounds such as those used for transformer fluid.

(b) The quantity of pollutants in each of the wastewater sources identified in Table 4 may not exceed the concentration listed in that table.

(c) Where the discharger requests and the control authority approves in writing, instead of monitoring cooling tower blowdown, compliance with the limitations for the 126 priority pollutants may be determined by engineering calculations which demonstrate that the regulated pollutants are not present or are present in the final discharge in no detectable amount.

(d) There may be no discharge of wastewater pollutants from fly ash transport water.

Table 4

PSES and PSNS Effluent Limitations in mg/l

Wastewater	Copper (total) Max. for any 1 day	Chromium (total) Max. for any time	Zinc (total) Max. for any time	Other Priority Pollutants Max. for any time
Chemical metal cleaning wastes	1.0			
Cooling tower blowdown[1]		0.2	1.0	nda
Fly ash transport water[2]				

[1] Except as shown for total chromium and total zinc, discharge of cooling tower blowdown shall be limited to no detectable amount for the 126 priority pollutants contained in chemicals added for cooling tower maintenance.

[2] There may be no discharge of wastewater pollutants from fly ash transport water for PSNS.

[3] "nda" means no detectable amount.

The foregoing rules were approved and adopted by the State of Wisconsin Natural Resources Board on May 29, 1986

The rules contained herein shall take effect as provided in s. 227.22(1) (intro.), Stats.

Dated at Madison, Wisconsin July 18, 1986.

STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES

By Carroll D. Besadny
Carroll D. Besadny, Secretary

(SEAL)

5966K